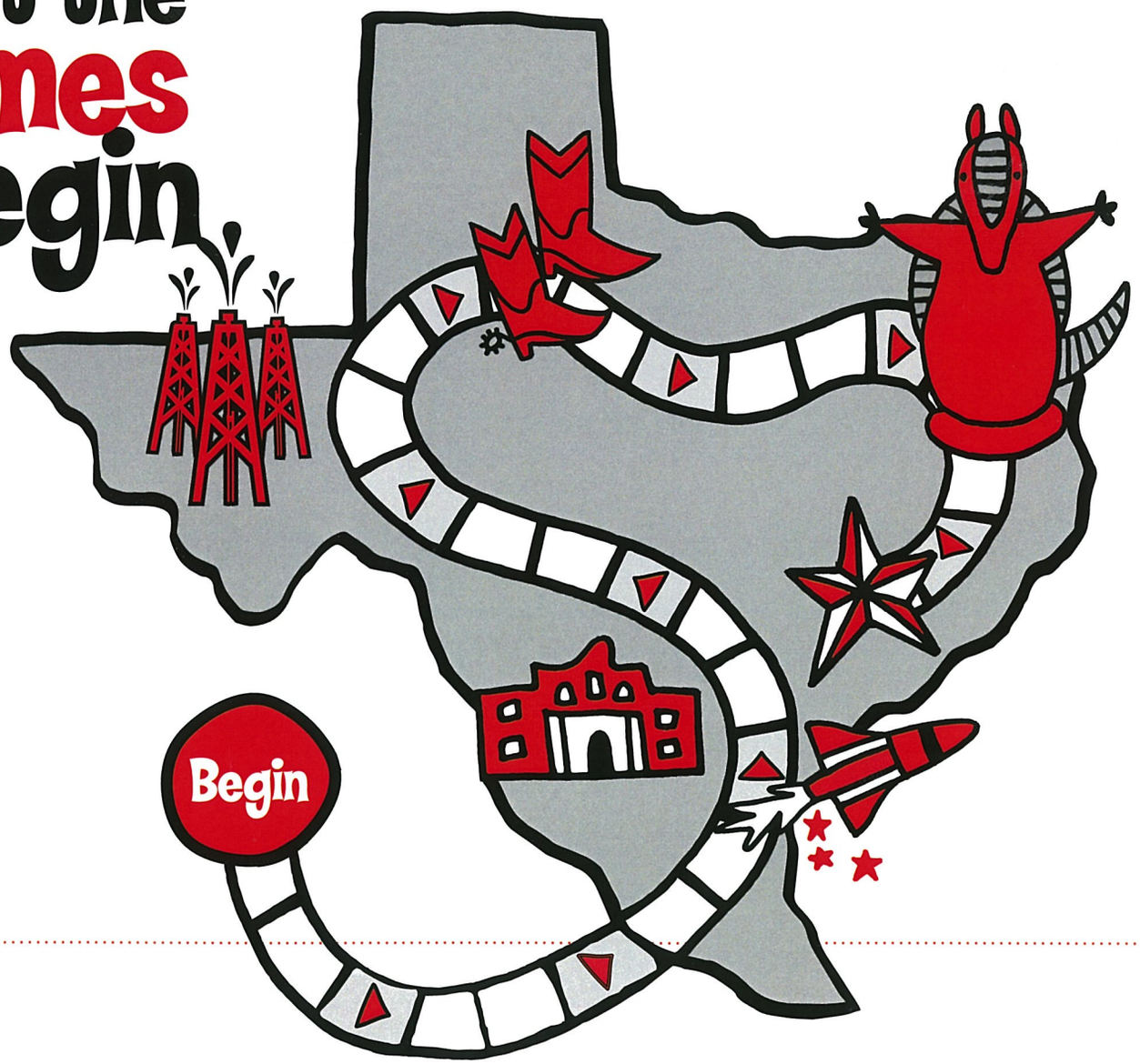
29TH ANNUAL

TEXAS ENVIRONMENTAL SUPERCONFERENCE

THURSDAY-FRIDAY • AUGUST 3-4, 2017 • FOUR SEASONS HOTEL • AUSTIN, TEXAS

Let the Games Begin.



Presented By:

State Bar of Texas Environmental & Natural Resources Law Section • Air & Waste Management Association, Southwest Section • Water Environment Association of Texas • Texas Association of Environmental Professionals • The Environmental Health and Safety Audit Center • American Bar Association Section of Environments, Energy & Resources

Supported By: **EARTHx** (formerly Earth Day Texas)


29TH ANNUAL
TEXAS ENVIRONMENTAL
SUPERCONFERENCE



TO: Attendees

FROM: Planning Committee

DATE: August 3, 2017

On behalf of the Environmental and Natural Resources Law Section of the State Bar of Texas, the Air and Waste Management Association-Southwest Section, the Water Environment Association of Texas, the Texas Association of Environmental Professionals, the Environmental Health and Safety Audit Center (formerly, the Auditing Roundtable), and the American Bar Association Section of Environment, Energy & Resources, welcome to the 29th Annual Texas Environmental Superconference – "*Let the Games Begin*, with our theme of board games.

Course materials are both in print (for those who ordered them) and online. The online materials may be downloaded at the section's website, www.texenrls.org, using the password "SC2017."

As always, there are evaluation forms for the program. We appreciate your taking the time to complete them and to give us your comments and suggestions. The organizers of this program take these forms into account in planning next year's conference. In addition, if you have an interest in having a particular topic presented or in speaking on a particular topic, the evaluation form is the appropriate place to provide that information.

Next year's conference – our 30th – is scheduled, as always, beginning the first Thursday in August, that is, August 2, 2018. We've already picked a theme – "A Texas State of Mind." Please mark your calendars.

Please also feel free to provide any comments or suggestions to any member of the Planning Committee at the conference, or, thereafter, to Jeff Civins at jeff.civins@haynesboone.com or at (512) 867-8469.

Thanks!

29th ANNUAL TEXAS ENVIRONMENTAL SUPERCONFERENCE

"Let the Games Begin"

Thursday-Friday, August 3-4, 2017
Four Seasons Hotel

Thursday, August 3, 2017

8:00 – 8:35 REGISTRATION/CONTINENTAL BREAKFAST
"Scrabble"

8:35 – 9:00 OPENING REMARKS
"Say Anything"

Jeff Civins, Texas Environmental Superconference
Arnoldo Medina, Environmental and Natural Resources Law Section, State Bar of Texas
Kevin Smith, Air & Waste Management Association, Southwest Section
Julie Nahrgang, Water Environment Association of Texas
Mike McClellan, Texas Association of Environmental Professionals
Michael Byington, The Environmental Health and Safety Audit Center of the IIA
Danny Worrell, ABA Section of Environment, Energy & Resources
Bruce Fogerty, EARTHx (formerly Earth Day Texas)



Moderator: Lisa Dyar, Winstead PC

Tab 1 9:00 – 9:30 CASE LAW UPDATE
"Trivial Pursuit"
Katie Bennett Hobson, Katten Muchin Rosenman LLP

Tab 2 9:30 – 10:00 ESA DEVELOPMENTS
"Mouse Trap"
Brooke Wahlberg, Nossaman LLP

Tab 3 10:00 – 10:15 PRO BONO OPPORTUNITIES IN ENFORCEMENT DEFENSE
"Stratego"
Marshall Coover, Texas Star Alliance

10:15 – 10:30 BREAK – *sponsored by Pastor, Behling & Wheeler, LLC*
"Tiddly Winks"

[Skit]



Moderator: Jeff Saitas, Saitas and Seales

Tab 4 10:30 – 12:00 AIR QUALITY
"The Game of Life"
Suzanne Smith, EPA Region 6
Mike Wilson, Director, Air Permits Division, TCEQ
Whitney Swift, Bracewell LLP
Mike Nasi, Jackson Walker L.L.P.
Adrian Shelley, Director, Public Citizen Texas (pending)

[Skit]

12:00 – 1:15 LUNCH – *sponsored by ERM*
"Hungry Hungry Hippos"

[Skit]



Moderator: Cindy Smiley, Smiley Law

Tab 5 1:15 – 2:30 WATER ISSUES
"Battleship"
Maia Corbitt, Booth, Ahrens, & Werkenthin
Robert Mace, Executive Administrator, Texas Water Development Board
Sara Thornton, Lloyd Gosselink Rochelle & Townsend, P.C.

Tab 6 2:30 – 3:00 TSCA UPDATE
"Risk"
Cliff Rothenstein, K&L Gates

3:00 – 3:15 BREAK – *sponsored by Geosyntec*
"Connect 4"

[Skit]



Moderator: Debra Tsuchiyama Baker, Baker Wotring LLP

Tab 7 `3:15 – 4:15 ENVIRONMENTAL ISSUES IN THE OIL PATCH
"Bingo"
Regulatory – Lee Fuller, Executive Vice President, Independent Petroleum Association of America
Litigation – Michael Mazzone, Haynes and Boone, LLP

Tab 8 4:15 – 5:15 ENVIRONMENTAL ASPECTS OF INFRASTRUCTURE
"Chutes and Ladders"
Samia Broadaway, Baker Botts L.L.P.
Thomas W. Smith, Executive Director, American Society of Civil Engineers

[Skit]

5:15 – 6:00 RECEPTION – *sponsored by Cirrus*
"Twister"

Friday, August 4, 2017

8:00 – 8:25 CONTINENTAL BREAKFAST
"Bananagrams"

8:25 – 8:30 OPENING REMARKS
"Balderdash"

[Skit]



Moderator: Chris Smith, Smith Jolin LLP

Tab 9 8:30 – 9:00 TEXAS LEGISLATIVE UPDATE
"Boggle"
Texas State Representative Drew Darby

Tab 10 9:00 – 9:45 EPA TCEQ RELATIONS
"Jenga"
Sam Coleman, Acting Regional Administrator , EPA Region 6
Bryan Shaw, Chairman, TCEQ

Tab 11 9:45 – 10:15 VIEW FROM THE TOP
"Go"
Patrick Traylor, Deputy Assistant Administrator, Office of Enforcement and Compliance Assurance, EPA DC

10:15 – 10:30 BREAK – *sponsored by Ramboll Environ*
"Yahtzee"

[Skit]



Moderator: Carrick Brooke-Davidson, Guida, Slavich & Flores P.C.

Tab 12 10:30 – 12:00 WHAT NOW?
"Clue"
Stephanie Bergeron Perdue, Deputy Executive Director, TCEQ
John Cruden, President of the American College of Environmental Lawyers
Avi Garbow, Gibson Dunn & Crutcher LLP
Patrick Traylor, Deputy Assistant Administrator, Office of Enforcement and Compliance Assurance, EPA DC
John Walke, Director, Clean Air Project, NRDC

[Skit]

12:00 – 1:15 LUNCH -- *co-sponsored by Terracon and Exponent*
"Apples to Apples"

1:15 – 1:30 SBOT ENRLS Meeting
"Monopoly"



Moderator: Phillip Goodwin, City of Houston

Tab 13 1:30 – 2:00 NEWS FROM DOJ
Jeff Wood, Acting Assistant Attorney General, Environment & Natural Resources Division

Tab 14 2:00 – 2:30 CLIMATE CHANGE AND THE ETHICAL RESPONSIBILITY OF ATTORNEYS
"Don't Break the Ice"
Victor Flatt, Chair and Faculty Director, Environment, Energy, and Natural Resources (EENR) Center, University of Houston Law Center

Tab 15 2:30 – 3:30 ETHICAL ASPECTS OF INTERNAL INVESTIGATIONS
"Operation"
Peter Anderson, Beveridge & Diamond P.C.
Larry Nettles, Vinson & Elkins, LLP
Andrew Strong, Pillsbury Winthrop Shaw Pittman LLP

3:30	ADJOURN *"Candy Land"* Sundaes

Wednesday Evening Program--*Sponsored by Langan Engineering*

ENVIRONMENTAL ENFORCEMENT
Overview and Practice Pointers

"Trouble"

Moderator: Craig J. Pritzlaff, Office of the Texas Attorney General

6:00 – 7:15 REGULATOR PERSPECTIVE
Cheryl Seager, Director of the Enforcement Division, EPA Region 6
Emily Petrick, Office of the Texas Attorney General
Ramiro Garcia, Director, Office of Compliance and Enforcement, TCEQ
Ryan Fite, Assistant County Attorney, Travis County

Moderator: Tim Wilkins, Bracewell LLP

7:15 – 8:00 REGULATED PERSPECTIVE
Jonathan Bull, Gardere
Lily Chinn, Katten Muchin Rosenman, LLP
Mike Dillinger, NuStar Energy L.P.

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Jeff Civins

Jeff Civins is a senior counsel at Haynes and Boone, LLP. in Austin. Jeff has practiced all aspects of environmental law since 1975, assisting clients in compliance matters, transactions, and litigation. As an adjunct professor at the University of Texas School of Law, Jeff taught a seminar on Environmental Law Concerns in Business in spring of 1987 and has been teaching a seminar on Environmental Litigation each spring since 1992.

Jeff is a member of the Advisory Board of UT's Kay Bailey Hutchison Center for Energy, Law, and Business and is a fellow of the American College of Environmental Lawyers. He is the organizer and co-editor of the Thomson Reuters Texas Practice two-volume treatise on Texas Environmental Law and author of the chapter on Environmental Aspects of Business Transactions. He is also the originator of the Thomson Reuters annual compilation of Texas environmental statutes.

Jeff is a former chair of the Environmental and Natural Resources Law Section of the State Bar of Texas and has been chair of the section's Annual Texas Environmental Superconference since its inception. Jeff also chaired this year's Earth Day Texas Environmental Law & Policy Symposium in Dallas.

Jeff received an AB in chemistry from Brandeis University, an MS in chemistry from Penn State, and a JD from the University of Texas School of Law. Prior to law school, Jeff taught science in public and private schools in New York City.



Lisa Uselton Dyar

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University of Texas School of Law

- J.D., 1993
- Associate Editor, *State Bar of Texas Environmental Law Journal*

University of Texas at Austin

- B.A., Government, 1990
- Alpha Phi Omega service fraternity

Lisa Dyar has practiced environmental law for over 15 years. She has represented clients in the energy, chemical, mining, manufacturing and waste disposal sectors in a wide range of environmental issues. Lisa advises clients in permitting, compliance and enforcement matters, and participates in developing legislative and rulemaking strategies. Lisa served as a senior enforcement attorney with the Texas Commission on Environmental Quality's Litigation Division where she was lead counsel for some of the agency's most complex and high profile air and multimedia enforcement cases and was recognized for her outstanding leadership. Lisa's wide range of environmental and regulatory experiences include a significant focus on air quality matters.

Representative Experience

- Representation before the Texas Commission on Environmental Quality and the Environmental Protection Agency, including:
  - Contested case hearings before the State Office of Administrative Hearings
  - Settlement of enforcement cases
  - Federal citizen suits
  - Episodic air emissions events
  - Federal flare enforcement initiative investigations
  - Air, water and waste permit applications
  - Superfund representation
- Representing multinational energy corporation in defending a federal Clean Air Act citizen suit
- Advising to Title V operating permits and petitions
- Developing and advocating comprehensive NSR and greenhouse gas permitting strategy for a major chemical corporation
- Interpreting ozone NAAQS implementation questions
- Protecting trade secret and confidential business information under state and federal public information statutes
- Developing comments to proposed rulemaking, municipal ordinances, legislation and policy initiatives
- Drafting statewide consolidated environmental enforcement legislation
- Negotiating administrative and civil enforcement settlement agreements
- Counseling clients about waste and recycling operations
- Managing and supporting environmental compliance audits

Professional & Community Involvement

- State Bar of Texas, Environmental and Natural Resources Section, Education Committee Chair
- Austin Bar Association, Environment, Natural Resources and Water Law Section
- Young Men's Service League
- Mobile Loaves & Fishes
- Bethany United Methodist Church

Awards & Recognition

- Outstanding Women in Texas Government – Outstanding Leadership Award, 1998
- Alpha Phi Omega Active Service Award, 1988

Admitted to Practice

- Texas, 1993

Katten

Katten Muchin Rosenman LLP



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Education

JD, The University of Texas at Austin School of Law

BM, Hope College

Bar Admissions

Texas

Catherine "Katie" Bennett Hobson advises clients on environmental issues, focusing on environmental regulatory matters with an emphasis on compliance obligations under federal and state air quality, water quality and waste rules. She also counsels clients on workplace safety and health matters, particularly where workplace safety issues and environmental issues intersect. Her representation includes a broad range of environmental permitting, compliance, transactional and litigation matters.

Recent Experience

- Regulatory compliance counsel for major chemical and midstream energy companies, including refineries, chemical manufacturers, and gas plants and terminals, regarding air, water and waste rules, workplace safety rules, environmental permitting matters, and environmental due diligence on potential transactions.
- Representation of companies in citation actions by federal and state environmental and occupational safety and health agencies.
- Representation of a pipeline company in relation to potential EPA enforcement actions and involving consideration of jurisdiction issues under the Waters of the US Rule and prior law and guidance.
- Representation of a recycled crushed concrete supplier and demolition contractor in an administrative contested case hearing on an application for a concrete batch plant standard permit under the Texas Clean Air Act.

Case Law Update

Presented at:

State Bar of Texas
29th Annual Texas Environmental Superconference
August 3-4, 2017
Austin, Texas

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CASE LAW UPDATE

I. D.C. CIRCUIT

A. CERCLA Exemptions for Animal Feeding Operations

In *Waterkeeper Alliance v. EPA*, 853 F.3d 527 (D.C. Cir. 2017), the D.C. Circuit vacated the U.S. Environmental Protection Agency's ("EPA") 2008 rule generally exempting farms from requirements to notify the agency of hazardous air releases from animal waste under the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA") and the Emergency Planning and Community Right-to-Know Act ("EPCRA"). EPA's 2008 rule retained reporting requirements for one category of animal raising operations known as concentrated animal feeding operations ("CAFOs").

Environmental groups sued EPA for violating CERCLA and EPCRA, arguing that the statutes require reports of any and all releases over the reportable quantity and that EPA has no authority to issue exemptions. EPA argued that animal-waste reports were unnecessary because in most cases, a federal response is impractical and unlikely. The D.C. Circuit held that the rule could not be justified as a reasonable interpretation of statutory ambiguity, or as an implementation of a *de minimis* exemption, and so vacated.

B. Endangered Species Act ("ESA") Delisting

In *Defenders of Wildlife v. Zinke*, 849 F.3d 1077 (D.C. Cir. 2017), the D.C. Circuit upheld the Department of the Interior's decision to delist the Wyoming Gray Wolf, reversing the lower court's decision. The Wyoming Gray Wolf was originally listed as endangered in 1973. The Fish and Wildlife Service ("FWS"), on behalf of the Secretary of the Department of the Interior, promulgated a final rule delisting the Wyoming Gray Wolf in 2012, based on the recovery of the wolf's population and the State of Wyoming's conservation management plan. Environmental groups sued, claiming that FWS was arbitrary in its determination that Wyoming had put adequate "regulatory mechanisms" in place to protect the wolf. The district court agreed with plaintiffs that although Wyoming's state management plan included a commitment to manage the wolf population at or above a minimum level, this provision was not legally enforceable, and the plan was therefore inadequate to support delisting.

Applying the familiar two-step deference test set forth in *Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837 (1984), the D.C. Circuit found that the term "regulatory mechanisms" in the Endangered Species Act was ambiguous on its face, and that the Secretary's determination to delist was reasonable in light of the administrative record.

C. CWA Section 401 Certification Requirements

In *Delaware Riverkeeper Network v. Federal Energy Regulatory Commission*, 857 F.3d 388 (D.C. Cir. 2017), Plaintiff Delaware Riverkeeper Network filed a claim against the Federal Energy Regulatory Commission ("FERC") alleging violations of the Clean Water Act ("CWA") and National Environmental Policy Act ("NEPA") after FERC issued a certificate of public convenience and necessity for a natural gas pipeline expansion project. Specifically, plaintiff alleged that by issuing approval of the project prior to the state's issuance of a CWA Section 401

water quality certification, FERC violated the CWA. Plaintiffs also alleged that FERC violated NEPA by failing to establish an accurate baseline in conducting its environmental review of the project.

The court reasoned that while CWA Section 401 requires applicants of a federal license or permit to first obtain a water quality certification before conducting activity which may result in any discharge into navigable waters, FERC's certificate of public convenience did not authorize any activity that could result in a discharge. The court also ruled that FERC conducted a fully informed and therefore adequate study under the procedural requirements of NEPA.

D. Exemptions to Disclosure under FOIA Exemption 4 and CWA 308

In *Environmental Integrity Project et al. v. U.S. Environmental Protection Agency*, No. 16-5109, 2017 WL 2324136 (D.C. Cir. May 30, 2017), the D.C. Circuit resolved an apparent conflict between the Freedom of Information Act ("FOIA") Exemption 4, which exempts from public disclosure trade secrets and commercial and financial information, and CWA Section 308, which exempts from disclosure only trade secrets and mandates disclosure of all other records. Environmental organizations brought suit against EPA for withholding requested data on power plant wastewater discharges, which all parties to the case agreed do not qualify as trade secrets under either FOIA Exemption 4 or CWA 308, but do qualify as "commercial or financial information" under FOIA Exemption 4.

The court ruled that the Administrative Procedure Act "provides that FOIA exemptions apply unless a later statute expressly supersedes or modifies those exemptions." 5 U.S.C. § 559. Because CWA 308 does not expressly supersede FOIA, the court held that EPA permissibly invoked FOIA Exemption 4 in protecting data on power plant wastewater discharges.

E. APA Challenges to Interpretive Policy Statements

In *Center for Regulatory Reasonableness v. Environmental Protection Agency*, 849 F.3d 453 (D.C. Cir. 2017), the D.C. Circuit declined to exercise jurisdiction over an industry organization's challenge of statements by the EPA indicating the agency would not follow an Eighth Circuit decision regarding policies governing publicly owned treatment facilities. The Eighth Circuit's decision held that two policy letters issued by EPA in 2011 amounted to rulemaking implemented without adhering to the requirements of the Administrative Procedure Act ("APA"). EPA issued several statements indicating it would not follow the Eighth Circuit's decision outside that circuit. The Center for Regulatory Reasonableness challenged EPA's statements as illegal and in excess of the agency's statutory authority, also claiming the statements themselves constituted impermissible rulemaking.

The D.C. Circuit held that it did not have jurisdiction to hear the Center's challenge, because "district courts have jurisdiction to review final regulatory actions unless a statutory provision provides for direct review in a court of appeals" and the CWA did not provide for direct review of such statements. The court also noted that while the Center could have sought direct review of EPA's policy letters in district court, its challenge was well beyond the 120-day window to challenge the letters.

F. RCRA Legitimacy Factors

In *American Petroleum Institute v. EPA*, No. 09-1038, 2017 WL 2883867 (D.C. Cir. July 7, 2017), the D.C. Circuit vacated portions of EPA's 2015 rule on the Definition of Solid Waste (the 2015 Rule). 80 Fed. Reg. 1694 (Jan. 13, 2015). Both industry and environmental groups challenged the 2015 Rule, which revised the 2008 Definition of Solid Waste Rule.

The 2008 rule excluded hazardous secondary materials from the definition of solid waste when recycled "legitimately," a term EPA defined by reference to certain "legitimacy factors," which distinguished "true" recycling from "sham" recycling (where companies claim to reuse materials they in fact discard as waste.)

The 2015 Rule revised the definition of "legitimate recycling" and expanded the scope of the legitimacy factors to cover all recycling. Under the new Rule, to satisfy the legitimacy test for recycling of a particular material, recycling entities must prevail on all four factors. First, the hazardous secondary material must provide a useful contribution to the recycling process. Second, the recycling process must produce a valuable product or intermediate. Third, the **persons controlling the secondary material must manage the hazardous secondary material as a valuable commodity**. And fourth, the **product of the recycling process must be comparable to a legitimate product or intermediate**.

Industry petitioners challenged EPA's planned means to implement the legitimacy test, arguing that mandating two of the four factors across all recycling amounts to an unlawful regulation of non-discarded materials. Specifically, plaintiffs challenged the third and fourth factors listed above.

With respect to factor three, the rule requires that the secondary material be stored in a container meeting several enumerated requirements. The court disagreed with plaintiffs' arguments that EPA was barred from regulating how recycling materials were contained, finding it was reasonable for EPA to impose a containment requirement, "so long as it is such that an inference of 'sham' or illegitimacy would logically flow from a firm's noncompliance."

The court's analysis of the fourth factor was more involved. EPA described this factor as an effort to prevent recyclers from loading products with hazardous secondary materials that provide no recognizable benefit to the product and are simply "along for the ride." In other words, EPA was concerned that reported recyclers might incorporate hazardous constituents in the final product when they were not needed, as a way to avoid proper disposal of that material. The fourth factor sets up two tracts for addressing this concern: one for covering products for which there is an analog of undoubted recycling legitimacy, and the other addressing products with no such analog. EPA recognized, however, that the criteria set forth under these two tracts did not draw a satisfactory line between genuine and sham recycling. Consequently, the agency offered a rather complicated exception aimed at preventing products from being labeled as sham when they in fact posed no "significant human health or environmental risk." After an exhaustive analysis, the court found that Factor 4's complex provision falls short of EPA's aim. The court determined that Factor 4 imposes "tasks tangential to disposal . . . and thus tangential to EPA's authority . . . even when EPA has offered little reason to doubt a product's legitimacy."

Consequently, the court vacated Factor 4 insofar as it applies to all hazardous secondary materials.

The court also vacated in large part the 2015 Rule's Verified Recycler Exclusion, which tightened its predecessor Transfer-Based Exclusion by requiring generators to meet emergency preparedness standards and eliminating the "reasonable efforts" option afforded under the Transfer-Based Exclusion, thus requiring that generators send their secondary materials to reclaimers that either have a RCRA permit or a RCRA variance. The court vacated the 2015 Rule, except for its emergency preparedness provisions and its expanded containment requirement. Incidentally, in vacating the Verified Recycler Exclusion, the court also vacated a new hazardous waste exclusion for spent catalysts, which were previously ineligible for exclusions under the 2008 Rule.

II. FIFTH CIRCUIT

A. Statute of Limitations for OSHA Citations

In *Delek Refining, Ltd. v. Occupational Safety and Health Review Commission*, 845 F.3d 170 (5th Cir. 2016), the Fifth Circuit issued an opinion aligning itself with a D.C. Circuit holding that refused to extend the statute of limitations for OSHA citations in the absence of a continuing, unlawful risk to employee safety and health. The case arose from an appeal of citations issued by the Occupational Safety and Health Commission ("OSHA") to Delek Refining for violations under the Process Safety Management ("PSM") standard.

The opinion focused on two main issues: 1) Whether OSHA was barred by the statute of limitations from issuing citations for failure to timely resolve or address process hazard analysis ("PHA") and audit findings and recommendations; and 2) Whether the refinery's "positive pressurization unit" constituted "process equipment" that was thus subject to mechanical integrity maintenance and inspection requirements under the PSM standard.

The Secretary of Labor issued citations to Delek in 2008 for failure to address PHA and audit findings in a timely manner, where both the PHAs and audits were conducted in 2005 or earlier, before Delek took ownership of the refinery. Delek appealed, arguing that the citations were barred by the six-month statute of limitations established by 29 U.S.C. § 658(c). The Secretary of Labor argued that failure to timely address PHA or audit recommendations constituted a "continuing" violation that effectively tolled the limitations period.

The Fifth Circuit disagreed, finding persuasive a ruling by the D.C. Circuit that rejected the continuing violations theory as applied to a recordkeeping failure. *AKM LLC dba Volks Constructors v. Secretary of Labor*, 675 F.3d 752 (D.C. Cir. 2012). While it did not decide whether the continuing violations theory might be appropriate "in cases involving continuing, unlawful risks to employee health and safety," the Fifth Circuit held that it did not apply in this case. Specifically, the court reasoned, "while a PHA or audit might result in a recommendation – even a safety-related recommendation – an employer is under no obligation to actually implement that recommendation. This structure is quite unlike a safety regulation which commands the employee to actually remedy a safety hazard and maintain a workplace free of such hazards."

In response to *Volks* and before the holding in *Delek*, the agency published a rule amending its recordkeeping regulations "to clarify that the duty to make and maintain accurate records of work-related injuries and illnesses is an ongoing obligation". See 81 Fed. Reg. 91792 (December 19, 2016).

The court affirmed the agency's interpretation of the application of PSM to the positive pressurization unit, finding there is sufficient ambiguity in the text of the PSM standard to accord deference to the Secretary's reasonable interpretation.

B. Habitat Designation for the Dusky Gopher Frog

In *Markle Interests, LLC, et al v. United States Fish and Wildlife Service, et al.*, 848 F.3d 635 (5th Cir. 2017), the Fifth Circuit voted not to rehear *en banc* a case affirming the FWS decision to designate 1,500 acres of private property in Louisiana as critical habitat for the endangered dusky gopher frog. The underlying decision by a three-judge panel affirmed FWS's decision to list critical habitat for the frog not only in Mississippi, which is the only state where the species is currently located, but also in Louisiana, where five ephemeral ponds exist that could support the frog's reproduction. In a spirited dissent to the denial, Judge Jones wrote of the panel's decision: "The panel majority's non-textual interpretations of the ESA misconstrue Congress's efforts to prescribe limits on the designation of endangered species' habitats and encourage aggressive, tenuously based interference with property rights."

C. Sufficiency of Privilege Logs in Federal Agency Investigations

In *Equal Employment Opportunity Commission v. BDO USA, LLP*, 856 F.3d 356 (5th Cir. 2017), the Fifth Circuit held that a privilege log submitted to a federal agency was insufficient proof that withheld documents were protected by attorney-client privilege. The privilege log was submitted by financial firm BDO USA, LLP to the Equal Employment Opportunity Commission in the course of a gender discrimination investigation. The agency requested documents both informally and via administrative subpoena before bringing an enforcement action. The Fifth Circuit found that the lower court used an overly-broad definition of attorney-client privilege, and that the log was insufficiently detailed to prove a prima facie case of privilege. Specifically, the log contained entries that were vague and that did not make clear whether legal or business advice was being communicated. Additionally, entries failed to show that confidentiality of the communications was not breached. The court remanded to the lower court for a determination applying the correct attorney-client privilege standard.

D. Deepwater Horizon Restitution Fraud

In May, a Fifth Circuit panel affirmed a ruling requiring Crystal Seafood Co. Inc. to pay back over $1 million in restitution, finding that the company had fraudulently represented its business was ongoing at the time of the Deepwater Horizon oil spill. *In re: Deepwater Horizon*, 857 F.3d 246 (5th Cir. 2017). The court found that the shrimp processor had not processed shrimp for a year at the time of the spill and no longer owned any shrimp processing equipment. As a result, it knew or should have known, its business would soon fail at the time it filed its claim for restitution.

III. OTHER U.S. COURTS OF APPEAL

A. Water Basin Transfer Rule Upheld

In *Catskill Mountains Chapter of Trout Unlimited, Inc. v. EPA*, 846 F.3d 492 (2nd Cir. 2017), the court affirmed EPA's 2008 "Water Transfers Rule," which codifies long-standing EPA practice allowing water to be transferred between basins without a National Pollutant Discharge Elimination Systems ("NPDES") permit. At the heart of the dispute were transfers of water from various water basins in the State of New York for the purpose of supplying sufficient water to New York City. Environmental groups and state and local governments challenged the 2008 rule as contrary to the requirements of the Clean Water Act. Applying *Chevron* deference, the court disagreed, reasoning that although the 2008 rule "may or may not be the best or most faithful interpretation of the Act in light of its paramount goal of restoring and protecting the quality of U.S. waters, it is supported by several valid arguments –interpretive, theoretical, and practical. And the EPA's interpretation of the Act... seems to us to be precisely the kind of policymaking decision that *Chevron* is designed to protect from overly intrusive judicial review."

B. Ionic Discharges Violate Narrative Provisions of NPDES Permit

In *Ohio Valley Environmental Coalition, et al. v. Fola Coal Company, Limited*, 845 F.3d 133 (4th Cir. 2017), the Fourth Circuit affirmed the holding of the U.S. District Court for the Southern District of West Virginia, which determined that mining company Fola Coal violated its NPDES permit by discharging "ionic pollution." Although Fola Coal's permit did not set specific effluent limits for ions and sulfates, it did include a narrative requirement that discharges be "of such quality so as not to cause violation of applicable water quality standards adopted by the Department of Environmental Protection." Plaintiff environmental groups alleged Fola Coal violated this narrative provision by discharging ions and sulfates in sufficient quantities to cause increased conductivity in Stillhouse Branch, a waterway adjacent to the mining operation. In its defense, Fola Coal argued that it was shielded from liability by its compliance with the effluent limitations of its NPDES permit. The court held that, despite the West Virginia Department of Environmental Protection's ("WVDEP") agreement with Fola Coal's interpretation of its permit, Fola could still be held accountable for violation of the permit's narrative requirements. Because Stillhouse Branch was deemed by EPA to have impaired water quality due to conductivity caused by ions and sulfates, the court upheld the district court's determination that Fola Coal violated its permit.

C. CERCLA Claims for Mining Operation Discharge Dismissed

In *Blankenship v. Consolidation Coal Company*, 850 F.3d 630 (4th Cir. 2017), the Fourth Circuit affirmed the holding of the lower court to dismiss complaints under CERCLA alleging that Consolidation Coal Company illegally discharged wastewater into an abandoned mine underneath a residential area. The lower court held that the plaintiffs failed to allege facts supporting a CERCLA claim for cleanup costs, rejecting the plaintiffs' argument that state statutes of limitations were preempted by the CERCLA statute of limitations.

D. NSR and Post-Construction Data

In *US v. DTE Energy Company*, 845 F.3d 735 (6th Cir. 2017), the Sixth Circuit declined to grant summary judgment to a coal-fired power plant operator, finding that there were genuine disputes of material fact that precluded a judgment about the operator's compliance with NSR preconstruction requirements. DTE Energy Company undertook modifications of a coal-fired power plant, notifying the Michigan Department of Environmental Quality the day before construction that DTE predicted an increase in post-construction emissions 100 times greater than that required to trigger NSR. DTE characterized the modifications as routine maintenance and informed the agency it had excluded the predicted emissions increases from its projections based on "demand growth." DTE then began construction without obtaining an NSR permit.

EPA brought an enforcement action challenging DTE's routine-maintenance designations and its exclusion for demand growth. Reversing the lower court's grant of summary judgment, the Sixth Circuit found DTE failed to carry its burden to set out a factual basis for its demand-growth exclusion. The court also held that EPA was not prevented from challenging DTE's preconstruction projects, reasoning, "DTE was not required by the regulations to secure the EPA's approval of the projects, or the project before beginning construction, but in going forward without a permit, DTE proceeded at its own risk."

E. Remand of Flint Class Action to State Court

In *Mason, et al., v. Lockwood, Andrews & Newnam, P.C., et al.*, 842 F.3d 383 (6th Cir. 2016), the Sixth Circuit remanded a class action filed by Flint, Michigan residents regarding water contamination to state court, holding that the controversy meets the "local controversy" exception to the Class Action Fairness Act. The proposed class action involves a claim of professional negligence against two corporations, who allegedly knew Flint's Water Treatment Plant required upgrades for lead contamination, yet failed to ensure safeguards were implemented.

F. Effect of Settlement on CERCLA Contribution Claims

In *Asarco, LLC v. Noranda Mining, Inc.*, 844 F.3d 1201 (10th Cir. 2017), the Tenth Circuit reversed the lower court's holding that Asarco could not recover contribution costs from Noranda Mining under the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"). In 2009, after declaring bankruptcy, Asarco settled its CERCLA liability with EPA for contamination at the Lower Silver Creek/Richardson Flat Site in Utah. The settlement preserved Asarco's right to file future claims for contribution against non-settling Potentially Responsible Parties ("PRPs"). Asarco was then reorganized and began pursuing claims against PRPs, filing a suit against fellow PRP Noranda Mining for its contribution to contamination at Lower Silver Creek in 2013.

Noranda Mining filed for summary judgment and the district court granted on the basis that Asarco had indicated to the Texas bankruptcy court that its settlement amount was fair because it represented Asarco's proportionate share of liability for the site, and therefore Asarco was judicially estopped from further remedy. The Tenth Circuit disagreed, finding that the bankruptcy court knew of Asarco's preserved right to obtain contribution because it approved the

settlement agreement. The Tenth Circuit held instead that Noranda had not met its burden of proof, and that contested issues of fact remained in the case, making summary judgment inappropriate.

G. Constitutionality of Regulating Takes of the Utah Prairie Dog

In *People for the Ethical Treatment of Property Owners v. United States Fish and Wildlife Service*, 852 F.3d 990 (10th Cir. 2017), the Tenth Circuit ruled that the federal government can constitutionally regulate "takes" of the Utah prairie dog, a threatened species, on non-federal land. The People for the Ethical Treatment of Property Owners ("PETPO"), a non-profit organization, brought suit against the FWS, arguing that the federal government has no right under the Commerce Clause of the U.S. Constitution to regulate species under the ESA when that species resides only within the State of Utah. The Tenth Circuit disagreed, concluding that regulation of the Utah prairie dog is an essential part of a broader regulatory scheme that, as a whole, substantially affects interstate commerce. Noting that "[e]very one of our sister circuits that has addressed this issue has agreed that regulation of purely intrastate species is an essential part of the ESA's regulatory scheme," the court held that regulating takes of the Utah Prairie dog under the ESA is a constitutional exercise of congressional authority under the Commerce Clause.

IV. TEXAS FEDERAL DISTRICT COURTS

A. CAA Citizen Suit Judgment

In *Environment Texas Citizen Lobby, Inc. v. ExxonMobil Corporation*, No. H-10-4969, 2017 WL 2331679 (S.D. Tex. Apr. 26, 2017), the court granted penalties against ExxonMobil for $19.9 million dollars in a suit brought under the citizen suit provisions of the Clean Air Act ("CAA"). Environmental groups brought suit in 2010 and requested declaratory judgment and penalties for exceedances of emissions limits and other permit violations at ExxonMobil's petrochemical industrial complex in Baytown, Texas. After a bench trial, the district court denied the plaintiffs' requests, finding that very few violations out of the many alleged in the complaint were actionable, and that ExxonMobil "made substantial efforts to improve environmental performance and compliance, including implementing four environmental improvement projects to reduce emissions and employing a vast array of emissions-reduction and emissions-detection equipment." 66 F. Supp. 3d 875 (S.D. Tex. 2014).

On appeal, the Fifth Circuit vacated the district court's decision, finding that the district court erred in its analysis of ExxonMobil's liability under specific counts and abused its discretion in applying the CAA's penalty factors. 824 F. 3d 507 (5th Cir. 2016).

On remand, the district court issued revised findings of facts and conclusions of law, and reconsidered the alleged violations and applicable penalty factors in reaching the $19.9 million dollar penalty. The court also granted attorneys' fees. However, the district court denied the plaintiffs' motion for declaratory judgment and injunctive relief, and as a result, declined to appoint a special master to monitor compliance with injunctive relief.

V. OTHER DISTRICT COURT OPINIONS

A. Burford Abstention Applied to Deep Injection Earthquake Claims

In *Sierra Club v. Chesapeake Operating, LLC*, 2017 WL 1287546 (W.D. Okla. Apr. 4, 2017), the U.S. District Court for the Western District of Oklahoma denied a request for injunction under the citizen suit provision of the Resource Conservation and Recovery Act ("RCRA"). Plaintiff Sierra Club brought suit against Chesapeake Operating, LLC and several other oil and gas producers, arguing in its complaint that deep injection of oil and gas extraction waste was contributing to an increase in earthquakes within Oklahoma and that these conditions presented an imminent and substantial threat to public health and the environment.

The court declined to exercise jurisdiction, invoking the Burford abstention and primary jurisdiction doctrine in deferring to the Oklahoma Corporation Commission ("OCC") regarding injection well issues. The Burford abstention allows federal courts to abstain from asserting jurisdiction in cases where a complex regulatory system would be disrupted by court intervention. The primary jurisdiction doctrine is invoked where courts have jurisdiction, but it is likely that the case will require resolution of issues that have been placed in the hands of an administrative body under a regulatory scheme. Describing itself as "ill-equipped to outperform the [OCC] in determining what it will take to meaningfully reduce seismic activity in and near the producing areas of Oklahoma and putting the growing body of technical knowledge to work in the service of rational regulation," the court dismissed the plaintiff's complaint.

B. Environmentalism Not Proven to Constitute a Religion

In *Krause v. Tulsa City-County Library Commission*, No. 4:16-cv-00643, 2017 WL 337996 (N.D. Okla. Jan. 23, 2017), the U.S. District Court for the Northern District of Oklahoma dismissed the complaint of a pro se plaintiff who brought suit against the Tulsa City-County Library Commission claiming that the recycling practices of the Commission constituted a violation of the free exercise clause of the First Amendment. Specifically, plaintiff argued that the Commission's placement of "fake" recycling bins in the Central Library hindered the plaintiff's exercise of Environmentalism, which he claimed was a religion. Noting the plaintiff had provided no factual support for his assertion that environmental activism constitutes a religion, the court dismissed for failure to state a claim.

C. NEPA Categorical Exclusion Review

In *Center for Biological Diversity v. Zinke*, No. 16-cv-738, 2017 WL 1755947 (D.D.C. May 4, 2017), the U.S. District Court for the District of Columbia ruled that the Department of the Interior ("DOI") is not required to complete an environmental review undertaken in the wake of the Deepwater Horizon spill. DOI announced in October of 2010 that it would conduct a review of "categorical exclusions" from NEPA requirements with respect to Outer Continental Shelf drilling operations. Petitioners sued DOI six years later, asking the court to compel the DOI to decide whether revisions to its categorical exclusions are necessary. The court dismissed the suit in March 2017 and issued a Memorandum and Opinion in May 2017. The court held that although regulations require agencies to review their NEPA procedures and make necessary

changes, no regulation requires agencies to complete their review or to make public a decision not to review regulations.

D. CWA Citizen Suit Regarding Pipeline Spill

In *Upstate Forever and Savannah Riverkeeper v. Kinder Morgan Energy Partners, L.P. and Plantation Pipe Line Company, Inc.*, No. 8:16-cv-4003, 2017 WL 2266875 (D.S.C. Apr. 20, 2017), the U.S. District Court for the District of South Carolina Anderson Division dismissed a CWA citizen suit brought against a pipeline company for a pipeline spill which plaintiffs alleged constituted a violation of CWA provisions. In order to establish a violation, plaintiffs must show a discharge of a pollutant into navigable waters from any point source without a permit. While acknowledging that a pipeline could be a point source sufficient to satisfy the violation requirements in theory, the court held plaintiffs had not shown the pipeline was a point source in this case. Plaintiffs' evidence that contamination from the pipeline spill ultimately migrated into navigable waters through groundwater proved only nonpoint source pollution outside the purview of the provisions of the CWA at issue.

E. *Mens Rea* and Killing ESA Protected Species

In *WildEarth Guardians et al v. United States Department of Justice*, No. 4:13-cv-00392 (D. Ariz. June 21, 2017), the U.S. District Court for the District of Arizona held that an individual's knowledge of a species' protected status is not a prerequisite for the Department of Justice ("DOJ") to prosecute under the ESA. To assist its attorneys in prosecuting individuals who shoot endangered wolves while hunting, the DOJ adopted a policy of only prosecuting individuals where there is evidence they knew the biological identity of the animal at the time of the shooting. The DOJ also instructed its attorneys to request a jury instruction reflecting this interpretation. Plaintiffs challenged this policy, known as the McKittrick Policy, alleging it violated the APA. The court agreed, holding that the DOJ had abdicated its statutory responsibility by adopting the policy and making clear that the DOJ was incorrect in believing it could not prosecute mistaken and/or careless wolf takings.

F. NEPA Challenges to Pipeline Project Authorization

In *Standing Rock Sioux Tribe v. U.S. Army Corps of Engineers*, No. 16-1534, 2017 WL 2573994 (D.D.C. June 14, 2017), the court granted in part and denied in part motions for partial summary judgment by the Standing Rock Sioux Tribe and Cheyenne River Sioux Tribe and the US Army Corps of Engineers ("ACE"). The plaintiff tribes alleged that that ACE's authorization of a crude oil pipeline under a federally regulated waterway bordering the tribes' reservations violated NEPA because ACE failed to consider the pipeline's effects on the environment. The court held that while ACE complied with NEPA in many areas, "it did not adequately consider the impacts of an oil spill on fishing rights, hunting rights, or environmental justice, or the degree to which the pipeline's effects are likely to be highly controversial." The court remanded the deficient sections of ACE's environmental analysis. However, the court did not decide whether pipeline operations must cease.

VI. TEXAS SUPREME COURT

A. Communications Subject to TCPA

In *ExxonMobil Pipeline Company, et al. v. Coleman*, 512 S.W.3d 895 (Tex. 2017), the Texas Supreme Court held that communications between supervisors at ExxonMobil Pipeline Company and a former employee about the employee's failure to record storage tank levels were subject to the Texas Citizens Participation Act ("TCPA") because they were made in connection with a matter of public concern. Plaintiff Coleman was a terminal technician responsible for performing preventative maintenance on storage tanks at a pipeline terminal, including gauging the levels in the tanks each night and recording the results in the system's computer. Coleman failed to gauge a tank in August 2012, but reported that he did. When the discrepancy in tanks levels was discovered, Coleman admitted in an email exchange with the foreman that he had not gauged the tank, and after an internal company investigation, signed a statement admitting to failing to gauge the tank. Coleman was placed on leave and ultimately discharged. He then sued the foreman and his direct supervisor for defamation, alleging that statements made about the circumstance that led to his termination were untrue.

The TCPA provides a procedure for expediting dismissal of suits brought to silence a defendant's exercise of free speech, which it defines as "a communication made in connection with a matter of public concern." TEX. CIV. PRAC. & REM. CODE § 27.001(3). ExxonMobil Pipeline Company invoked TCPA and moved to dismiss the defamation claim, arguing that the TCPA applied to communications between Coleman and his supervisors. The court of appeals held that communications among ExxonMobil employees "had only a tangential relationship to health, safety, environmental, and economic concerns," But the Texas Supreme Court reversed, holding that statements about failure to gauge a tank were related to a "matter of public concern" because maintaining tank levels reduces environmental, health, safety, and economic risks associated with overfilling tanks, which may hold flammable materials.

B. Statute of Limitations for Contamination Claims

In *ExxonMobil Corporation v. Lazy R Ranch*, 511 S.W.3d 538 (Tex. 2017), the Texas Supreme Court addressed claims that ExxonMobil Corporation's oil and gas drilling operations caused hydrocarbon contamination at the Lazy R Ranch, where ExxonMobil had conducted operations for almost 60 years before selling its lease in 2008. Ranch owners brought claims for nuisance, negligence, and breach of contract and ExxonMobil moved for summary judgment, arguing that the claims were barred by the two-year statute of limitations.

Reversing in part the decision by the court of appeals, the Texas Supreme Court held that the statute of limitations barred recovery for two of the four sites of contamination, because evidence showed conclusively that contamination had occurred there prior to 2005. In holding the statute of limitations barred recovery for these sites, the court rejected the plaintiff's arguments that the "discovery rule" applied because the contamination was objectively verifiable. The court found that evidence was inconclusive about when contamination may have occurred on the other two sites, necessitating remand to the trial court for further fact finding.

C. No RRC Primary Jurisdiction over Oil and Gas Contamination Claims

In *Forest Oil Corporation v. El Rucio Land and Cattle Company, Inc., et al.*, No. 14-0979, 2017 WL 1541086 (Tex. Apr. 28, 2017), the Texas Supreme Court held that the Texas Railroad Commission ("RRC") does not have primary or exclusive jurisdiction to hear contamination claims, and refused to vacate the decision of an arbitrator when parties agreed to resolve disputes through arbitration. The case arose out of plaintiff landowner's claims against Forest Oil Company for environmental contamination. Forest Oil Company moved to compel arbitration, under the provisions of an earlier settlement agreement which incorporated an arbitration provision. Simultaneously, plaintiff asked RRC to investigate the contamination and RRC referred Forest Oil Company to its Voluntary Operator Cleanup Program.

The arbitration panel awarded the landowner $15 million for actual damages, $500,000 for exemplary damages, $6.7 million in attorney fees, and $500,000 for personal injury actual damages. Forest Oil moved to vacate on the grounds that RRC has exclusive or primary jurisdiction over the claims, precluding arbitration.

The Texas Supreme Court affirmed the decision of the court of appeals and found that the Texas Water Code does not grant RRC exclusive or primary jurisdiction over contamination suits. The court also held that, absent evidence of an arbitrator's partiality, and absent an agreement between the parties for judicial review of the arbitration award, the arbitration award should not be vacated.

D. Horizontal Drilling Not Trespass of Mineral Estate

In *Lightning Oil Company v. Anadarko E&P Onshore, LLC.*, No. 15-0910, 2017 WL 2200343 (Tex. May 19, 2017) the Texas Supreme Court affirmed the court of appeals in addressing whether an oil and gas operator's horizontal drilling through a mineral estate the operator does not own to reach minerals it had leased under an adjacent tract of land constituted trespass. Plaintiff Lightning Oil Company argued that by drilling through its mineral estate, Anadarko would produce small amounts of oil and gas from Lightning's estate in the cuttings pushed to the surface during the drilling process. Although the court agreed, it reasoned that balancing the public policy of encouraging maximum recovery of minerals and minimizing waste outweighed Lightning's small loss, which it held was "not a sufficient injury to support a claim for trespass."

VII. TEXAS COURTS OF APPEALS

A. TCEQ Necessary Party to Enforcement Settlement

In *State of Texas v. Brazoria County, et. al.*, 518 S.W.3d 926 (Tex. App.—Houston [1st Dist.] 2017, no pet.), the First Court of Appeals set aside agreed judgments between property owners and Brazoria County which purportedly resolved issues in an environmental enforcement action against the property owners for disposal of raw sewage, on-site sewage facilities, and floodplain management rules. The Texas Commission on Environmental Quality ("TCEQ") objected to the settlement. The lower court overruled TCEQ's objections and entered final judgment, but the appellate court reversed, saying that TCEQ is a "necessary and indispensable party" to the lawsuit under Texas Water Code Section 7.353. The trial court's judgment was set aside and the case was remanded for further proceedings.

VIII. CASES TO WATCH

A. One-in, Two-out Policy

In *Public Citizen v. Trump*, No. 1:17-cv-00253 (D.D.C. filed Feb. 8, 2017), plaintiffs filed suit challenging Executive Order ("EO") Number 13771, entitled "Reducing Regulation and Controlling Regulatory Costs" and related implementing guidance by the Office of Management and Budget. The complaint alleges the EO exceeds President Trump's constitutional authority, violates his duty under the Take Care Clause of the Constitution, and directs federal agencies to engage in unlawful actions." Defendants have moved to dismiss, and oral argument on the motion has been scheduled for August 10, 2017.

B. Risk Management Program

In *Air Alliance Houston, et al. v. EPA, et al.*, No. 17-1155 (D.C. Cir. filed June 15, 2017), environmental groups sued EPA for delaying implementation of the new Risk Management Program ("RMP") rule, which was finalized in December 2016 and originally set to go into effect March 21, 2017. The complaint challenges a June 14th rulemaking by EPA that postpones implementation of amendments of the new RMP rule for 20 months to allow the agency to consider petitions for reconsideration. The D.C. Circuit granted labor unions' motions to intervene on June 27, 2017.

C. Waters of the U.S.

In *In re: U.S. Dep't of Defense & U.S. Envtl. Protection Agency Final Rule: Clean Water Rule*, 817 F.3d 261 (6th Cir. 2016), *cert. granted, National Association of Manufacturers v. Department of Defense*, 85 U.S.L.W. 3344 (U.S. Jan. 13, 2017), the Supreme Court granted certiorari in an appeal of a February 2016 decision by the Sixth Circuit which held that the Sixth Circuit, not the district courts, has jurisdiction to hear the case on the merits of the legality of the Waters of the United States ("WOTUS") Rule. Due to uncertainty about whether certain CWA judicial review provisions at 33 U.S.C. § 1369 apply to the WOTUS Rule, many parties challenging the Rule brought suit in both circuit courts and district courts. By granting certiorari, the Supreme Court will have the opportunity to resolve a long-standing circuit split regarding the reach of the judicial review provisions in the CWA, which provide for direct review in appellate courts of seven distinct actions by the EPA Administrator. 33 U.S.C. § 1369(b). If the Supreme Court upholds the Sixth Circuit's decision, the ultimate ruling by the Sixth Circuit on the WOTUS Rule's validity would be applicable nationwide (assuming the case is not dismissed before that time). However, if the Supreme Court overturns the Sixth Circuit's ruling, separate district court cases could proceed and reach varying conclusions about the WOTUS Rule, potentially resulting in conflicting decisions on appeal.

The Sixth Circuit dispute about the merits of the WOTUS rule is *Murray Energy v. EPA*, No. 15-3751 (6th Cir. filed July 13, 2015). On June 30, 2017, federal respondents filed a Notice of Proposed Rule notifying the court that EPA and ACE signed a notice of proposed rulemaking to initiate review and revision of the WOTUS Rule. The proposed rulemaking was drafted in response to President Trump's February 28, 2017 Executive Order directing EPA and ACE to review the WOTUS Rule and consider interpreting the term "navigable waters" in a manner

consistent with the opinion of Justice Scalia in *Rapanos v. U.S.*, 547 U.S. 715 (2006). Once published in the Federal Register, the EPA will accept comments for 30 days and then will consider and address comments before issuing a final rule. In the meantime, the Sixth Circuit could allow litigation to continue.

D. Methane Rule

American Petroleum Institute v. EPA, No. 13-1108 (D.C. Cir. filed Apr. 3, 2013) represents consolidated challenges to EPA's Methane Rule, which establishes new emissions standards for methane and volatile organic compounds ("VOCs") for certain activities across the oil and natural gas source category. The Methane Rule was part of the Obama Administration's efforts to reduce methane emissions from the oil and natural gas sector by 40-45% below 2012 levels by 2025. The D.C. Circuit granted a motion to hold the case in abeyance on May 18, 2017, in light of President Trump's "Energy Independence" Executive Order, which directed the agency to review the Methane Rule and, if appropriate, initiate rulemaking proceedings to suspend, revise or rescind that Rule. The court proceedings are paused pending EPA's notification of what action it determines it will be taking with respect to the Rule after its review.

In *Clean Air Council, et al. v. EPA*, No. 17-1145 (D.C. Cir. filed June 5, 2017), environmental group petitioners challenged EPA's June 5, 2017 "notice of reconsideration and partial stay" for 90 days of the Methane Rule. 82 Fed. Reg. 25,730 (June 5, 2017). The D.C. Circuit lifted the stay on July 3, 2017 in a divided panel, saying EPA did not have authority under the CAA to suspend the Rule. On July 14, a D.C. Circuit panel agreed to delay for two weeks its mandate requiring EPA to lift the Methane Rule stay, allowing the agency to determine whether to seek rehearing or pursue other relief.

E. Clean Power Plan

The case regarding the legality of the Obama Administration's Clean Power Plan ("CPP") is *State of West Virginia v. EPA*, No. 15-1363 (D.C. Cir. filed Oct. 23, 2015). The CPP establishes greenhouse gas emissions standards for new, modified, and reconstructed coal-fired electric generating units and parameters for states to regulate existing electric generating units. Petitioners challenged the rule in 2015. The D.C. Circuit heard oral arguments in September 2016 and was poised to decide the case on the merits, but in April the court granted EPA's request to hold the litigation in abeyance in light of President Trump's "Energy Independence" Executive Order to the allow the agency time to review and potentially reconsider the CPP.

The challenge to EPA's greenhouse gas ("GHG") emissions rule for new and reconstructed power plants is *State of North Dakota v. EPA*, No. 15-1381 (D.C. Cir. filed Oct. 23, 2015). Like other roll-backs of Obama Administration rules, the D.C. Circuit granted a motion to hold this case in abeyance in May 2017 to allow the EPA time to review and reconsider the rule.

F. Utility MACT Rule

In *Murray Energy Corp. v. EPA*, No. 16-1127 (D.C. Cir. filed Apr. 25, 2016), petitioners challenged EPA's revised cost assessment for its Mercury and Air Toxics Standards ("MATS") air rule, commonly known as the "Utility MACT." In *ARIPPA v. EPA*, No. 15-1180 (D.C. Cir. filed June 22, 2016), petitioners challenged EPA's denial of petitions to reconsider aspects of the

Utility MACT. The D.C. Circuit granted EPA's requests in both cases in April to indefinitely delay oral argument and hold the cases in abeyance while EPA considers petitions to reconsider.

G. SSM SIP Call

In *Walter Coke, Inc. v. EPA*, No. 15-1166 (D.C. Cir. filed June 12, 2015), industry petitioners challenged EPA's May 2015 rulemaking which prohibits states from exempting startup, shutdown, and malfunction ("SSM") events from compliance requirements in their State Implementation Plan ("SIP") regulations. The rule sets forth findings that SSM provisions in the SIPs of 36 states fail to meet the requirements of the CAA and issues a SIP call for each of those states (one of which is Texas). In April, the D.C. Circuit granted EPA's request to indefinitely postpone oral argument and hold the case in abeyance while EPA reconsiders the rule.

Case Law Update

29th Annual Texas Environmental Superconference

August 3-4, 2017

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Waterkeeper Alliance v. EPA

853 F.3d 527 (D.C. Cir. 2017)

- Court vacated EPA's 2008 rule generally exempting farms from requirements to notify the agency of hazardous air releases from animal waste under CERCLA.
- EPA argued animal-waste reports are unnecessary because federal response is "impractical and unlikely," but court held this was not a justified interpretation of the statute.

2

Katten

Delaware Riverkeeper Network v. Federal Energy Regulatory Commission

857 F.3d 388 (D.C. Cir. 2017)

- FERC's issuance of a certificate of public convenience did not violate CWA Section 401.
- Certificate of public convenience did not authorize an activity that could result in discharge, so did not trigger Section 401 certification requirements.

3

Katten

Environmental Integrity Project et al. v. U.S. Environmental Protection Agency

No. 16-5109, 2017 WL 2324136 (D.C. Cir. May 30, 2017)

- Court held CWA 308 exemptions to public disclosure do not supersede FOIA Exemption 4.
- CWA 308 exempts only trade secrets. FOIA Exemption 4 exempts both trade secrets and commercial or financial information.
- EPA can invoke FOIA Exemption 4 to protect commercial information.

4

Katten

American Petroleum Institute v. EPA

No. 09-1038, 2017 WL 2883867 (D.C. Cir. July 7, 2017)

- Court vacated portions of EPA's 2015 Rule on the Definition of Solid Waste.
- The 2015 Rule expanded the scope of its predecessor's 2008 Rule's "legitimacy factors" to cover all recycling.
- Court vacated the fourth legitimacy factor requiring that product of the recycling process be comparable to a legitimate product or intermediate.
- Factor 4 imposes "tasks tangential to disposal...thus tangential to EPA's authority."

5

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Delek Refining, Ltd. v. Occupational Safety and Health Review Commission

845 F.3d 170 (5th Cir. 2016)

- Court refused to extend OSHA's six-month statute of limitations for issuing citations in absence of a continuing unlawful risk to employee safety and health.
- Court rejected OSHA's "continuing violation" theory as applied to citations for failure to timely resolve audit findings and recommendations.

6

Katten

Markle Interests, LLC, et al. v. United States Fish and Wildlife Service, et al.

848 F.3d 635 (5th Cir. 2017)

- Court voted not to rehear *en banc* decision affirming FWS decision to designate critical habitat for the dusky gopher frog.
- Ephemeral ponds in Louisiana included in designation because they could support the frog's reproduction.

7

Katten

Equal Employment Opportunity Commission v. BDO USA, LLP

856 F.3d 356 (5th Cir. 2017)

- Court held privilege log submitted to a federal agency was insufficiently detailed to prove attorney-client privilege.
- Court remanded to lower court for determination about documents applying the correct attorney-client privilege standard.

8

Katten

Catskill Mountains Chapter of Trout Unlimited, Inc. v. EPA

846 F.3d 492 (2nd Cir. 2017)

- Court affirmed EPA's 2008 Water Transfers Rule.
- Court applied *Chevron* deference, reasoning that EPA's interpretation was supported by several valid arguments whether or not its interpretation was the "best or most faithful interpretation of the [CWA]."

9

Katten

Ohio Valley Environmental Coalition, et al. v. Fola Coal Company, Limited

845 F.3d 133 (4th Cir. 2017)

- Court held mining company violated narrative requirements in its NPDES permit by discharging ions and sulfates.
- Company's "permit shield" argument unsuccessful despite state environmental agency's agreement with company's interpretation of its permit.

10

Katten

US v. DTE Energy Company

845 F.3d 735 (6th Cir. 2017)

- EPA challenged modification activities undertaken by coal-fired power plant owner/operator, claiming they required an NSR permit.
- Reversing lower court's judgment, Sixth Circuit declined to grant summary judgment to coal-fired power plant owner/operator.
- Owner/operator was not required to obtain EPA's approval of the projects before beginning construction, but "proceeded at its own risk."

11

Katten

Environment Texas Citizen Lobby, Inc. v. ExxonMobil Corporation

No. H-10-4969, 2017 WL 2331679 (S.D. Tex. Apr. 26, 2017)

- Court granted penalties of $19.9 million in CAA citizen suit.
- Decision made on remand, after Fifth Circuit vacated district court's prior ruling and held that it erred in its analysis of liability and incorrectly applied CAA penalty factors.
- Court also granted attorneys' fees, but denied plaintiff's motion for declaratory judgment and injunctive relief.

12

Katten

Sierra Club v. Chesapeake Operating, LLC

2017 WL 1287546 (W.D. Okla. Apr. 4, 2017)

- Court denied request for injunction under citizen suit provisions of RCRA.
- Plaintiffs argued deep injection of oil and gas extraction waste was contributing to an increase in earthquakes in Oklahoma.
- Court exercised *Burford* abstention and primary jurisdiction doctrine, deferring to the Oklahoma Corporation Commission.

13

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Standing Rock Sioux Tribe v. U.S. Army Corps of Engineers, No. 16-1534, 2017 WL 2573994 (D.D.C. June 14, 2017)

- Challenges alleged the U.S. Army Corps of Engineers' authorization of the Dakota Access crude oil pipeline under a waterway bordering reservations of the Standing Rock Sioux Tribe and the Cheyenne River Sioux Tribe violated NEPA.
- Court held that while the Corps "substantially complied with NEPA in many areas," it did not adequately consider the effects of an oil spill on fishing and hunting rights or environmental justice.

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Forest Oil Corporation v. El Rucio Land and Cattle Company, Inc., et al.

No. 14-0979, 2017 WL 1541086 (Tex. Apr. 28, 2017)

- Texas Supreme Court held RRC does not have primary or exclusive jurisdiction to hear oil and gas contamination claims.

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Lightning Oil Company v. Anadarko E&P Onshore, LLC

No. 15-0910, 2017 WL 2200343 (Tex. May 19, 2017)

- Court held horizontal drilling did not constitute a trespass of a mineral estate.
- Public policy interests in recovering maximum recovery of minerals and minimizing waste outweighed small amount of harm caused by incidental production of material from plaintiff's mineral estate.

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State of Texas v. Brazoria County, et al.

518 S.W.3d 926 (Tex. App.—Houston [1st Dist.] 2017, no pet.)

- Court held TCEQ was a necessary and indispensable party to a settlement between property owners and Brazoria County.
- Court set aside agreed judgments between property owners and Brazoria County resolving environmental enforcement action where TCEQ objected to the settlement.

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Cases to Watch

- *Public Citizen v. Trump*, No. 1:17-cv-00253, (D.D.C. filed Feb. 8, 2017)
- *Air Alliance Houston, et al. v. EPA, et al.*, No. 17-1155 (D.C. Cir. filed June 15, 2017)
- *In re: U.S. Dep't of Defense & U.S. Envtl. Protection Agency Final Rule: Clean Water Rule*, 817 F.3d 261 (6th Cir. 2016), *cert. granted, National Association of Manufacturers v. Department of Defense,* 85 U.S.L.W. 3344 (U.S. Jan. 13, 2017) (No. 16-299).
- *Indigenous Envtl. Network et al v. U.S. Dep't of State et al*, No. 4:17-cv-00029 (Dist. Mont. Filed Mar. 27, 2017)
- *Northern Plains Res. Council et al v. Thomas A. Shannon, Jr., et al*, 4:17-cv-00031 (Dist. Mont. Filed Mar. 30, 2017)
- *American Petroleum Institute v. EPA*, No. 13-1108 (D.C. Cir. filed Apr. 3, 2013)

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Cases to Watch

- *Clean Air Council, et al. v. EPA*, No. 17-1145 (D.C. Cir. filed June 5, 2017)
- *State of West Virginia v. EPA*, No. 15-1363 (D.C. Cir. filed Oct. 23, 2015)
- *Murray Energy Corp. v. EPA*, No. 16-1127 (D.C. Cir. filed Apr. 25, 2016)
- *Walter Coke, Inc. v. EPA*, No. 15-1166 (D.C. Cir. filed June 12, 2015)

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Endangered Species Act Developments

Brooke M. Wahlberg, Nossaman LLP

I. Endangered Species Act (ESA) Basics

While this presentation focuses on recent ESA developments, the following is a brief recap of the ESA framework to help put the new developments in context. Congress enacted the ESA in 1973.[1] Two agencies administer the ESA: the US Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) (together, Services). Most legal work centers on five ESA sections:

- Section 4 - Listing of Species and Designation of Critical Habitat

This section sets forth the process for listing and delisting species as well as the designation of critical habitat.[2] A significant proportion of ESA litigation involves "missed deadline" cases based on this ESA section that challenge the Services' failure to reach statutory "90-day" and "12-month" findings on citizen petitions to list, delist, or reclassify a species or to designate or amend critical habitat for a species.

- Section 9 - Prohibition of "Take" of Listed Species

Section 9 contains the legal linchpin of the ESA. "Take" of a listed species is prohibited: "It is unlawful for any person to take any such [endangered] species [of fish or wildlife] within the United States or the territorial seas of the United States."[3] The term "take" means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."[4] "Harm" is further defined by USFWS regulation as:

> [A]n act which actually kills or injures wildlife. Such act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.[5]

A significant body of case law has developed the meaning of "harm" and related issues of evidentiary requirements, proximate causation, and foreseeability since the 1995 seminal Supreme Court case *Babbitt v. Sweet Home Chapter of Communities for a Great Oregon.*[6]

- Section 7 - Federal Agency Consultations

Section 7 requires federal action agencies to consult with the Services to "[e]nsure that any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the

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[1] Pub. L. No. 93–205, 87 Stat. 884 (1973), codified at 16 U.S.C. §§ 1531–1544
[2] 16 U.S.C. § 1533.
[3] *Id.* § 1538(a)(1)(B).
[4] *Id.* § 1532(19).
[5] 50 C.F.R. § 17.3.
[6] Babbitt v. Sweet Home Chapter of Cmtys. for a Great Or., 515 U.S. 687 (1995).

continued existence of any endangered species or threatened species or result in the destruction or adverse modification of [designated critical] habitat of such species."[7] "Jeopardize the continued existence of" is defined by joint Services regulation as "to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species.[8] "Adverse modification" of critical habitat is also defined by regulation as follows:

Destruction or adverse modification means a direct or indirect alteration that appreciably diminishes the value of critical habitat for the conservation of a listed species. Such alterations may include, but are not limited to, those that alter the physical or biological features essential to the conservation of a species or that preclude or significantly delay development of such features.[9]

- Section 10 - Incidental Take Permits (Habitat Conservation Plans)

Non-federal actors seeking incidental take authorization under the ESA can do so under section 10(a)(1)(A) and section 10(a)(1)(B).[10] "Incidental take" is defined by USFWS regulation as "any taking otherwise prohibited, if such taking is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity."[11] Section 10(a)(1)(A) provides for scientific research permits and enhancement of survival (EOS) permits.[12] Section 10(a)(1)(B) provides for incidental take permits (ITPs) and requires that applications be accompanied by Habitat Conservation Plans (HCP).[13] The Services must review an HCP to evaluate whether it meets several issuance criteria.[14] The ITP process also requires National Environment Policy Act (NEPA) and ESA section 7 analyses.

- Section 11 – Enforcement (Including Citizen Suits)

In addition to the federal government's ability to pursue criminal sanctions, civil penalties, and injunctions for ESA violations, ESA section 11(g) provides expressly for citizen suits that seek injunctions or that seek to compel the Services to perform any non-discretionary ESA duty.[15] That is, a third party, with adequate 60-day notice, can sue the Services or a private party on ESA grounds.[16]

II. New Rules and Guidance

As the Obama Administration drew to a close, USFWS issued numerous new and revised ESA-related regulations and guidance documents between mid-2016 and early 2017. Each of the

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[7] 16 U.S.C. § 1536(a)(2).
[8] 50 C.F.R. § 402.02.
[9] *Id.* The prior definition of "destruction or adverse modification" had been invalidated by the courts, and the Services issued a revised definition in February 2016. The fate of that definition is now being litigated as described in greater detail below.
[10] 16 U.S.C. § 1539(a)(1).
[11] 50 C.F.R. § 17.3.
[12] 16 U.S.C. § 1539(a)(1)(A).
[13] *Id.* § 1539(a)(1)(B).
[14] *Id.* § 1539(a)(2).
[15] *Id.* § 1540.
[16] *Id.* § 1540(g).

following regulations and guidance documents are discussed in detail in the following sections. The parentheticals note which ESA section discussed above is most relevant to the new rule/guidance.

- Revised rule governing petition requirements (section 4)
- Policy establishing methodology for prioritizing status reviews and 12-month findings on listing petitions (section 4)
- Peer review guidance for listing and recovery actions (section 4)
- Updated National Listing Workplan (section 4)
- Revised Candidate Conservation Agreement with Assurances (CCAA) rules and policy (section 10(a)(1)(A))
- Policy regarding voluntary prelisting conservation actions (section 7 & 10)
- Revised USFWS Mitigation Policy and new ESA Compensatory Mitigation Policy (sections 7 and 10, respectively)
- Revised HCP Handbook (section 10(a)(1)(B))

III. Petitions Rule

USFWS finalized its "Revisions to the Regulations for Petitions" in fall of 2016.[17] These updated regulations address petitions to list, delist, and reclassify species as well as petitions to designate or revise critical habitat.[18] Under ESA section 4, any person can submit a petition requesting that USFWS consider action to change the listing status of a species.[19] ESA section 4 dictates timelines by which USFWS must address the petition.[20] USFWS findings on a petition are subject to judicial review.[21] The USFWS' stated intentions for the updated regulations are that:

- The revisions are intended to improve quality of petitions by delineating clear, heightened content requirements to enable efficient and informed decision making.
- The revised regulations limit petitions to one species per petition. Previously, several environmental non-governmental organizations (ENGOs) regularly submitted "mega-petitions" triggering the review of the status of tens or hundreds of species at once.
- The revised regulations now require 30-days' notice to states within the range of the species at issue in the petition.
- The revised regulations introduce the concept of "new information" into the statutory standard of "substantial scientific or commercial information." In doing so, the

[17] 81 Fed. Reg. 66,462 (Sept. 27, 2016).
[18] Id.
[19] 16 U.S.C. § 1533(b)(3).
[20] *Id.*
[21] *Id.* § 1533(b)(3)(C)(ii).

regulations put the onus on the petitioner to demonstrate that the information supporting its requested action includes new data, a new analysis, or a new interpretation that has not previously been considered by the Service in a judicially-reviewable action (i.e., a 90-day or 12-month finding on a petition, but not a 5-year status review or a recovery plan, which are not judicially reviewable).

IV. Listing Prioritization Methodology

Closely related to the revised petition regulations, USFWS also issued a "Methodology for Prioritizing Status Reviews and Accompanying 12-Month Findings on Petitions for Listing."[22] The methodology is a policy document that lays out the USFWS method of prioritizing outstanding workload specific to species status reviews by establishing a 5 "priority bin" method of prioritization.

V. Updated National Listing Workplan

In 2011, USFWS entered into a multi-district litigation settlement for its failure to meet ESA deadlines for determinations on mega-petitions filed by ENGOs. As part of that settlement, USFWS published a listing workplan that included court-mandated deadlines for making decisions on species status and critical habitat designations. That workplan timeline ended in 2015. In September 2016, USFWS voluntarily updated its workplan, setting forth the next seven years of species status reviews.[23] These include both listing determinations and critical habitat designations. The 2016 workplan includes the 362 highest-priority pending listing and critical habitat decisions for petitioned and candidate species. The workplan functions in conjunction with the revised petition regulations in that it aims to strategically and transparently work through the decision making backlog on a publicly-available and reasoned timeline while concurrently avoiding the unwarranted creation any additional backlog through initial positive findings on insubstantial petitions. The revised petitions regulations, listing prioritization methodology, and updated listing workplan together aim to systematically improve USFWS administration of ESA section 4 by deliberately prioritizing USFWS actions in light of limited resources and statutory conservation purposes, which may minimize future deadlines-based litigation.

VI. CCAA Rules and Policy

ESA section 10(a)(1)(A) provides for scientific research permits and EOS permits.[24] One type of EOS permit includes a CCAA, which is available where a prospective permittee seeks incidental take coverage for a candidate species[25] and is willing to commit to certain conservation measures outlined in a CCAA that satisfies the issuance criteria set forth in the CCAA regulations.[26] Two CCAAs currently exist in Texas—one for the lesser prairie-chicken and one for the dunes sagebrush lizard—both of which are geared toward landowners with oil and gas, ranching and/or agricultural operations that could result in "take" of the species. In

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[22] 81 Fed. Reg. 49,248 (July 27, 2016).
[23] "National Listing Workplan," U.S. Fish and Wildlife Service (Sept. 2016), *available at* https://www.fws.gov/endangered/esa-library/pdf/Listing%207-Year%20Workplan%20Sept%202016.pdf.
[24] 16 U.S.C. § 1539(a)(1)(A).
[25] Candidate species are plants and animals for which USFWS has sufficient information on their biological status and threats to propose them as endangered or threatened , but for which development of a proposed listing regulation is precluded by other higher priority listing activities.
[26] 50 C.F.R. § 17.22(d).

return for the commitment to the conservation measures outlined in the CCAA, the participating landowners receive regulatory assurances through the EOS permit so that, if the species is listed as endangered or threatened and the landowner continues to adhere to its CCAA commitments, any incidental take that may occur is authorized by the EOS. At the end of 2016, USFWS revised the CCAA regulations and associated policy.[27] The revisions focused on the following:

- Introduced the "net conservation benefit" standard to replace the previous standard, which had included a hypothetical concept of conservation measures needing to be implemented on "other necessary properties" that created confusion (i.e., to approve a CCAA, the Service had to '"determine that the benefits of the conservation measures implemented by a property owner under a CCAA, when combined with those benefits that would be achieved if it is assumed that conservation measures were also to be implemented on other necessary properties, would preclude or remove any need to list the covered species"). This change clarifies the level of conservation effort required in each agreement.

- Clarified that a "landowner" eligible to enter into a CCAA includes leaseholders that have the authority to carry out the terms of the CCAA on their enrolled properties. Also clarified.

- Introduced the concept of "key threats" that must be addressed by a CCAA.

VII. Voluntary Prelisting Conservation Actions Policy

Many project proponents encounter species that are not yet listed or candidate species, either of which may be listed in the near future. A clear policy did not exist to allow USFWS to give post-listing credit for mitigation activities taken prior to listing. Consequently, USFWS has often been hesitant to provide credit ahead of any determinations, and high-quality mitigation opportunities are lost. USFWS has been in the process of developing an advance credit policy for many years—an advance notice of proposed rulemaking and draft policy had been published in 2012 and 2014, respectively. On January 18, 2017, Director's Order No. 218 issued a final policy on crediting of mitigation implemented in advance of the impact. The policy creates a structured system for awarding post-listing credit for "qualifying actions" undertaken prior to a species' listing. Its stated intention is to give landowners, government agencies, and others incentives to carry out voluntary conservation actions for non-listed species by allowing the benefits to the species from a voluntary conservation action undertaken prior to listing to be used—either by the person who undertook such action or by a third party—to mitigate or to serve as a compensatory measure for the detrimental effects of another action undertaken after listing.

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[27] Revisions to the Regulations for CCAAs, 81 Fed. Reg. 95,053 (Dec. 27, 2016); Revised CCAA Policy, 81 Fed. Reg. 95,164 (Dec. 27, 2016).

VIII. USFWS "Umbrella" Mitigation Policy, ESA Compensatory Mitigation Policy, and Interim Guidance on Implementing ESA Compensatory Mitigation Policy

The November 3, 2015 Presidential Memorandum entitled "Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment" required USFWS (among other agencies) to produce mitigation policies consistent with the Presidential Memorandum, which focused on encouragement of advance, durable, landscape-scale mitigation. In response to this requirement, USFWS issued a series of mitigation policies: (1) an "umbrella" mitigation policy;[28] (2) an ESA-focused policy;[29] and (3) an interim guidance document focused on the implementation of the ESA-focused policy.[30]

Umbrella Mitigation Policy

The umbrella mitigation policy revises the USFWS' 1981 Mitigation Policy. It applies to all aspects of USFWS jurisdiction but expressly does not cover mitigation in the context of the ESA. The umbrella policy emphasizes the mitigation hierarchy—requiring first avoidance, then minimization, and then mitigation. It also emphasizes a "net benefit goal or, at a minimum, a no net loss goal" for natural resources. The umbrella mitigation policy encourages the implementation of mitigation in advance of impacts. This is at odds with another goal of the umbrella mitigation policy, landscape-scale mitigation. Implementation of mitigation ahead of impacts may foreclose opportunities to combine mitigation efforts to secure larger, landscape-scale opportunities. The umbrella mitigation policy does recognize that research or education may be included as part of a compensatory mitigation package. It also recognizes new, innovative mitigation mechanisms such as habitat credit exchanges. This policy defers to the ESA Compensatory Mitigation Policy for all ESA-related mitigation.

ESA Compensatory Mitigation Policy and Interim Guidance on Implementation

The ESA Compensatory Mitigation Policy addresses compensatory mitigation in both ESA section 7 and section 10 contexts. It also uses the same "net benefit" or, at a minimum, "no net loss" standard, which is a higher standard than what is required by ESA section 10 ("minimize and mitigate to the maximum extent practicable"). ESA section 7 does not require nor contemplate compensatory mitigation, yet this policy emphasizes compensatory mitigation in the ESA section 7 context. This ESA-specific policy relies upon mitigation sequencing (i.e., avoid, then minimize, then mitigate). This sequencing directly contradicts the USFWS' prior interpretation and the D.C. Circuit's holding in favor of that USFWS interpretation in the *Union Neighbors* decision.[31]

In January 2017, USFWS published Interim Guidance on Implementing the ESA Compensatory Mitigation Policy. The Interim Guidance is a logistical companion piece to the ESA

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[28] Revised USFWS Mitigation Policy, 81 Fed. Reg. 83,440 (Nov. 21, 2016).
[29] USFWS ESA Compensatory Mitigation Policy, 81 Fed. Reg. 95,316 (Dec. 27, 2016).
[30] Interim Guidance on Implementing the ESA Compensatory Mitigation Policy, USFWS Deputy Director Memorandum (Jan. 17, 2017), *available at* https://www.fws.gov/endangered/improving_ESA/pdf/Interim_Guidance_for_Implementing_the_Endangered%20Species%20Act%20Jan%202017.pdf.
[31] *Union Neighbors United, Inc. v. Jewell*, 831 F.3d 564, 568 (D.C. Cir. 2016) (upholding USFWS' finding, which accounted for minimization and mitigation together before finding that such measures were to the "maximum extent practicable").

Compensatory Mitigation Policy. It sets forth the documentation required for mitigation proposals and provides more practical details regarding easements, endowment funding, and process. Notably, the Interim Guidance applies retroactively to amendments and modifications of existing instruments. Interestingly for Texas, the Interim Guidance expresses a strong preference that mitigation sites possess unified mineral and surface estates and even goes so far to encourage mitigation proponents to attempt to reunify split estates.

IX. Revised HCP Handbook

In December 2016, USFWS revised its 1996 HCP Handbook.[32] The revised HCP Handbook is a substantial re-write of the 1996 version and expands to nearly 400 pages. While the majority of HCPs are project-specific or low-effect HCPs, the revised HCP Handbook focuses primarily on large-scale and regional HCPs. Like the mitigation policies, the HCP Handbook emphasizes "net benefit" or "no net loss" despite the ESA not requiring such a standard. Additionally, the HCP Handbook is inconsistent throughout in its treatment of minimization and mitigation. In some instances, the HCP Handbook echoes the mitigation policies' emphasis on a sequential approach of avoidance, minimization, and mitigation. In other instances, the HCP Handbook describes the obligation to "minimize and mitigate to the maximum extent practicable" in a manner consistent with the D.C. Circuit's holding in *Union Neighbors*.

X. Critical Habitat Litigation

Markle Interests

In June 2016, the Fifth Circuit upheld USFWS' designation of unoccupied critical habitat for the dusky gopher frog.[33] This holding has a potentially significant impact on the future of critical habitat designations. USFWS had designated critical habitat in an area that was not occupied by the species, did not contain the habitat characteristics for the dusky gopher frog, and had no indication that the area would regain the characteristics that would make it suitable for the dusky gopher frog. Lumber interests challenged the designation, and the Fifth Circuit upheld the USFWS action. USFWS carried out this designation under the previous critical habitat rules (i.e., the pre-2016 rules). The previous critical habitat rules required a higher standard ("essential to the conservation of the species") for unoccupied habitat and that any critical habitat contain elements necessary to support the species. On July 11, 2017, the lumber interest filed a petition for certiorari with the Supreme Court seeking review of the Fifth Circuit's decision.

States' Critical Habitat Suit

In November 2016, 18 states filed litigation against USFWS and NMFS challenging the two critical habitat rules USFWS promulgated in February 2016 and seeking vacatur of those rules.[34] The complaint asserts that the critical habitat rules unlawfully expand federal government's control over state lands and waters. In particular, the complaint focuses on aspects of the 2016 rules that do away with the longstanding interpretation that the ESA establishes a higher standard for designation of unoccupied habitat than for occupied habitat. This lawsuit has been stayed during the transition to the Trump Administration.

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[32] Joint USFWS and NMFS Habitat Conservation Planning Handbook, 81 Fed. Reg. 93,702 (Dec. 21, 2016)
[33] Markle Interests, L.L.C. v. U.S. Fish and Wildlife Serv., 827 F.3d 452 (5th Cir. 2016).
[34] *State of Alabama v. Nat'l Marine Fisheries Serv.*, No. 1:16-cv-00593 (S.D. Ala. filed Nov. 29, 2016).

XI. Texas ESA Litigation

South Texas Sea Turtle Case

In *Friends of Lydia Ann Channel v. U.S. Army Corps of Engineers, LLC*,[35] plaintiffs challenged a letter of permission (LOP) that the U.S. Army Corps of Engineers (USACE) issued for the construction of a mooring project. USACE discovered that the project proponent failed to comply with the terms of the LOP and that LACM's stated purpose and need differed from what had been provided to USACE. USACE suspended and eventually revoked the LOP and began the process of developing a restoration and removal plan, as USACE had deemed the mooring construction project unauthorized. During this time, the project continued to operate. Plaintiffs alleged that USACE failed to meet its duties under ESA Section 7 and that continued operation of the project could adversely affect listed species. In reviewing the USACE's evaluation of the project, the administrative record did not include any indication that USACE received or reviewed any studies on potential impacts of the mooring project to ESA-listed species in the Channel (including whooping crane, piping plover, West Indian manatee, and several species of sea turtle, among others). Plaintiffs won their motion for preliminary injunction based upon the high probability of direct take of endangered green sea turtles and Kemp's ridley sea turtles as a result of the continued operation of the mooring project during USACE review of the proposed restoration and removal plan. The court relied on expert testimony that sea turtles are attracted to the area due to algae growing on the mooring structures, and when temperatures in the Channel drop below 40 degrees, the turtles will be "cold stunned" and likely unable to react in time to avoid barge traffic using the mooring project.

Central Texas MoPac Litigation

In *Fath, et al. v. Texas Department of Transportation*, plaintiffs Shudde Fath, Save Our Springs Alliance, and others challenged TxDOT's approval of three highway projects—MoPac South Express Lanes, MoPac South Intersections, and State Highway 45 Southwest ("SH 45 SW")—alleging that the projects were improperly segmented and should have been analyzed under one environmental impact statement ("EIS") in accordance with the National Environmental Policy Act ("NEPA").[36] Pursuant to a Memorandum of Understanding between TxDOT and the Federal Highway Administration ("FHWA"), TxDOT functions as FHWA for NEPA purposes where state projects have received federal funding or are otherwise subject to FHWA jurisdiction. While the MoPac South Express Lanes and MoPac South Intersections projects are federally funded, SH 45 SW is a state-only project, funded with state and local dollars, that seeks no federal permitting or authorizations. Plaintiffs claim that TxDOT should have evaluated whether and to what degree the three projects cumulatively would impact the Edwards Aquifer and the species that depend on it. Defendants maintain that the three projects are distinct and separate, that the MoPac Express Lanes project is not ripe for review, that SH 45 SW is a non-federal project and was not improperly segmented, and that, in any event, TxDOT took a sufficient look at cumulative impacts, to the degree such an inquiry was required. Oral argument was taken on March 22, 2017, and a ruling is awaited.

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[35] No. 2:15-CV-0514, 2017 WL 958652 (S.D. Tex. Mar. 13, 2017), *appeal docketed*, No. 17-40259 (5th Cir. Mar. 14, 2017).

[36] *Fath, et al. v. TxDOT*, 1:16-cv-00234 (W.D. Tex. filed Feb. 2016).

XII. Other Texas ESA Developments: Species Updates

USFWS has taken action on several species occurring in Texas. A brief summary of the latest developments is provided below:

- Black-capped vireo
  - On Dec. 15, 2016, USFWS proposed delisting the species following consideration of a 2012 petition to downlist the species to threatened status due to recovery.[37] According to the recently-updated Unified Agenda, USFWS anticipates final action on its proposed delisting in January 2018.[38]
- Golden-cheeked warbler
  - On June 5, 2017, the Texas General Land Office, represented by the Texas Public Policy Foundation, filed litigation challenging USFWS' negative "90-day finding" on a petition to delist the golden-cheeked warbler.[39]
- Tobusch fishhook cactus
  - On Dec. 28, 2016, USFWS proposed to downlist the Tobusch fishhook cactus.[40] On June 13, 2017, USFWS reopened comment period to remedy a procedural deficiency regarding local newspaper notice of the proposed rule.[41] A final USFWS action is anticipated in January 2018.[42]
- Five freshwater mussels species
  - Four candidate species are the focus of an ongoing stakeholder work group led by the Texas Comptroller's Office.
  - USFWS proposed the Texas hornshell for listing as endangered on August 10, 2016.[43] On May 30, 2017, USFWS reopened comment period,[44] and a final listing determination is anticipated in August 2017.[45]
- Lesser prairie-chicken
  - On Nov. 30, 2016, USFWS made a positive 90-day finding on a petition to list the lesser prairie-chicken following the species' removal from the list of threatened

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[37] 81 Fed. Reg. 90762 (Dec. 15, 2016).
[38] 2017 Unified Agenda of Federal Regulatory and Deregulatory Actions," Office of Information and Regulatory Affairs (July 20, 2017).
[39] General Land Office of the State of Texas v. U.S. Fish and Wildlife Serv., No. 1:17-cv-538 (W.D. Tex. Filed June 5, 2017).
[40] 81 Fed. Reg. 95932 (Dec. 29, 2016).
[41] 82 Fed. Reg. 27033 (June 13, 2017).
[42] 2017 Unified Agenda of Federal Regulatory and Deregulatory Actions," Office of Information and Regulatory Affairs (July 20, 2017).
[43] 81 Fed. Reg. 52796 (Aug. 10, 2016).
[44] 82 Fed. 24654 (May 30, 2017).
[45] 2017 Unified Agenda of Federal Regulatory and Deregulatory Actions," Office of Information and Regulatory Affairs (July 20, 2017).

species earlier that year. Pursuant to ESA section 4, USFWS should make its 12-month finding in fall of 2017,[46] and USFWS anticipates reaching a listing determination in September 2017.[47]

XIII. Recent Texas Habitat Conservation Plans

Several significant ITPs have been issued in Texas in recent years and several more are currently in development.

- Utility-scale HCPs – Several Texas utilities have obtained or are in the process of pursuing ITPs on a system-wide scale. These include Oncor (2012), LCRA (2012), CPS Energy (in development), and others.

- Southern Edwards Plateau HCP (2015) – The most recent regional HCP to be approved is the SEP HCP. Authorized activities include commercial and residential development and infrastructure projects in the City of San Antonio and Bexar County. The ITP includes take authorization of nine listed species.

- Heart of Texas HCP (2017) – This ITP addresses construction and other activities associated with a 10,808 acre wind energy project in McCulloch County. It is a single-species authorization for the black-capped vireo.

- Draft Barton Springs Edwards Aquifer Conservation District HCP (in development) – The conservation district is seeking an ITP for certain pumping activities that may result in take of the Austin blind salamander and Barton Springs salamander. The public comment period is currently open until mid-September.

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[46] 81 Fed. Reg. 86315 (Nov. 30, 2016).
[47] 2017 Unified Agenda of Federal Regulatory and Deregulatory Actions," Office of Information and Regulatory Affairs (July 20, 2017).

NOSSAMAN LLP

Endangered Species Act Developments

Texas Environmental Superconference

August 3, 2017

Presented by Brooke M. Wahlberg, Partner

nossaman.com

MAKING IT HAPPEN.

Endangered Species Act Recap

- Enacted by Congress in 1973 (16 U.S.C. § 1531 et seq.)
- Administered by US Fish & Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS)
- Key Sections:
  - Section 4 - Listing of Species and Designation of Critical Habitat
  - Section 9 - Prohibition of "Take" of Listed Species
  - Section 7 - Federal Agency Consultations
  - Section 10 - Incidental Take Permits (Habitat Conservation Plans)
  - Section 11 – Enforcement (citizens may sue)

MAKING IT HAPPEN.

New Rules and Guidance

USFWS issued numerous new and revised ESA-related regulations and guidance documents between mid-2016 and early 2017:

- Revised rule governing petition requirements
- Rule establishing methodology for prioritizing status reviews and 12-month findings on listing petitions
- Peer review guidance for listing and recovery actions
- Updated National Listing Workplan
- Revised CCAA rules and policy
- Policy regarding voluntary prelisting conservation actions
- Revised FWS Mitigation Policy and ESA Compensatory Mitigation Policy
- Revised HCP Handbook

Petitions Rule

- Revisions to the Regulations for Petitions, 81 Fed. Reg. 66462 (Sept. 27, 2016)
  - Covers petitions to list/delist/reclassify species and to revise critical habitat
  - Intended to improve quality of petitions by delineating clear, heightened content requirements to enable efficient and informed decision making
  - Limits petitions to one species per petition
  - Requires 30-days' notice to states
  - Introduces concept of "new information" into the statutory standard of "substantial scientific or commercial information"



Listing Prioritization Methodology

- Methodology for Prioritizing Status Reviews and Accompanying 12-Month Findings on Petitions for Listing, 81 Fed. Reg. 49248 (July 27, 2016)
  - Explains FWS method of prioritizing outstanding workload (acknowledges insufficient resources to meet ESA determination deadlines)
  - Establishes a 5 "priority bin" method of prioritization
  - Ties in with the revised Petitions Rule and revised Listing Workplan

Updated Listing Workplan

- USFWS National Listing Workplan (September 2016 version)
  - 7-year workplan for FWS petition reviews (90-day and 12-month findings), status reviews, proposed and final listing determinations, and proposed and final critical habitat rulemakings
  - Current version includes the 362 highest priority pending listing and critical habitat decisions for petitioned and candidate species
  - *Available at* https://www.fws.gov/endangered/improving_esa/pdf/Listing%207-Year%20Workplan%20Sept%202016.pdf
- Revised Petitions Rule aims to prevent erroneous positive 90-day findings on petitions to avoid creation of any additional backlog

CCAA Rules and Policy

- Revisions to the Regulations for CCAAs, 81 Fed. Reg. 95053 (Dec. 27, 2016)
  - Introduced "net conservation benefit" standard
  - Clarified who is a "landowner" and what level of conservation effort is required in each agreement (by striking confusing "other necessary properties" language)
- Revised CCAA Policy, 81 Fed. Reg. 95164 (Dec. 27, 2016)
  - Consistent with revised Rule, clarified the level of conservation effort required in each agreement (by eliminating references to "other necessary properties")
  - Introduced concept of "key threats" that must be addressed by a CCAA

Voluntary Prelisting Conservation Actions Policy

- Policy issued January 18, 2017 by Director's Order No. 218 after stalling at OMB in final days of Obama Administration
- Creates structured system for awarding post-listing credit for "qualifying actions" undertaken prior to a species' listing
- Intended to give landowners, government agencies, and others incentives to carry out voluntary conservation actions for non-listed species by allowing the benefits to the species from a voluntary conservation action undertaken prior to listing to be used—either by the person who undertook such action or by a third party—to mitigate or to serve as a compensatory measure for the detrimental effects of another action undertaken after listing.



USFWS Mitigation Policy

- Pursuant to Presidential Memorandum on Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment (Nov. 3, 2015), which directs agencies to establish policies on mitigation.
- Revises the 1981 USFWS Mitigation Policy
- Emphasizes mitigation hierarchy (avoid > minimize > mitigate) and "net benefit" standard (or at least "no net loss")
- Stresses advance implementation of mitigation, which can be limiting (e.g., for pooling and larger-scale conservation)
- States research or education may be included as part of a compensatory mitigation package and recognizes alternative mitigation/habitat credit exchanges
- Acknowledges responsibility for species conservation banks is with bank sponsor, not project proponent

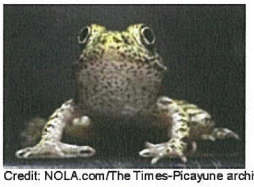
ESA Compensatory Mitigation Policy

- Addresses compensatory mitigation in both ESA section 7 and section 10 contexts
- Uses a heightened mitigation standard ("net benefit or at a minimum, no net loss") that is not required by the ESA
- Emphasizes mitigation sequencing (conflicts with prior FWS and recent DC Circuit holding)
- Issued a supplementary Interim Guidance focused on Implementing the ESA Compensatory Mitigation Policy
  - Sets forth the documentation required for mitigation
  - Applies retroactively to amendments and modifications of existing instruments
  - Prefers mitigation sites where estate is not split and emphasizes reunification of estates

Revised HCP Handbook

- Revised Joint USFWS and NMFS Habitat Conservation Planning Handbook, 81 Fed. Reg. 93702 (Dec. 21, 2016)
  - Substantial re-write of prior 1996 HCP Handbook
  - Aimed at large-scale HCPs but largely neglects project-scale or low-effect HCPs that make up majority of HCPs
  - Recommends a "net gain" approach to conservation (or at a minimum, "no net loss")
- USFWS has said it intended the revised HCP Handbook to be consistent with the *Union Neighbors* (i.e., Buckeye Wind) holding, but is not consistent

Critical Habitat Litigation


Credit: NOLA.com/The Times-Picayune archive

- June 2016: Fifth Circuit upheld USFWS' designation of unoccupied critical habitat for the dusky gopher frog. *Markle Interests, L.L.C. v. U.S. Fish and Wildlife Serv.*, 827 F.3d 452 (5th Cir. 2016).
  - July 2017: Plaintiffs filed for certiorari
- November 2016: 18 states filed litigation against FWS and NMFS challenging the two critical habitat rules and seeking vacatur. *State of Alabama v. Nat'l Marine Fisheries Serv.*, 1:16-cv-00593 (S.D. Ala. 2016).
  - Asserts that the CH rules unlawfully expand federal government's control over state lands and waters
  - Takes issue with provisions allowing designation of unoccupied habitat, among other provisions

Texas ESA Litigation

South Texas Sea Turtle Case

- *Friends of Lydia Ann Channel v. U.S. Army Corps of Engineers, LLC*, No. 2:15-CV-0514, (S.D. Tex. Mar. 13, 2017)
- Plaintiffs challenged USACE LOP authorizing construction of mooring project
- Administrative record did not include any indication USACE received or reviewed any studies on potential impacts of the mooring project to ESA-listed species in the Channel (whooping crane, piping plover, West Indian manatee, several species of sea turtle, among others)
- USACE suspended and eventually revoked the LOP after discovering the permittee failed to comply with the terms of the LOP and that the stated purpose and need differed from what had been provided to USACE.
- Plaintiffs won motion for PI based upon high probability of direct take of endangered green sea turtles and Kemp's ridley sea turtles as a result of the continued operation of the mooring project
- Court relied on expert testimony that sea turtles are attracted to the area due to algae growing on the mooring structures, and when temperatures in the Channel drop below 40 degrees, the turtles will be "cold stunned" and likely unable to react in time to avoid barge traffic using the mooring project

Texas ESA Litigation cont.

Mopac South litigation

- *Fath et al. v. TxDOT,* 1:16-cv-00234 (W.D. Tex.) (filed Feb. 2016)
- Challenges 3 highway projects:
  - Mopac South Express Lanes
  - Mopac South Intersections
  - SH 45 SW
- Includes ESA, NEPA, and segmentation claims
- Alleges need to conduct NEPA analysis of the 3 projects together for potential impacts to Edwards Aquifer despite limited use of federal funding
- TxDOT maintains that the 3 highway projects are distinct (i.e., independent planning and utility) and use different funding mechanisms (i.e., some use no federal funds)

Texas Species Updates

- **Black-capped vireo**
  - Dec. 15, 2016: USFWS proposed delisting
- **Golden-cheeked warbler**
  - June 5, 2017: GLO and TPPF litigating negative "90-day finding" on petition to delist



- **Tobusch fishhook cactus**
  - Dec. 28, 2016: USFWS proposed to downlist
  - June 13, 2017: Reopened comment period

Texas Species Updates

- **Five freshwater mussels species**
  - Candidates are focus of ongoing stakeholder Work Group organized by Texas Comptroller's Office
  - Texas Hornshell proposed for listing as endangered August 10, 2016; on May 30, 2017 comment period reopened
- **Lesser prairie-chicken**
  - Species Status Assessment - underway based on Nov.30, 2016 positive 90-day finding

Other Texas ESA Developments: Habitat Conservation Plans

- **Large-scale Utility HCPs**
  - Oncor, LCRA, and others
- **Southern Edwards Plateau HCP**
  - Covers commercial and residential development and infrastructure projects in City of San Antonio and Bexar County
  - ITP coverage for 9 ESA-listed species
- **Heart of Texas HCP**
  - Covers a 10,808 acre wind energy project in McCulloch county
  - ITP coverage for black-capped vireo
- **Draft Barton Springs Edwards Aquifer Conservation District HCP**
  - Public comment period open until mid-September
  - Seeking ITP coverage for the Austin blind salamander and Barton Springs salamander for certain pumping activities

David "Marshall" Coover, III is a Principal at Texas Star Alliance. He has spent his ten-year legal career in a variety of capacities at the intersection of environmental law, regulatory policy, and legislative advocacy. As a trusted policy and political advisor, he was worked closely with elected appointed officials, and their staffs, at the highest echelons of State and Federal Government – from the Administrator of the Environmental Protection Agency to the Governor of Texas. As a litigator, he has tried cases as varied as environmental enforcement actions in Travis County District Court and a landmark Endangered Species Act case in Federal District Court. He has also coordinated messaging and public relations strategies with the leadership of major trade associations and their constituent companies, as well as environmental groups and other NGOs.

Marshall's capabilities extend beyond representation before Regulatory and Legislative bodies. His practice also includes managerial and financial consulting, where he shares the strategic communication, energy project finance, and strategic analysis of leveraged buy outs, mergers, workouts, and spin offs proficiencies he has developed as a graduate of the Executive MBA program at the McCombs School of Business. His business consulting practice is also informed by his experiences as the lead equity investor in a real estate technology platform and as the Managing Director of a boutique growth equity fund.

Marshall is actively involved in numerous professional, legal, and community organizations, including the University of Texas System Chancellor's Centurions, the State Bar of Texas Environmental and Natural Resources Law Section, the Waller Creek Conservancy, and LifeWorks. He, his wife, and their two sons are members of St. Austin's Catholic Parish.

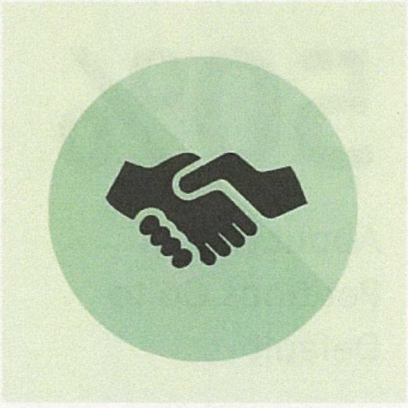
TCEQ ENVIRONMENTAL ASSISTANCE PROGRAM

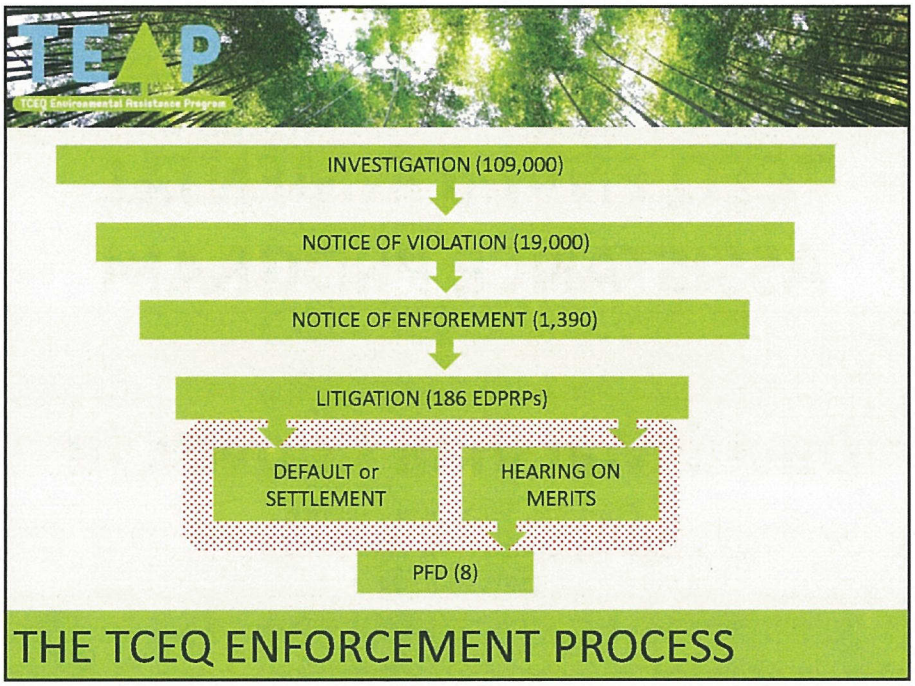
David Marshall Coover, III

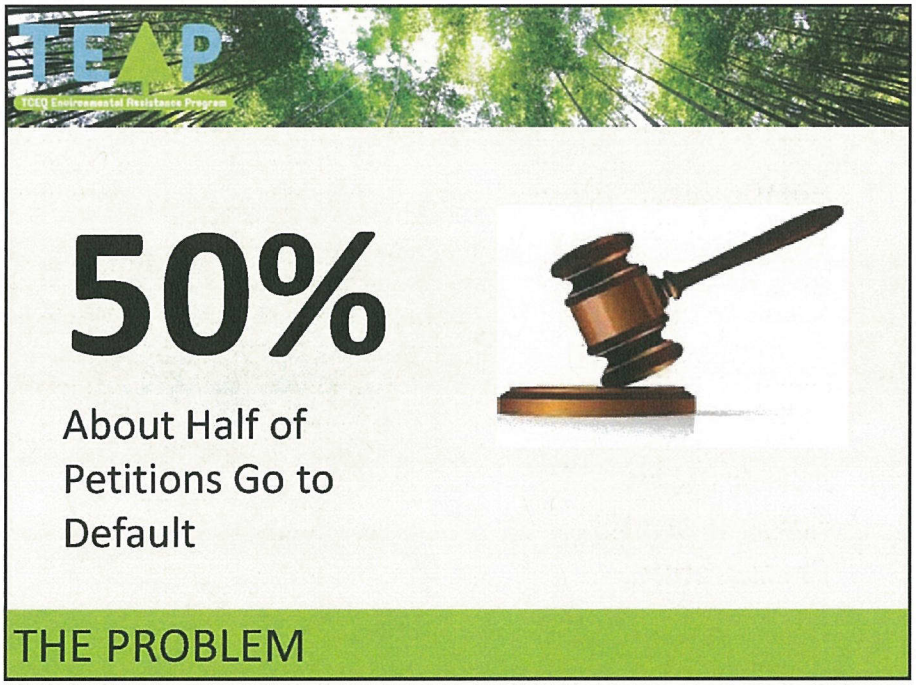
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WHAT IS TEAP?

- Partnership Between TCEQ, VLS, and ENRLS
- Matches Low-Income Respondents with Environmental Practitioners




INVESTIGATION (109,000)
NOTICE OF VIOLATION (19,000)
NOTICE OF ENFOREMENT (1,390)
LITIGATION (186 EDPRPs)
DEFAULT or SETTLEMENT
HEARING ON MERITS
PFD (8)
THE TCEQ ENFORCEMENT PROCESS


50%
About Half of Petitions Go to Default
THE PROBLEM





Default Orders Represent a Lose-Lose Outcome!

THE PREMISE



TCEQ	RESPONDENT	VLS	TEAP	ATTORNEY
Petition Filed	Application	Financial Screen	Merit Screen & Attorney Match	Engagement & Case Disposal
30 to 45 days after referral from Enforcement	14 Days	1 to 2 days	7 days	3 to 6 months, depending on case evaluation.

PROJECTED TIMELINE



- Seven Applicants
- Four Successful Matches
- Positive Feedback from All Participants

EARLY SUCCESSES



THE SOLUTION



- Interested Firms Should Designate a Point of Contact for TEAP
- Firm POC Notifies TEAP of Availability and Capability

ATTORNEY OPT-IN



- TCEQ Enforcement Staff
- Eric Groten and Ellyn Josef of Vinson & Elkins
- Jonathan Buck of Volunteer Legal Services

SPECIAL THANKS

Jeff has been with the firm Saitas and Seales since 2002. The firm specializes in environmental consulting and government affairs and assists firm clients with regulatory, permitting and enforcement matters before federal and state regulatory agencies and the Texas Legislature, primarily in air pollution control, but also in water and waste matters. Prior to establishing Saitas and Seales, Jeff was the Executive Director of the Texas Commission on Environmental Quality. At the agency he was responsible for managing operations of an agency with over 3,000 employees and a budget of $400 million. He represented the agency before Congress and the Texas Legislature on programmatic (air and water quality, waste management, water and wastewater utilities and water rights) and budget issues, acted as a spokesman for the agency on major media issues and provided information and recommendations to commissioners and state leadership on budget and programmatic matters.

Suzanne J. Smith

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Suzanne Smith is the Chief of the Multimedia Counseling Branch within the Office of Regional Counsel at EPA Region 6. The Branch represents the Region on defensive litigation and other matters arising under the Clean Air Act and the Resource Conservation and Recovery Act. Currently, her branch focuses on matters arising under the Clean Air Act such as: Infrastructure SIPs, Regional Haze SIPs, Ozone Attainment SIPs, New Source Review permitting SIPs, and New Source Review and Title V permits.

Suzanne began her career at EPA Region 6 as an enforcement attorney, primarily focusing on RCRA and pesticide issues. Later, she turned her attention to permitting and planning matters arising from the Clean Air Act. Suzanne received a B.A. in Political Science from the University of California, Berkeley and received her J.D. from Tulane Law School.

Biography: Michael P. Wilson, P.E.

Air Permits Division
Texas Commission on Environmental Quality

Current Position

In August 2011, Michael became the director of the Air Permits Division.

Prior Experience and Education

Michael received a Bachelor of Science degree in Agricultural Engineering from Texas A&M University in December 1991. He began working for the Texas Commission on Environmental Quality (then the Texas Air Control Board) in January of 1992. He worked in the Air Permitting Division, Mechanical Section where he reviewed New Source Review applications for agricultural sources. In January 2004, Michael became the team leader for the Mechanical and Agricultural Team, and in June 2005, he was promoted to manager of the Mechanical/Agricultural/Construction Section. Michael served as the assistant director of the Air Permits Division from August 2009 to July 2011. He is a licensed professional engineer in Texas.

Contact Information

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Texas Commission on Environmental Quality

Simple Cycle Turbine

Readily Available Permit

Qualification Criteria.....1

Special Conditions.....4

RAP Modeling Outline.....11

August 3, 2017

Texas Commission on Environmental Quality
Readily Available Permit – Simple Cycle Turbine
Qualification Criteria

The following qualification criteria must be met in order to submit an application for the Readily Available Permit – Simple Cycle Turbine (RAP-SCT). If the facility meets the conditions of this permit, the answer should be "Yes" to each of these criteria.

If the qualifying criteria are not met, or if the applicant does not agree with the RAP-SCT conditions, the applicant will receive notice that the application has been voided. If the application is voided for these reasons, the application should seek a different type of authorization as appropriate.

I. General Requirements:

The project is for an electric utility simple cycle turbine facility.

The project is at a greenfield site.

The project is a minor source.

The customer has a compliance history classification of Satisfactory or High.

- Further information on compliance history classifications can be found at: www.tceq.texas.gov/compliance/enforcement/compliance-history/about.html.
- Details on obtaining a compliance history report can be found at: www.tceq.texas.gov/compliance/enforcement/compliance-history/get_report.html.

The facility will comply with the RAP-SCT conditions.

The emission sources included in this RAP are limited to:

- Two (2) simple cycle turbines;
- One (1) fire water pump;
- Two (2) dew point heaters;
- Two (2) lube oil vents;
- Six (6) tanks; and
- One (1) emergency generator engine.
- Fugitive emissions
- Maintenance, Startup and Shutdown (MSS) activities

The setback distance requirements from the property line to the closest emission point vary depending on the county in which the site is located.

- El Paso County setback requirement is 300 meters.
- Harris County setback requirement is 420 meters.
- All other counties have a setback requirement of 150 meters.

II. Equipment Criteria:

Simple Cycle Turbine

Each turbine is limited to operating 2500 hours per year.

Each individual simple cycle turbine must meet the following discharge parameters:

- The release height must be a minimum of 80 feet (ft.);
- The temperature must be a minimum of 756 degrees Fahrenheit (°F); and
- The diameter must be a minimum of 15 ft.;
- The velocity must be a minimum of 52.4 feet per second (fps).

The following practices and controls represent Best Available Control Technology (BACT) for each unit:

- NO_X: 9 ppmvd at 15% O_2 during steady state operations using dry low NO_x (DLN). Installing a selective catalytic reduction (SCR) would not be economically reasonable given the limited annual operating hours.
- CO: 9 ppmvd at 15% O_2 using DLN and good combustion practices. An oxidation catalyst would not be economically reasonable given the limited annual operating hours.
- VOC: 2.0 ppmvd at 15% O_2 using good combustion practices, good burner design, and firing pipeline-quality natural gas.
- SO_2 and H_2SO_4: Firing pipeline-quality natural gas with a sulfur content not exceeding 2.0 grains total sulfur per 100 dry standard cubic feet (dscf) on an hourly basis, and 0.25 grains total sulfur per 100 dscf on an annual basis.
- PM/ PM_{10} / $PM_{2.5}$: Firing pipeline-quality natural gas and good combustion practices.
- MSS: Conducted in accordance with manufacturer's recommendations, minimizing the duration of the events (as required by the Special Conditions), and meeting the emission limitations on the maximum allowable emission rate table (MAERT).

Fire Water Pump

The fire water pump must meet the following discharge parameters:

- The release height must be a minimum of 7 ft.;
- The diameter must be a minimum of 0.33 ft.;
- The temperature must be a minimum of 821°F; and
- The velocity must be a minimum of 90 fps.

The fire water pump must meet the following input parameters:

- The rated brake power of the engine may not exceed 184.22 horsepower (hp).

The following practices and controls represent BACT for this unit:

- Meeting the requirements of 40 CFR Part 60, Subpart IIII.
- Firing ultra-low sulfur diesel fuel (no more than 15 parts per million (ppm) sulfur by weight).
- Limited to 100 hrs/yr of non-emergency operation.
- Have a non-resettable runtime meter.

Dew Point Heater

Each individual dew point heater must meet the following discharge parameters:

- The release height must be a minimum of 20 ft.;
- The diameter must be a minimum of 0.67 ft.;
- The temperature must be a minimum of 700°F; and
- The velocity must be a minimum of 40 fps.

Each individual dew point heater must meet the following input parameters:

- The design firing rate of the heater may not exceed 5.99 million British thermal units per hour (MMBtu/hr).

The following practices and controls represent BACT for each unit:

- Low NO_x burners limited to 0.06 lb. NO_x/MMBtu higher heating value (HHV basis).
- Firing pipeline-quality natural gas.

Lube Oil Vent

Each individual lube oil vent must meet the following discharge parameters:

- The release height must be a minimum of 20 ft.

The following practices and controls represent BACT for each unit:

- Lube oil mist shall be minimized through the use of a mist elimination system which is designed to achieve 99% or greater reduction of fine particulate matter ($PM_{2.5}$).

Tank

Each tank must store diesel or lube oil.

Each individual tank must meet the following discharge parameters:
- The release height must be a minimum of 3 ft.

The following practices and controls represent BACT for each unit:
- Painted white.
- Submerged fill.

Emergency Engine

The emergency engine must meet the following discharge parameters:
- The release height must be a minimum of 10 ft.;
- The diameter must be a minimum of 0.32 ft.;
- The temperature must be a minimum of 859 °F; and
- The velocity must be a minimum of 73.5 fps.

The emergency generator engine must meet the following input parameters:
- The rated brake power of the engine may not exceed 1234 hp.

The following practices and controls represent BACT for this unit:
- Meeting the requirements of 40 CFR 60, Subpart IIII.
- Firing ultra-low sulfur diesel fuel (no more than 15 ppm sulfur by weight).
- Limited to 100 hrs/yr of non-emergency operation.
- Have a non-resettable runtime meter.

Fugitive Emissions

The fugitive emissions must meet the following discharge parameters:
- The release height must be a minimum of 3 ft.

The following practices and controls represent BACT for these emissions:
- Repair leaks as soon as possible.

Maintenance Activities

Maintenance activities must meet the following discharge parameters:
- The release height of the filter and CEMS maintenance activities must be a minimum of 15 ft.
- Other maintenance activities included in EPN MAINT do not have a minimum stack height requirement.

The following practices and controls represent BACT for these emissions:
- Limiting the duration of events.
- Use good practices for minimizing emissions.

Special Conditions

Permit Number

1. This permit authorizes emissions only from those emission points listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates" (MAERT), and the facilities covered by this permit are authorized to emit subject to the emission rate limits on that table and other operating conditions specified in this permit. Also, this permit authorizes the emissions from planned maintenance, startup, and shutdown (MSS).

Federal Regulations

2. The permitted sources at these facilities shall comply with all applicable requirements of the following federal regulations:

   A. The U.S. Environmental Protection Agency (EPA) Standards of Performance for New Stationary Sources (NSPS) in Title 40 Code of Federal Regulations (40 CFR) Part 60:

      (1) Subpart A: General Provisions

      (2) Subpart KKKK: Stationary Combustion Turbines

      (3) Subpart IIII: Stationary Compression Ignition Internal Combustion Engines

   B. The EPA National Emission Standards for Hazardous Air Pollutants (NESHAPS) for Source Categories in 40 CFR Part 63:

      (1) Subpart A: General Provisions

      (2) Subpart ZZZZ: Stationary Reciprocating Internal Combustion Engines

3. If any condition of this permit is more stringent than the regulations so incorporated, then for the purposes of complying with this permit, the permit shall govern and be the standard by which compliance shall be demonstrated.

Operational Specifications

4. Opacity of emissions from sources authorized by this permit shall not exceed 5 percent averaged over any six minute period. During periods of startup, shutdown or maintenance, the opacity from the stacks shall not exceed 15 percent over any six minute period.

   A. Visible emission observations shall be conducted each calendar quarter for each stack during normal operation, unless the emission unit is not operating for the entire calendar quarter. Observations shall be made at least 15 feet and no more than 0.25 miles from the emission points. Up to three emissions points may be read concurrently, provided that all three emission points are within a 70 degree viewing sector in front of the observer and the sun is positioned at the observer's back.

   B. If visible emissions are observed from the stack(s), then opacity shall be determined by EPA Reference Method 9 within 24 hours of observing visible emissions. Contributions from uncombined water shall not be included in determining compliance with this condition.

   C. If the opacity limits of this Special Condition are exceeded, corrective action to eliminate the source of visible emissions shall be taken promptly and documented within one week of first observation.

5. Upon request by the Executive Director of the Texas Commission on Environmental Quality (TCEQ) or any local air pollution control program having jurisdiction, the permit holder shall provide a sample and/or an analysis of the fuel fired in the gas turbines or engines, or shall allow an air pollution control agency representative to obtain a sample for analysis.

6. Fuel for each turbine shall be pipeline-quality natural gas containing no more than 2.0 grains total sulfur per 100 dry standard cubic feet (dscf) on an hourly basis, and 0.25 grains total sulfur per 100 dscf on an annual basis.

7. Each turbine shall be limited to 2500 hours of operation per year, including periods of MSS.

8. Exhaust gases from each turbine shall not exceed the following concentrations in parts per million by volume, dry basis (ppmvd) at 15 percent oxygen (O_2):

Pollutant	Averaging Time	Concentration
Oxides of Nitrogen (NOX)	3-hr rolling average	9.0
Carbon Monoxide (CO)	3-hr rolling average	9.0
Volatile Organic Compound (VOC)	3-hr rolling average	2.0

A. Each turbine's normal operating range is from 60 to 100 percent of base load except for periods of planned MSS.

B. Reduced load operation below base load not associated with planned MSS is authorized and not subject to the above concentration limits, provided the emission rates specified in the MAERT are not exceeded.

C. Planned startup events for each turbine are excluded from the above concentration limits. Each startup event shall not exceed one hour and is defined as the period that begins when an initial flame detection signal is recorded in the plant's data acquisition and handling system (DAHS) and ends when the turbine enters lean pre-mix operating mode.

D. Planned shutdown events for each turbine are excluded from the above concentration limits. Each shutdown event shall not exceed one hour and is defined as the period that begins when the DAHS received a shutdown signal and exits the lean pre-mix operating mode and ends when the flame detection signal is no longer detected by the plant's DAHS.

E. Emissions from maintenance activities (Attachment A) shall be excluded. Compliance shall be demonstrated by comparing the pollutant's total hourly emissions as calculated or measured by the Continuous Emissions Monitoring System (CEMS) to the hourly MSS rates listed in the MAERT. The permit holder shall sum all emissions from planned maintenance activities on a rolling 12-month basis for each Emission Point Number (EPN) to demonstrate compliance with the MAERT.

9. Each dew point heater shall be designed to emit no more than 0.06 pound NOx per million British thermal unit (lb/MMBtu) (higher heating value (HHV) basis) fuel fired on a 1-hour block average.

10. The following requirements apply to each engine:

A. Fuel for each engine shall be limited to ultra-low sulfur diesel (ULSD) containing no more than 15 parts per million by weight (ppmw) total sulfur.

B. Each engine shall be limited to 100 hours per year during non-emergency situations.

C. Each engine shall be equipped with a non-resettable hour meter.

Initial Determination of Compliance

11. Sampling ports and platforms shall be incorporated into the design of the turbine exhaust stacks according to the specifications set forth in the TCEQ "Guidelines for Stack Sampling Facilities". Alternate sampling facility designs may be submitted for approval by the TCEQ Regional Director.

The permit holder shall perform stack sampling and other testing as required to establish the actual quantities of air contaminants being emitted into the atmosphere from each gas turbine. The permit holder is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense. Sampling shall be conducted in accordance with the appropriate procedures of the TCEQ Sampling Procedures Manual and EPA Reference Methods. The TCEQ Executive Director or his designated representative shall be afforded the opportunity to observe all such sampling upon request.

Fuel sampling using the methods and procedures of 40 CFR § 60.4415 may be conducted in lieu of stack sampling for sulfur dioxide (SO_2) or the permit holder may be exempted from fuel monitoring of SO_2 as provided under 40 CFR § 60.4365. If fuel sampling is used, compliance with NSPS Subpart KKKK SO_2 limits shall be based on 100 percent conversion of the sulfur in the fuel to SO_2. Any deviations from those procedures must be approved by the Executive Director of the TCEQ prior to sampling. Fuel sampling using the methods and procedures of 40 CFR § 60.4360 may be conducted in lieu of stack testing for SO_2.

A. The appropriate TCEQ Regional Office shall be contacted as soon as testing is scheduled but not less than 45 days prior to sampling to schedule a pretest meeting. The notice shall include:

(1) Proposed date for pretest meeting.

(2) Date sampling will occur.

(3) Name of firm conducting sampling.

(4) Type of sampling equipment to be used.

(5) Method or procedure to be used in sampling.

(6) Procedure used to determine turbine load during and after the sampling period.

A written proposed description of any deviation from sampling procedures specified in permit conditions or the TCEQ or EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. The TCEQ Regional Director shall approve or disapprove of any deviation from specified sampling procedures.

B. Air contaminants and diluents from the turbine to be sampled and analyzed include NO_X, CO, particulate matter (PM), VOC, SO_2, opacity, and O_2. Fuel sampling using the methods and procedures of the applicable NSPS may be conducted in lieu of stack sampling for SO_2.

C. Each turbine shall be tested at a minimum and maximum load of the permitted operating range that is defined in this permit for the atmospheric conditions which exist during testing. Each tested load shall be identified in the sampling report. The permit holder shall present at the pretest meeting the manner in which stack sampling will be executed in order to demonstrate compliance with emission standards found in 40 CFR Part 60, Subpart KKKK for combustion gas turbines.

D. Test waivers and alternate or equivalent procedure proposals which must have EPA approval shall be submitted to the TCEQ Air Permits Division.

E. Sampling shall occur within 60 days after achieving the maximum operating rate, but no later than 180 days after initial startup of the facilities and at other times when required by the TCEQ Regional Director. Requests for additional time to perform sampling shall be submitted to the appropriate regional office.

F. Copies of the final sampling report shall be forwarded to the TCEQ within 60 days after sampling is completed. Sampling reports, including distribution instructions, shall comply with Chapter 14 of the TCEQ Sampling Procedures Manual.

Continuous Demonstration of Compliance

12. The permit holder shall install, calibrate, and maintain a CEMS to measure and record the in-stack concentration of NO_x, CO, and diluent gases (carbon dioxide (CO_2) or O_2) from each gas turbine stack.

A. The NO_x and diluent gas CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 2 and 3, 40 CFR Part 60, Appendix B. The permit holder shall assure that the CEMS meets the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1.

B. Compliance with the CEMS requirements of 40 CFR Part 60 can be demonstrated by meeting the applicable requirements of 40 CFR Part 75 provided that the holder of this permit demonstrates compliance with all applicable 40 CFR Part 60 emission standards.

C. The CO CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable performance specifications in 40 CFR Part 60, Appendix B, Performance Specification No. 4.

D. All CEMS shall meet the applicable quality assurance requirements specified in 40 CFR Part 60, Appendix F, except that cylinder gas audits (CGA) conducted in all four quarters may be used in lieu of the annual relative accuracy test audit. Quarterly CGAs shall be conducted at least 60 days apart. Relative accuracy exceedances (as specified in 40 CFR 60, Appendix F), CGA exceedances of ±15 percent accuracy, and any CEMS downtime shall be reported to the TCEQ regional office, and necessary corrective action shall be taken. Supplemental stack sampling may be required at the discretion of the TCEQ Regional Director.

E. If any emission monitor fails to meet specified performance, it shall be repaired or replaced immediately. If repair or replacement is not immediately feasible, the monitor shall be repaired or replaced no later than seven days after the failure is first detected by an employee at the site, unless written permission is obtained from the TCEQ Regional Office which allows for longer repair/replacement time. The holder of this permit shall develop an operation and maintenance program (including stocking necessary spare parts) to ensure that the continuous monitors are available as required. A monitor with downtime due to breakdown or repair of more than 10 percent of the facility operating time for any calendar year will be considered as a defective monitor and the monitor must be replaced within two weeks after exceeding the 10 percent threshold.

F. The monitoring data shall be reduced to hourly average values at least once every day, using a minimum of four equally-spaced data points from each one-hour period. At least two valid data points shall be generated during the hourly period in which zero and span is performed. The individual average concentrations shall be reduced to units of lbs/hr at least once every day.

G. The monitoring data and quality-assurance data shall be maintained by the permit holder at the facility site. The data from the CEMS will be used to determine compliance with the conditions of this permit. During periods where the CEMS data is unavailable or not quality assured, compliance may alternatively be determined by using manufacturer emission factors or valid and representative data previously measured and recorded by the unit's CEMS under similar operating conditions.

H. The TCEQ Regional Office shall be notified at least 21 days prior to any required relative accuracy test audit, and Regional Office personnel shall be provided with an opportunity to observe the testing.

I. If applicable, the requirements of 40 CFR Part 75, Appendices A and B, may be used as an alternative to the performance specifications and quality assurance requirements (respectively) of 40 CFR Part 60 for the NO_X and O_2 CEMS.

13. The holder of this permit shall either measure, or develop a program to calculate, the total mass flow rate through the stacks to ensure continuous compliance with the emission limitations specified in the MAERT. The permit holder shall calculate hourly mass emissions in pounds per hour (lbs/hr) using the measured or calculated exhaust flow rate and the measured concentrations of NO_x and CO from the CEMS required in this permit.

14. The permit holder shall monitor fuel consumption from each gaseous fuel combustion device individually and continuously, using monitoring devices that are accurate to ±2.0 percent of the unit's maximum flow and maintain, calibrate, and operate the devices in accordance with the manufacturer's specifications. The devices shall be calibrated in accordance with the manufacturer's recommendations or at least annually.

15. After the initial demonstration of compliance, ongoing compliance with the VOC and PM tons per year emission rates in the MAERT shall be demonstrated by calculating rolling 12-month annual emissions from emission factors (lb/MMBtu, HHV) obtained from the results of the sampling required by this permit and the monthly total heat input (MMBtu, HHV) from natural gas fuel.

Recordkeeping Requirements

16. The following records (written or electronic) shall be kept at the plant for the life of the permit. All records required in this permit shall be made available at the request of personnel from the TCEQ, EPA, or any local air pollution control program having jurisdiction:

A. A copy of this permit.

B. The initial permit application and subsequent representations submitted to the TCEQ.

C. A complete copy of the testing reports and records of the initial performance testing completed to demonstrate initial compliance.

D. Stack sampling results or other air emissions testing (other than CEMS data).

17. The following records shall be maintained by the holder of this permit in a form suitable for inspection for a period of five years after collection and shall be made available upon request to representatives of the TCEQ, EPA, or any local air pollution control program having jurisdiction:

A. The CEMS data to demonstrate compliance with the emission rates listed in the Special Conditions and the MAERT.

B. Raw data files of all CEMS data including calibration checks and adjustments and maintenance performed on these systems in a permanent form suitable for inspection.

C. Records for the hourly calculated values required to determine mass flow rates from CEMS data and compliance with the MAERT shall be cumulatively added during each hour of the month and stored electronically.

D. Records of the hours of operation and the quantity of natural gas fired in the gas turbines.

E. Records of dates and times for startups and shutdowns of each turbine.

F. Records of fuel sampling conducted pursuant to 40 CFR Part 60, Subpart KKKK.

G. Records of fuel delivery including sulfur content based on receipts or chemical analyses. Fuel designated as ULSD on the receipt is acceptable.

H. Record of visible emissions or opacity observations, including corrective actions taken.

I. Records of planned maintenance activities.

Date: _____

Attachment A - Maintenance Activities

The following list of maintenance activities is authorized by this permit. This list is not intended to be all-inclusive of activities at the site.

Planned Maintenance Activity	EPN	Emissions				
		NO_X	CO	VOC	PM	SO_2
Combustion optimization[1]	CTG1 and/or CTG2	X	X	X	X	X
Turbine washing online[2]	CTG1 and/or CTG2				X	
Miscellaneous particulate filter maintenance[3]	MAINT				X	
Gaseous fuel venting[4]	MAINT			X		
Water-based washing	MAINT			X		
Management of sludge from pits, ponds, sumps, and water conveyances[5]	MAINT			X		
Organic chemical usage	MAINT			X		
Inspection, repair, replacement, adjusting, testing, and calibration of analytical equipment, process instruments including sight glasses, meters, gauges, CEMS, or Periodic Emissions Monitoring System (PEMS)	MAINT	X	X	X		
Small equipment and fugitive component repair and replacement in VOC service[6]	MAINT			X		
Maintenance of storage vessels storing materials with a vapor pressure <0.5 psia	MAINT			X		
Maintenance of storage vessels storing gasoline of other materials with a vapor pressure > 0.5 psia	MAINT			X		
Maintenance of storage vessels storing gasoline of other materials with a vapor pressure > 0.5 psia that require clearing of the vessels to allow for entry of personnel	MAINT			X		

Date:_____

[1] Includes, but is not limited to, (1) leak or operability checks (e.g. turbine over-speed test, troubleshooting), (ii) balancing, and (iii) tuning activities that occur during seasonal tuning or after completion of initial construction, combustor change-out, major repair, combustor maintenance, or other similar circumstances.

[2] Involves the use of water only.

[3] Includes, but is not limited to, process-related building air filters, and combustion turbine air intake filters.

[4] Includes, but is not limited to, venting prior to pipeline pigging and meter proving.

[5] Includes, but is not limited to, management by vacuum truck/dewatering of materials in open pits, ponds, sumps, tanks, and other closed/open vessels. Material include water and sludge materials containing miscellaneous VOCs such as diesel, lube oil, and other waste oils.

[6] Includes, but is not limited to, (i) repair/replacement of pumps, compressors, valves, pipes, flanges, transport lines, filters, and screens in natural gas, diesel oil, lube oil, and gasoline service, (ii) vehicle and mobile equipment maintenance that may involve VOC emissions, such as oil changes, transmission service, and hydraulic system service.

Air Quality Analyses for the Simple Cycle Turbine Readily Available Permit

Air quality analyses (AQAs) were performed in support of the simple cycle turbine readily available permit (RAP). AQAs were performed for each of the sixteen Texas Commission on Environmental Quality (TCEQ) regions; these regions include Amarillo, Lubbock, Abilene, Dallas-Fort Worth, Tyler, El Paso, Midland, San Angelo, Waco, Beaumont, Austin, Houston, San Antonio, Corpus Christi, Harlingen, and Laredo. Click here for additional information on the different TCEQ regions, including maps and listings of the counties within each region.

The discussion below begins with an explanation on how model input data were developed prior to conducting modeling for the simple cycle turbine RAP. The discussion continues with an explanation of the modeling and the results of the analyses.

Developing Model Input Data

Prior to conducting modeling, it's important that the model user knows the model input data requirements and understands what these data represent. For the simple cycle turbine RAP, obtaining model source input parameters for simple cycle turbines and other ancillary equipment was necessary, along with developing meteorological data sets that the model could use.

Source Input Data

In order to obtain model source input parameters for simple cycle turbines and other ancillary equipment, a review of permit files was conducted for simple cycle turbine projects that have been submitted to the agency in the past (approximately 20 different project files were reviewed). The goal was to identify the facilities and equipment that are typical for simple cycle turbine sites. Based on the review, the following facilities and equipment were identified: turbines; dew point heaters; lube oil vents; fire water pump engine; emergency generator engine; tanks for storing diesel and lube oil; fugitive emissions; and planned maintenance, start-up, and shutdown (MSS) activities associated with continuous emission monitoring system (CEMS) calibration, turbine washing, and filter change outs.

Along with identifying the different types of facilities and equipment, emission rates and source parameters used for modeling (for example, source release height, exit temperature, exit velocity, exit diameter, etc.) were compiled for the identified facilities. For the simple cycle turbines, data associated with different turbine models, operating levels, and start-up/shutdown operations were also considered as data were compiled. Once all of the applicable data were compiled for the different facilities and equipment, reasonable worst-case values were determined for use as model input data. The approach for determining reasonable worst-case values was to use high emission rates and source parameters that would lead to lower plume rise and less dispersion in order to have a conservative analysis.

Meteorological Input Data

The American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) was used to conduct the modeling analyses. The meteorological data pre-processor for AERMOD is AERMET, and AERMET version 16216 was used to process meteorological data for the analyses. As noted above, modeling was conducted for each of the sixteen TCEQ regions;

therefore, AERMET was used to process meteorological data for each of the TCEQ regions. Five years of meteorological data (2011-2015) representative for each TCEQ region were processed using surface characteristic values calculated from AERSURFACE. Additionally, the ADJ_U* option within AERMET was used as meteorological data were processed. Using the ADJ_U* option is part of the regulatory package of AERMOD when site-specific turbulence data are not used in the processing.

Modeling and Results

With the model source input parameters and meteorological input data ready, the modeling can commence. The sections that follow will detail the general model setup, the results of the modeling as part of the air quality analyses, and the final documentation.

Model Setup

The modeling was conducted with AERMOD version 16216r. Based on the review of the previously submitted simple cycle turbine projects, the following pollutants were identified to be modeled: carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen oxide (NO_x), particulate matter with a diameter of 10 microns or less (PM_{10}), particulate matter with a diameter of 2.5 microns or less ($PM_{2.5}$), sulfuric acid (H_2SO_4), lube oil, diesel, and natural gas. For each pollutant, all applicable sources that emit the pollutant were modeled together:

- NO_2 and CO - two turbines, two dew point heaters, one fire water pump engine, one emergency generator engine, and planned MSS activities associated with CEMS calibration for two turbines
- SO_2 and H_2SO_4 - two turbines, two dew point heaters, one fire water pump engine, and one emergency generator engine
- PM_{10} and $PM_{2.5}$ - two turbines, two dew point heaters, two lube oil vents, one fire water pump engine, one emergency generator engine, and planned MSS activities associated with filter change outs and turbine washing for one turbine
- Diesel – diesel storage tank
- Natural Gas – fugitive piping
- Lube Oil – two lube oil vents, lube oil storage tank, and fugitive piping

All of the modeled sources were co-located at the center of the site. This technique will provide conservative results since the cumulative impact of all sources is maximized.

To account for conversion of NO_x to NO_2, the ambient ratio method 2 (ARM2) was used in the modeling analyses. This is consistent with EPA guidance for conducting a Tier 2 screening approach for NO_x emissions.

The modeling was conducted using a receptor grid that started at a distance of approximately 150 meters from the modeled sources. Therefore, a setback distance of 150 meters from the facilities to the nearest property line will be needed. This distance is driven by the ancillary equipment given that they have shorter release heights and/or plumes with little plume rise.

Results

Modeling was conducted for a number of pollutants for comparison with the National Ambient Air Quality Standards (NAAQS), state property line standards, and Effects Screening Levels (ESLs). For pollutants with a state property line standard (SO_2 and H_2SO_4) and pollutants with an

ESL (lube oil, diesel, and natural gas), the modeling results are less than their corresponding standards and ESLs, respectively. This includes the more restrictive SO_2 state property line standards for Galveston, Harris, Jefferson, and Orange Counties. For the criteria pollutants, the results are either less than de minimis levels or are less than the NAAQS when the model predictions are added to conservative background concentrations.

The approach for selecting background concentrations was to be conservative. For some pollutant/averaging time combinations, using the highest background concentration from 2013-2015 state-wide with the model predictions gives total concentrations less than the NAAQS. When the highest background concentration was too conservative, refinements were made, but conservative values were still used. For example, using the highest 98th percentile of the annual distribution of the maximum daily 1-hr concentrations for 1-hr NO_2 from 2013-2015 state-wide, and not a three-year average of the 98th percentile of the annual distribution of the maximum daily 1-hr concentrations (which is the design value concentration for 1-hr NO_2).

For PM, the background concentrations were based on the design value concentrations. For example, using the three-year average (2013-2015) of the 98th percentile of the annual distribution of the 24-hr concentrations for the 24-hr averaging period of $PM_{2.5}$. When the highest design value concentration state-wide was too conservative, a conservative regional value was used. As an example, consider TCEQ Region 8; this region does not have a $PM_{2.5}$ monitor located within it, and using the highest design value concentration for $PM_{2.5}$ state-wide is too conservative. Monitoring data from monitors located in surrounding TCEQ regions (TCEQ Regions 7, 9, 11, and 13) were reviewed, and the highest design value concentration from these four regions was used as a conservative value for TCEQ Region 8.

Note that there are two areas that will have a different setback distance (150 meters) based on the results of the analyses. The first area is El Paso County; since there is a PM_{10} nonattainment area in El Paso County, modeling results were evaluated to determine when PM_{10} predictions are less than de minimis [5 micrograms per cubic meter ($\mu g/m^3$)]. Based on the evaluation, a setback distance of 300 meters from the facilities to the nearest property line will be needed for sites proposed to be located in El Paso County. The second area is Harris County; given the annual $PM_{2.5}$ background concentrations for two monitors located in Harris County (the Clinton Dr. and Aldine monitors), modeling results were evaluated to determine when annual $PM_{2.5}$ predictions together with background concentrations are less than the annual $PM_{2.5}$ NAAQS (12 $\mu g/m^3$). Based on the evaluation, a setback distance of 420 meters from the facilities to the nearest property line will be needed for sites proposed to be located in Harris County.

Documentation

The documentation is already complete for the air quality analyses. A report has been written for each of the sixteen TCEQ regions, and it will be included as part of the technical review documentation.

Texas Commission on Environmental Quality

ePermits

How to Register with STEERS (*e*Permitting) System

Attention:

- **A STEERS account is required in order to access the *e*Permitting system. If you submit your Renewal or new Notice of Intent (NOI) application online, the discounted fee is $100 cheaper. The fee is $100 for a Renewal Industrial Notice of Intent (INOI) or No Exposure Certification (NEC).**
- If you go directly to the e-Pay website and pay for the authorization, it will not automatically renew your existing permit nor provide you a new permit and you will not receive the discount. You will need to complete the process by submitting the completed and signed NOI application through STEERS (*e*Permitting system).
- If you are not using the *e*Permitting system and are submitting your NOI via paper, then you will have to fill out, sign, and mail in the paper forms to the Stormwater Processing Center and mail your fee separately to the Cashier's Office. **The fee for the paper NOI or NEC is $200.**

When creating a new STEERS account you will need to select *Stormwater General Permits* as the STEERS Program Area. The account will be on probation until you sign the STEERS Participation Agreement (SPA). A copy of the SPA must be received by the TCEQ. The paper SPA can be mailed to STEERS or signed electronically if you have a valid class C Texas Driver's License (TDL). If signed using your driver's license, the activation occurs that same day. If the SPA is submitted by mail, it will be 3-10 days before full access is granted, depending on the mailing format used. The paper SPA allows for those who cannot sign electronically, such as out-of- state residents, to apply for permits online. **Signing the STEERS agreement only activates the user account; it does not renew or provide a permit.**

If you have an existing STEERS account or you are a new user, you will need to **log on to STEERS with your account number and password to start the permit authorization/renewal process.** For questions related to your STEERS account, please contact STEERS by e-mail at STEERS@tceq.texas.gov or by telephone at (512) 239-6925.

To apply online through *e*Permits, you must first create an account with STEERS by following these steps:

1. Go to this website: https://www3.tceq.texas.gov/steers/ (You must use "https")
2. Select **I Need: to create a new account**
3. Read the information and click **Create New Account**
4. Enter all required information including your name, company name, and title. (If there is no company name or title, enter Owner or Individual).
5. Enter your e-mail address. It must be unique.
6. Enter your phone number and mailing address.
7. Click **Next**.
8. The next page displays your information for review, you can click **previous** to make changes or click **next** if the information is correct. The next screen may provide a list of existing STEERS accounts, if there are potential duplicates with your name. If none pertain to you, click **Next**. Your ER account number will be immediately emailed to you once you click the **Next** button. Fill in the security question information. It is recommended that you save this information in a safe place for

future use. Each time you log in, you will be asked to answer one security question. NOTE: During login, if the answer provided to the question is incorrect (or is not the answer provided during creation of the security questions), STEERS will have you answer the next security question. You will have 3 chances before STEERS locks you out of your account.

9. Click **Save**.
10. Select program area "**Stormwater General Permits (EPR_ SW)**" from the drop down menu
11. Click **Go**.
12. Select the access type that you need for using ePermits. 30 TAC §305.44 requires the Executive Officer of a company or the person if owned by an individual to sign the application. Signature for applications cannot be delegated authority.

    Owner/Operator: Select **Stormwater Sign-view, create, delete, modify, pay, sign, and submit**

    Consultant/ Delegated Preparer: Select **Stormwater Preparer- view, create, delete, modify, pay, and submit**
13. Select your relationship to the facility:

    Owner/Operator: Select "**My employer is the facility...**"

    Delegated Preparer: Select "**My employer is the facility...**"

    Consultant: Select "**My employer is not the facility...**"
14. Select who is authorizing the account:

    Consultant/ Delegated Preparer: Select "**I, [Your Name], am applying for read, edit, or preparer role...**"

    Owner/Operator: Select "**I, [Your Name], am applying for a signatory role...**"
15. Click **Add Access**
16. Once the information has been updated, you will received the following pop-up "Your EPR_SW access has been updated. You can make additional changes or press cancel to return to Account Information." If you agree to the information provided, click **Cancel**
17. Verify that your account information is accurate. The Account Status will show **PROBATION** until you sign the STEERS Participation Agreement (SPA).
18. At the top of the page, select **eSign SPA** or **Paper SPA**

    Paper SPA – This allows you to print out the SPA, sign it and mail it to the address shown on the SPA. Once your paperwork is processed, you will receive an email notification that your probationary status was removed and you will have full access to STEERS.

    eSign SPA – If you have a valid Class C Texas Driver's License, you can eSign the application. Simply enter your personal information and TDL numbers where asked, click both check boxes, then click **eSign SPA**.
19. Check your email for the Welcome to STEERS Account Creation email.

20. Follow the instructions in the email to set up your account password.
21. Logon to STEERS by entering your newly created Account Number and Password to start the renewal/application process.

Texas Commission on Environmental Quality

Expedited Permitting Program

Implementation of the Expedited Permitting Program

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Request for Expedited Processing

Title 30 Texas Administrative Code (TAC) Chapter 101, Subchapter J allows applicants to request the expedited processing of an application filed under 30 TAC Chapters 106, 116, or 122. Subject to the availability of commission resources for expediting permit applications, the Texas Commission on Environmental Quality (TCEQ) may expedite the processing of the application. The applicant should demonstrate that the purpose of the application will benefit the economy of this state or an area of this state.

To expedite an application, the applicant must submit the Form APD-EXP (Expedited Permitting Request Form), the appropriate surcharge, and the Form APD-APS (Air Permitting Surcharge Payment Form). Form APD-EXP can be found on the web at www.tceq.texas.gov/assets/public/permitting/air/Forms/NewSourceReview/20706.pdf. Form APD-APS can be found on the web at www.tceq.texas.gov/assets/public/permitting/air/Forms/NewSourceReview/20707.pdf.

For new applications, attach the APD-EXP form and a cover letter specifying the request to expedite the processing of your project with the application that you submit to the Air Permits Initial Review Team (APIRT). With the application submittal, the applicant will also submit the surcharge along with Form APD-APS to the TCEQ's cashier's office at the address indicated on the form.

For pending applications, an applicant only needs to submit the form APD-EXP along with a cover letter to APIRT. The applicant will also submit the surcharge along with Form APD-APS to the TCEQ's cashier's office at the address indicated on the form.

The applicant will receive an acceptance or denial letter from the TCEQ. The letter will be transmitted to the applicant by e-mail. If a request is denied, the surcharge will be returned to the applicant.

For permits by rule (PBRs) and standard permits that do not require public notice, applicants are required to use the ePermits process to expedite the processing of the application. No hard copy applications or requests will be accepted. The ePermits process will ask a few questions regarding expediting and then allow payment of the surcharge.

Surcharge Amounts

To process a permit application as part of the expedited permitting program, the Air Permits Division (APD) requires a surcharge. The purpose of the surcharge is to fund additional resources to expedite the application. The surcharge must be submitted along with the expedited request. Projects submitted through the ePermits system will be paid through ePay. The application will not be expedited until TCEQ has verified that the appropriate surcharge has been received.

The surcharge amounts for the various air permit projects are listed as follows:

- PBRs and Standard Permits (which do not require public notice) - $500 (**non-refundable**, flat surcharge)
- Standard Permit (with public notice requirements) - $3,000

- Title V General Operating Permit (GOP) - $3,000
- Title V Site Operating Permit (SOP) - $10,000
- New Source Review (NSR) case-by-case permit - $10,000
- Federal NSR permits (Prevention of Significant Deterioration (PSD) including greenhouse gas PSD, Nonattainment (NA), Plantwide Applicability Limit (PAL), and Hazardous Air Pollutant (HAP)) - $20,000

There is no additional surcharge for an NSR case-by-case permit, which accompanies a Federal NSR Permit; only the Federal NSR permit surcharge applies. Only one surcharge is required when applying for multiple federal permits.

Refunds will be processed for projects with a remaining surcharge balance amount of $450 and greater, with the exception of PBRs and standard permits with no public notice. A minimal (5-10%) percentage of the surcharge will used to cover other costs incurred by expediting the processing of applications.

The applicant (specifically the contact person indicated on the Form APD-EXP) will be contacted by e-mail prior to the depletion of the initial surcharge amount. If the applicant elects not to provide additional funding to continue with the expedited process, the application will revert to a non-expedited project and will be reviewed according to standard agency timeframes. The project may also be re-assigned to a different reviewer.

Application and Review Process

General Information

The length of time to complete the air permitting process depends on factors such as the complexity of the application, APD workload and staff availability, and required public participation timeframes.

Missing or incomplete required information or documentation in the permit application is a key factor that delays the processing of a permit application. When the application does not provide sufficient administrative or technical information, the APD staff must contact the applicant to obtain the required information. Therefore, one of the best ways to improve permit timeframes is to supply as much of the necessary information as possible in a technically complete application.

In addition, APD recommends that the applicant contact permitting staff in the planning phases of a project to address some issues that require long lead times to complete. For example, testing to develop emission factors, air quality analysis issues and modeling protocols should be discussed prior to submittal of the application.

Projects with excessive applicant initiated delays will be removed from the expedited permitting program. Some common examples of applicant delays which can cause an expedited project to be removed from the program are (not intended to be an all-inclusive list): change in project scope, requests for additional time to respond to deficiencies, multiple deficiency requests for the same administrative/technical information, lags in newspaper publication, or applicant's overall lack of response to APD initiated requests. Deficiency letters will remind applicants of the possible removal from the expedited program. If an application is removed, a letter will be sent notifying the applicant the project is no longer part of the expedited permitting program and the remaining surcharge balance will be refunded.

New Source Review (NSR)

Pre-Application

Pre-Application Meeting (recommended, but not required)

- Prior to submittal of the application package, the applicant may contact the appropriate APD section manager to schedule a pre-application meeting. The meeting may be a phone conference.
- APD assigns a permit reviewer to the project. This assignment is subject to change.
- At least three working days prior to the pre-application meeting, the applicant submits the following information to the permit reviewer, preferably electronically. This information may be modified by the permit reviewer as is determined to be appropriate for the nature or characteristics of the project:
    - An overview of the project, including a description of the processes involved and the types of emissions (contaminants and approximate quantities);
    - A discussion of federal applicability including netting evaluation, if applicable;
    - A discussion of best available control technology (BACT);
    - A list of permitting questions to resolve in the meeting (BACT, impacts review strategies, calculation methodology, rule applicability, etc.);
    - A draft application and modeling protocol, if available; and
    - Anticipated submittal date and project timing (e.g., start of construction).
- During the pre-application meeting, the TCEQ staff and the applicant will discuss the expectations for the applicant to stay on the expedited track and an anticipated timeframe for the project.

Draft Application

- Prior to submittal of the formal application, the applicant may provide a draft application and modeling protocol (if applicable) for preliminary evaluation by TCEQ staff.
- Draft applications and modeling protocols should be submitted at least three weeks prior to the planned, formal application submittal date.

- A permit reviewer reviews the draft application and the Air Dispersion Modeling Team (ADMT) staff review the modeling protocol (if provided). Staff will discuss any deficiencies or questions with the applicant within seven days of the receipt of the draft application and modeling protocol. The permit reviewer (and ADMT staff if needed) will work with the applicant to resolve those deficiencies and/or questions prior to the application being submitted.

Application Submittal

- The applicant submits the Form APD-EXP, the appropriate surcharge, and the Form APD-APS. The APD-EXP form and a cover letter specifying the request to expedite the processing of the project should be submitted to the APIRT. The surcharge along with Form APD-APS should be submitted to the TCEQ's cashier's office at the address indicated on the form.
- All requirements for the application including technical information to support the PI-1, PI-1R, or PI-1S, must be included in the application for it to be declared "administratively complete."
- If the applicant has conducted SCREEN modeling to determine compliance with standards or meet effects screening level thresholds, the modeling results and supporting modeling documentation may be included in the application. However, additional modeling may be required if the applicant's proposed operational scenarios, control technology, emission rates, or other representations change after submittal. In addition, a modeling protocol should be provided if the applicant did not provide it during pre-application. A second modeling protocol should be provided to address any identified issues during pre-application. If the applicant does not address all issues in the second modeling protocol, the application may be voided in accordance with APD's current voidance procedures.
- The applicant will receive an email containing a letter that states whether or not the application has been accepted into the expedited permit program. The application will not be expedited until TCEQ has verified that the appropriate surcharge has been received.

Application Review

Enhanced Administrative Review (EAR)

- Permitting and modeling staff review the application and draft a deficiency letter if needed.
- All deficiencies will be combined into one letter and sent to the applicant. The applicant has 10 days to respond to the deficiency letter.
- The permitting staff evaluates the applicant's deficiency response. If the response is not acceptable, the application will be voided in accordance with APD's current voidance procedures.

Technical Review - New Source Review (NSR)

- The permit reviewer conducts the technical review including BACT, calculations, federal applicability, and technical completeness.

- The permit reviewer follows the deficiency guidelines in the "Deficiencies" section for requesting additional information and preparing the permitting documents.
- Once emission rates are verified, the permit reviewer requests a complete Air Quality Analysis (AQA) that follows the approved modeling protocol or an analysis using the Modeling and Effects Review Applicability (MERA). The permit reviewer may void the application if the applicant fails to provide a complete and accurate response in the time specified.
- The permit reviewer reviews the AQA report or MERA analysis. If the AQA represents essential portions of the technical review used to determine BACT and impacts, the permit reviewer transfers the report to the ADMT.

Modeling Audit

- ADMT provides the permit reviewer with results of the first review and associated deficiencies to transfer to the applicant. If the applicant does not address all issues in the second modeling protocol, the application may be voided in accordance with APD's current voidance procedures.
- If the air dispersion modeling does not pass the modeling audit two times, the permit reviewer may void the application in accordance with APD's current voidance procedures.
- If the AQA requires impacts review by the Toxicology Division, the permit reviewer will coordinate with Toxicology staff.

Draft Permit

- The permit reviewer provides the draft permit to the applicant as well as the appropriate TCEQ Regional Office.
- Once written comments have been received within 30 days, the permit reviewer addresses the comments and updates the draft permit as appropriate. If substantial changes are made, the permit reviewer sends out a revised draft as needed to the applicant and the TCEQ Regional Office.
- The applicant is sent the second public notice package. Applicants must follow the applicable public notice requirements.
- The applicant communicates the publication schedules for the appropriate newspapers to the permit reviewer so that the anticipated publication date can be set.
- The applicant is responsible for providing tear sheets, affidavits, and the public notice verification form to the permit reviewer and to the Office of the Chief Clerk (OCC) in accordance with the timeframes established in the second public notice package instructions.

Other Topics

Deficiencies

The permit reviewer may send deficiency letters by email or mail directed to the listed technical contact and/or company official.

- If the applicant does not provide complete and accurate responses to the deficient items within 30 days, the permit reviewer may grant a 15-day extension. TCEQ staff will hold a conference call with the company official (listed on the application) to discuss the project and the consequences of a void.
- If the applicant has not provided complete and accurate responses to the deficient items at the end of the 15-day extension, the permit reviewer may recommend to management that the project be voided in accordance with APD's current voidance procedures.

Permits by Rule (PBR) and Standard Permits with no public notice

Application Submittal

The applicant submits requests for expedited processing of the application via ePermits www3.tceq.texas.gov/steers/. The applicant will also pay the $500 nonrefundable surcharge at this time. **Note:** ePermits must be used for all PBRs and Standard Permits (with no public notice requirements). The surcharge will be paid through the ePermits system.

- All requirements for the application including technical information must be included in the application for it to be declared "administratively complete."

Technical Review

- The project is received by the section and assigned to the permit reviewer.
- The permit reviewer initiates technical review. Technical Review includes:
  - Federal and state applicability
  - Emissions calculations, process descriptions, and technical completeness
  - Impacts review (if applicable)
  - Any NSR permit-related review
  - Emissions table completion
  - Site review (if applicable)
- Deficiencies:
  - The applicant will receive a phone call and email explaining any deficiencies. The applicant will have five days to submit a complete and accurate response to the deficiency.
- The applicant will receive an authorization letter and emissions table by email (ePermits) or by mail.

Federal Operating Permits (Title V)

Application Submittal

- The applicant submits the Form APD-EXP, the appropriate surcharge, and the Form APD-APS. The APD-EXP form and a cover letter specifying the request to expedite the processing of the project should be submitted to the APIRT. The surcharge along with Form APD-APS should be submitted to the TCEQ's cashier's office at the address indicated on the form. Copies of the application must also be submitted to the appropriate TCEQ regional office and the Environmental Protection Agency (EPA) Region 6.
- The applicant will receive an email containing a letter that says whether the application has been accepted into the program. Once the applicant receives the letter confirming acceptance, the applicant can proceed with submitting the Form APD-APS (Air Permitting Surcharge Payment form) and the surcharge as indicated in the notice and described in the "Surcharge Amounts" section of this guidance document. The surcharge must be submitted within 10 days.
- The application will not be expedited until TCEQ has verified that the appropriate surcharge has been received.

Technical Review

- The permit reviewer initiates technical review. Technical review includes:
  - All applicable state and federal requirement determinations
  - Compliance Assurance Monitoring/ Periodic Monitoring (CAM/PM) evaluations
  - Technical completeness

Application Deficiencies

- The permit reviewer may send deficiency letters by email or mail directed to the listed technical contact and/or responsible official (RO).
- The applicant should respond to any deficiencies as expeditiously as possible, but no later than 30 days from the date of the email or letter, in order to prevent delays in the issuance of the permit. Note that the permit reviewer may request a shorter deadline. APD management must approve any requested extension.
- Failure to respond to application deficiencies within the timeframe requested by the permit reviewer may result in a voidance of the expedited project.

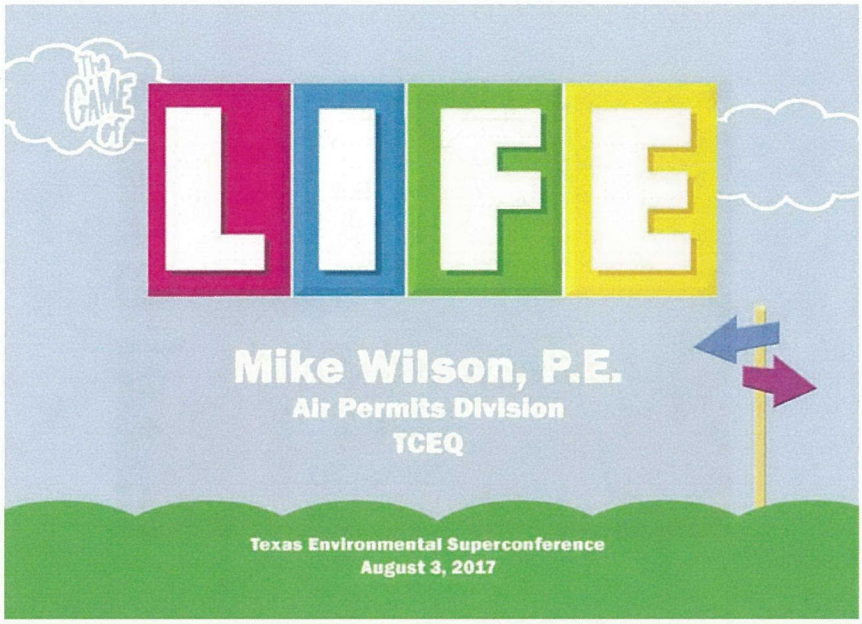
Public Notice Procedures

- Public notices for expedited projects will include the following sentence in the text of the notice: "This application is being processed in an expedited manner, as allowed by the commission's rules in 30 Texas Administrative Code, Chapter 101, Subchapter J."

- Applicants should verify that the expedited language is included in the notice published in the paper. Omitted language could result in republishing.
- Applicants will not be required to re-publish notice if notice requirements have been fulfilled prior to requesting expedited permitting review.

Response to Comments (RTC)

If comments are received during the public notice period, APD will work with the Office of Legal Services to complete the official RTC.





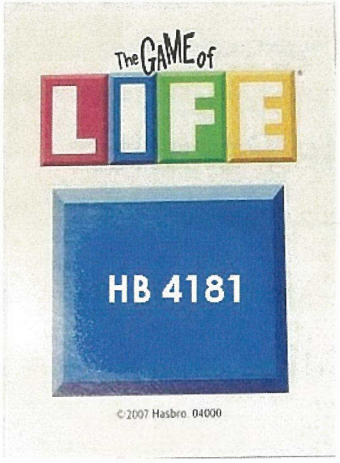
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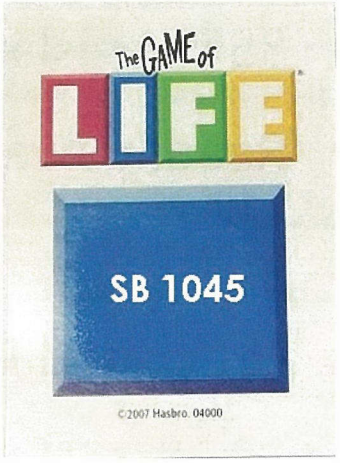
- 85th Legislative Session
- Readily Available Permits
- ePermits
- Expedited Permits

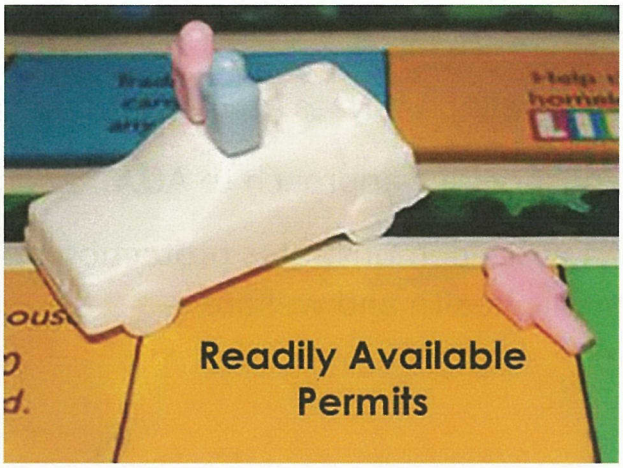




85th Legislative Session









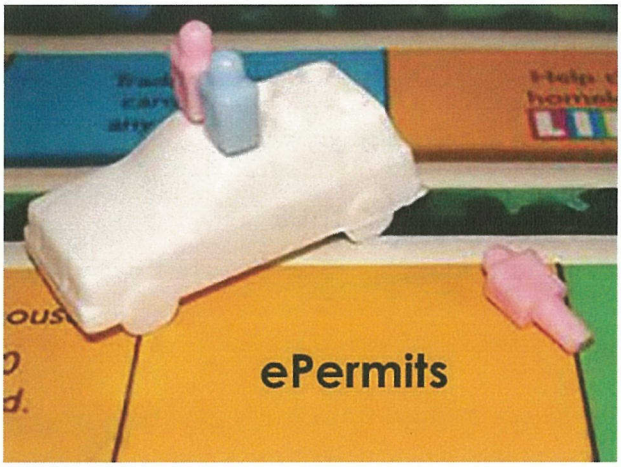
Readily Available Permitting (RAP)

- Develop criteria up-front
- Potential timeframes
- More RAPs planned



Readily Available Permitting (RAP)

- Air Quality Analyses (AQA) included
- Conservative approach to AQA
- Analyses demonstrates protection of public health and welfare





ePermits

- 7,033 – PBRs and standard permits issued in 2016
- 3,368 – of those issued came in through ePermits
- 2,050 – of those had "Same Day" immediate response
- 3,665 – of the total could have used ePermits
- 420 – of those could have had "Same Day" immediate response



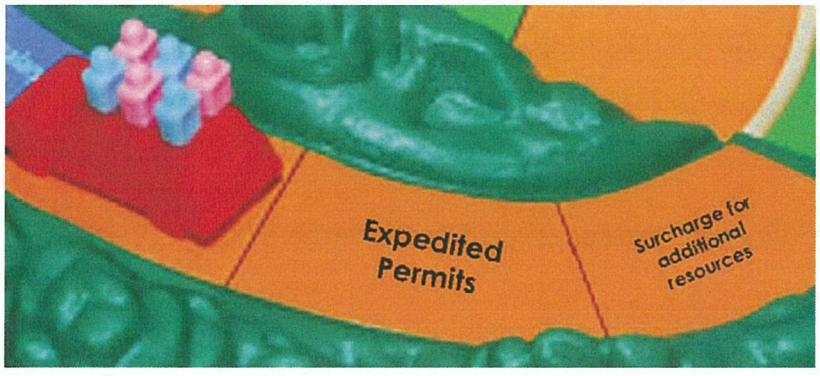
ePermits

- 7,000 – 8,000 PBRs and standard permits/year
- This accounts for 60% of the mail received by APD
- 15 employees enter all projects received by APD
- 70% of their time is spent on PBRs and standard permits



ePermits

- Future of ePermits
  - NSR renewals available 12/31/17
  - Eventually will require submittal of PBRs and standard permits through ePermits
  - Want to develop ability to accept all applications through ePermits





Expedited Air Permitting

- Increased efficiency
- More contractors
- Removing projects from the Program
- Retaining small percentage of surcharge





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About Whit

Whit Swift advises industrial companies on air quality matters, such as state and federal new source review permitting and Title V operating permit matters. In connection with that permitting work, he has represented applicants in contested permit matters before the Texas Commission on Environmental Quality (TCEQ) and the Texas State office of Administrative Hearings (SOAH).

In addition to permitting work, Whit assists major manufacturing, energy, chemical and petrochemical companies with compliance issues related to the Clean Air Act (CAA). His CAA compliance work includes both compliance counseling and enforcement defense work under state and federal programs, including the federal Risk Management Plan (RMP) program, federal regulatory requirements governing sources of hazardous air pollutants (National Emissions Standards for Hazardous Air Pollutants (NESHAP), release reporting, and State Implementation Plan (SIP) rules regulating point sources.

Recent Notable Matters

Major manufacturing, energy, chemical, and petrochemical companies — evaluating the applicability of permitting requirements and with the development and implementation of state and federal preconstruction and operating permit strategies

Refinery owner/operator — developing strategy for both state and federal permitting actions to ensure timely permit issuance and start of operation for major refinery expansion

Petroleum refineries and chemical plants — on-site investigations and related information requests and subsequent enforcement actions brought by the U.S. Environmental Protection Agency (EPA) enforcement under the RMP program

Texas chemical plant — negotiate a settlement with the EPA to resolve an RMP enforcement action following a fatality accident at its site

Chemical manufacturers — evaluate response strategy and lead negotiations with TCEQ Enforcement Division representatives aimed at reducing the penalties sought in significant environmental enforcement actions

Chemical manufacturer — drafting and negotiating a novel corrective order to resolve past liability for unauthorized emissions and establish a stipulated penalty structure to address future emissions events and remove the owner/operator from a cycle of Notices of Enforcement and administrative penalty orders

Power generation and materials handling companies — contested case hearings before SOAH over preconstruction air quality permits

Manufacturers — responding to information requests received from the EPA under Section 114 of the CAA and in defending against alleged Prevention of Significant Deterioration (PSD) violations in a subsequent enforcement action*

* Work completed prior to Bracewell

Publications and Speeches

Co-presenter, "Environmental Law's Not Dead Yet: Optics Versus Reality in the New Administration's Regulatory Reform Project," Association of Corporate Counsel South/Central Texas Chapter, July 12, 2017.

"Chapter 5: Air Quality," *Texas Environmental Law*, Thompson Reuters Texas Practice Series, 2015-2016.

"Implementation of the 2015 Ozone NAAQS," *Houston-Galveston Area Council Regional Air Quality Planning Advisory Committee*, November 17, 2016.

"Agency-Related Ethics Issues," *26th Annual Texas Environmental Superconference*, Austin, Texas, August 7-8, 2014.

"Greenhouse Gas Permitting Process: Legal Perspective," *Texas Chemical Council/Association of Chemical Industry of Texas*, June 5, 2013.

"Regulating Greenhouse Gases: The Endangerment Finding, the Triggering Rule, the Tailoring Rule, and the Proposed New Source Performance Standards for Power Plants," *University of Texas School of Law Power Plant Conference*, February 1, 2013.

Education

The University of Texas School of Law, J.D.
1996 – *Order of the Coif*

Washington and Lee University, B.A.
1993

Noteworthy

Chambers USA, Texas Environment, 2015 - 2017

The Legal 500 United States, Environment: Litigation, 2016; Environment: Regulatory, 2016

Woodward White, Inc., *Best Lawyers*, Environmental Law, 2016 - 2017

The University of Texas School of Law, *Order of the Coif*

Affiliations

State Bar of Texas, Environmental & Natural Resources Law Section

Austin Bar Association

Bar Admissions

Texas

29th Annual Texas Environmental Superconference

August 3-4, 2017

Austin, Texas

AIR QUALITY PANEL – "The Game of Life"

EPA's Authority to Postpone Implementation of Existing Rules

By Whit Swift, Brittany Pemberton, and Kit Schroeder, Bracewell LLP

I. Introduction

President Donald Trump has an ambitious agenda for the U.S. Environmental Protection Agency ("EPA"), with a focus on changing course on a number of high-profile rules promulgated during the Obama administration, including the Clean Power Plan and the rule defining "Waters of the United States." As part of that agenda, EPA Administrator Scott Pruitt has taken actions to stay or delay implementation of multiple rules promulgated by the prior administration – including key Obama-era air rules amending Risk Management Plan ("RMP") requirements[1] and certain elements of the New Source Performance Standard ("NSPS") establishing requirements for the control of methane emissions from oil and gas sources (the "Methane Rule").[2] These EPA actions have been met by vocal opposition from some members of the public, and have been challenged in court.

On July 3, 2017, the U.S. Court of Appeals for the District of Columbia Circuit vacated EPA's initial 90-day stay of certain Methane Rule requirements, complicating the Independence Day vacations of many associated with the oil and gas industry and, more broadly, signaling the challenge that EPA faces when seeking to stop or delay the implementation of one of its own rules (albeit one promulgated by a prior administration). This paper will examine the different forms of statutory authority available to EPA to stay or to delay the implementation of an existing rule, the limitations on that authority, and how EPA is using that authority in 2017. It will also discuss the implications of the D.C. Circuit's decision in the Methane Rule case for the regulated community, and for the Trump administration's efforts to delay implementation of other Obama-era environmental regulations.

II. EPA's Authority to Delay the Implementation of an Existing Rule

Following the change in administrations, EPA was faced with implementing *and* defending in court certain Obama-era rules that do not align with the agency's current direction. In response, EPA has announced reconsideration proceedings for a number of rules,[3] and at the

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[1] 40 C.F.R. Part 68 (40 C.F.R. § 68.1 *et seq.*, adopted at 82 Fed. Reg. 4594 (Jan. 13, 2017)).
[2] 40 C.F.R. Part 60, Subpart OOOOa (40 C.F.R. § 60.5360a *et seq.*, adopted at 81 Fed. Reg. 35824 (June 3, 2016)).
[3] *See, e.g.*, 82 Fed. Reg. 25730 (June 5, 2017) (Methane Rule); 82 Fed. Reg. 13968 (Mar. 16, 2017) (RMP Amendments).

same time requested that the D.C. Circuit place the judicial challenges of the merits of those Obama-era rules in abeyance for the duration of EPA's reconsideration – requests that have been granted by the D.C. Circuit.[4] In addition to initiating reconsideration proceedings, EPA has used multiple mechanisms to delay the implementation of rules that it plans to reconsider and may ultimately change, under both the Clean Air Act ("CAA") and the Administrative Procedure Act ("APA").

A. CAA Section 307(d)(7)(B): Stay Pending Reconsideration

Under the CAA, EPA has the authority to stay the effectiveness of a rule that meets the criteria for a reconsideration proceeding:

> If the person raising an objection can demonstrate to the Administrator that it was impracticable to raise such objection within such time or if the grounds for such objection arose after the period for public comment (but within the time specified for judicial review) and if such objection is of central relevance to the outcome of the rule, the Administrator shall convene a proceeding for reconsideration of the rule and provide the same procedural rights as would have been afforded had the information been available at the time the rule was proposed. . . . The effectiveness of the rule may be stayed during such reconsideration, however, by the Administrator or the court for a period not to exceed three months.[5]

EPA can stay an existing rule under CAA Section 307(d)(7)(B), and can do so with a single notice in the Federal Register, as opposed to notice-and-comment rulemaking. A stay issued under CAA Section 307(d)(7)(B) is limited in time, however, to the three months provided in the CAA.[6] Like many other deadlines established in the CAA, three months is aspirational for a reconsideration proceeding. As a result, EPA's issuance of a three-month administrative stay under CAA Section 307(d)(7)(B) is perhaps best viewed as providing EPA an opportunity to propose and finalize a longer stay through rulemaking that will actually provide the agency the time it needs to complete the reconsideration process without the administratively stayed rule springing back into effect.[7]

In addition, the CAA allows for a stay pending reconsideration "only under carefully defined circumstances."[8] As discussed in greater detail below as relates to the Methane Rule stay litigation, while EPA *may* issue a stay under CAA Section 307(d)(7)(B) when it convenes a

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[4] *See, e.g., API v. EPA*, No. 13-1108 (D.C. Cir.) (judicial challenge to the merits of the Methane Rule) (abeyance request filed filed by EPA on April 7, 2017, granted on May 19, 2017); *American Chemistry Council v. EPA*, No. 17-1085 (D.C. Cir) (judicial challenge to the merits of the RMP amendments) (abeyance requested filed by Petitioners, granted on Apr. 4, 2017).

[5] CAA § 307(d)(7)(B) [42 U.S.C. § 7607(d)(7)(B)].

[6] CAA § 307(d)(7)(B) [42 U.S.C. § 7607(d)(7)(B)]; *NRDC v. Reilly*, 976 F.2d 36, 40 (D.C. Cir. 1992).

[7] *See, e.g.*, 74 Fed. Reg. 36427 (July 23, 2009) ($PM_{2.5}$ Implementation Rule); 82 Fed. Reg. 27645 (June 16, 2017) (Methane Rule).

[8] *NRDC v. Reilly*, 976 F.2d at 40.

reconsideration proceeding, the conditions that give EPA grounds to initiate reconsideration must be present for the administrative stay to be valid.

B. APA Section 705: Stay Pending Judicial Review

EPA also has the authority to stay the effectiveness of a rule under the APA when that rule is challenged in court, under APA Section 705:

> When an agency finds that justice so requires, it may postpone the effective date of action taken by it, pending judicial review. On such conditions as may be required and to the extent necessary to prevent irreparable injury, the reviewing court, including the court to which a case may be taken on appeal from or on application for certiorari or other writ to a reviewing court, may issue all necessary and appropriate process to postpone the effective date of an agency action or to preserve status or rights pending conclusion of the review proceedings.[9]

Like the administrative stay notice for a reconsideration under the CAA, the agency can postpone the effective date of a rule under the APA with a single Federal Register notice, as opposed to notice-and-comment rulemaking. However, unlike the CAA administrative stay, a postponement under APA Section 705 is *not* limited in time. However, the stay available under the APA is only available when the underlying rule is subject to judicial review, *and* when the agency finds "that justice so requires."

In 2012, the U.S. District Court for the District of Columbia issued a decision striking down a delay notice issued by EPA for rules regulating hazardous air pollutant emissions from industrial, commercial, and institutional boilers and process heaters at major sources (the "Boiler Rule") and for regulating air pollutant emissions from commercial and industrial solid waste incineration units (the "CISWI Rule"), and in doing so highlighted a number of limitations on the agency's ability to rely on APA Section 705.[10] In the Boiler Rule and CISWI Rule case, EPA had issued a delay notice under APA Section 705 asserting that justice required postponing the effectiveness of the rule because litigation challenging the rule was pending.[11] EPA had also announced a reconsideration of the Boiler Rule and CISWI Rule, and claimed that the APA Section 705 delay would remain in-place until the judicial review proceedings were complete *or* EPA had completed its reconsideration, whichever came first.[12]

Sierra Club challenged the APA Section 705 delay notice, and the court found that the APA granted EPA authority to issue a delay notice, and that notice and comment rulemaking were not required for such a delay under the APA.[13] However, the vacated the APA Section 705 delay, finding that EPA's delay notice was arbitrary and capricious.[14] The court found that,

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[9] APA § 705 [5 U.S.C. § 705].
[10] *Sierra Club v. Jackson*, 833 F.Supp.2d 11 (D.D.C. 2012).
[11] 76 Fed. Reg. 28662 (May 18, 2011).
[12] *Id.* at 28664.
[13] *Sierra Club v. Jackson*, 833 F.Supp.2d at 26-27.
[14] *Sierra Club v. Jackson*, 833 F.Supp.2d at 30-31.

while EPA "paid lip service" to the pending rule challenge litigation, the agency's statements more clearly tied the indefinite stay under APA Section 705 to its pending reconsideration proceeding – and that the APA was not available for a stay pending reconsideration.[15] The court also found that, while EPA had briefly explained why justice required postponing the effectiveness of the rules, the agency had failed to justify the stay using the four-part test required for such stays ((1) the likelihood that the party seeking the stay will prevail on the merits of the appeal; (2) the likelihood that the moving party will be irreparably harmed absent a stay; (3) the prospect that others will be harmed if the court grants the stay; and (4) the public interest in granting the stay).[16]

The *Jackson* court found that EPA's was not using APA Section 705 as a temporary measure for preserving the status quo during litigation, but rather to buy time for a reconsideration proceeding while avoiding the three-month limit for reconsideration stays under CAA Section 307(d)(7)(B). It vacated EPA's stay of the Boiler Rule and CISWI Rule, and in doing so noted important restrictions on EPA's ability to rely on the APA for an extended stay.

C. CAA Section 307(d): Date Change through Notice-and-Comment Rulemaking

EPA has also delayed the implementation of its own rules through notice-and-comment rulemaking. Unlike the three-month administrative stay that can accompany reconsideration or the APA Section 705 stay, EPA cannot implement this form of stay with a notice in the Federal Register. Rather, EPA must issue a proposed rule to change the effective date, and then adopt a final rule changing the date after taking public comment on the proposal.

EPA has used this mechanism previously in seeking to establish a longer stay that will take effect upon the expiration of the three-month administrative stay authorized by CAA Section 307(d)(B)(7). In doing so, EPA has cited multiple sections of the CAA relating to the agency's general rulemaking authority. In 1991, EPA stayed the implementation of certain new hazardous air pollutant standards for radionuclides at Nuclear Regulatory Commission-licensed facilities, citing its "rulemaking authority to modify a previously promulgated NESHAP."[17] EPA later clarified, in litigating the stay, that it found this authority under CAA Section 301(a).[18] EPA cited this same authority in 2009, when proposing a nine-month stay to the $PM_{2.5}$ implementation rule, while stating that "this notice is also subject to Section 307(d) of the CAA."[19]

More recently, EPA has taken similar action and cited CAA Section 307(d) as authority for an amendment that changed an existing rule's effective date. In proposing and then adopting a rule to delay the effective date of the Obama EPA's RMP amendments by 20 months, EPA stated that its actions were authorized by CAA Section 307(d).[20] Both CAA Section 301(a) ("The Administrator is authorized to prescribe such regulations as are necessary to carry out his

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[15] *Sierra Club v. Jackson*, 833 F.Supp.2d at 33.
[16] *Sierra Club v. Jackson*, 833 F.Supp[1616].2d at 31-32.
[17] 56 Fed. Reg. 18735, 18737 (April 24, 1991).
[18] *See NRDC v. Reilly*, 976 F.2d at 40.
[19] 74 Fed. Reg. 36427, 36430 (July 23, 2009).
[20] 82 Fed. Reg. 16146 (Apr. 3, 2017) (proposed rule); 82 Fed. Reg. 27133 (June 14, 2017) (final rule).

functions under this chapter.")[21] and CAA Section 307(d) ("This subsection applies to . . . the promulgation or revision of any standard of performance under section 7411 of this title. . . .")[22] do not explicitly refer to a stay or delay of implementation, but rather EPA's general authority to promulgate rules, and to amend those rules that it has previously promulgated.

EPA's authority to delay the implementation or effective date through notice-and-comment under its general rulemaking authority is not, however, unfettered. In *NRDC v. Reilly,* the D.C. Circuit assessed the legality of EPA's 1991 final rule that stayed the implementation of certain new hazardous air pollutant standards for radionuclides at Nuclear Regulatory Commission-licensed facilities. While it acknowledged the general rulemaking authority cited by EPA, the D.C. Circuit found that this general rulemaking authority could not serve as authority to delay the effective date of a rule when another, more-specific CAA section established a statutory deadline.[23] Finding that CAA Section 112(b) mandated a "highly circumscribed schedule" for promulgating the hazardous air pollutant standard at issue, the court concluded,

> In the face of such a clear statutory command, we cannot conclude that section 301 provided EPA with the authority to stay regulations that were subject to the deadlines established by section 112(b).[24]

Whether EPA claims authority to amend the effective date of an existing rule under the general rulemaking authority of CAA Section 301(a) or CAA Section 307(d), it would appear that this authority would be limited, consistent with the court's decision in *NRDC v. Reilly,* to changes that did not contravene a statutory schedule or deadline for the promulgation of that rule.

III. EPA's Delay Actions of 2017

In 2017, EPA has taken steps to stay the implementation of Obama-era air regulations under all of the authorities cited above. Following is a brief review of actions EPA – or in one case, the Bureau of Land Management ("BLM") – has taken, and the authority cited for those actions.

- **RMP Amendments**
    - March 2017, Notice: 90-day administrative stay under CAA Section 307(d)(7)(B).[25]
    - April 2017, Proposed Rule: 20-month delay of effective date (until February 19, 2019) under CAA Section 307(d).[26]

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[21] CAA § 301(a) [42 U.S.C. § 7601(a)].
[22] *See, e.g.,* CAA § 307(d)(1)(C) [42 U.S.C. § 7607(d)(1)(C)].
[23] *See NRDC v. Reilly,* 976 F.2d at 41.
[24] *Id.*
[25] 82 Fed. Reg. 13968 (Mar. 16, 2017). Note that, prior to the issuance of the administrative stay associated with a reconsideration under CAA Section 307(d)(7)(B), EPA had already taken action to postpone the effective date of the RMP amendments. *See* 82 Fed. Reg. 4594 (Jan. 26, 2017).

- June 2017, Final Rule: 20-month delay of effective date (until February 19, 2019) under CAA Section 307(d).[27]

- **Methane Rule**

  - June 2017, Notice: 90-day administrative stay under CAA Section 307(d)(7)(B).[28]

  - June 2017, Proposed Rule: Two-year stay to follow 90-day administrative stay; *no specific authority cited in Federal Register.*[29] [30]

- **Landfill Gas/Methane Standards for Municipal Solid Waste ("MSW") Landfills**[31]

  - May 2017, Notice: 90-day administrative stay under CAA Section 307(d)(7)(B).[32]

- **Bureau of Land Management ("BLM") Methane and Waste Prevention Rule**[33]

  - June 2017, Notice: Indefinite postponement of compliance dates under APA Section 705.[34]

EPA's 2017 delay actions have been challenged in court. The final rule delaying the effective date of the RMP amendments by 20 months under CAA Section 307(d) has been challenged in *Air Alliance Houston v. EPA*, D.C. Circuit No. 17-1155. The Federal Register notice of the initial 90-day administrative stay of the Methane Rule was challenged in *Clean Air*

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[26] 82 Fed. Reg. 16146 (Apr. 3, 2017).
[27] 82 Fed. Reg. 27133 (June 14, 2017).
[28] 82 Fed. Reg. 25730 (June 5, 2017).
[29] 82 Fed. Reg. 27645 (June 16, 2017). While a review of the Federal Register proposal failed to identify any specific statutory authority cited by EPA, the general approach taken by EPA appears consistent with the approach taken by EPA in undertaking a notice-and-comment rulemaking to change the effective date of the RMP amendments.
[30] Note that, in addition to the two-year stay, on this same date, EPA proposed a separate 90-day stay of the Methane Rule, also with no specific authority cited in the Federal Register. 82 Fed. Reg. 26741 (June 16, 2017). This separate 90-day stay was proposed by EPA in an attempt to ensure that the Methane Rule requirements covered by the initial 90-day administrative stay would not spring back into effect, if the proposed two-year stay does not become final prior to the expiration of the initial 90-day administrative stay. *See* 82 Fed. Reg. at 27641. Because the proposed two-year stay would likely be determined to be a "major rule" under the Congressional Review Act with a delayed effective date (60 days after publication or after Congress receives the rule report, whichever is later), EPA is pursuing the second 90-day stay to fill any "gap" between the expiration of the initial 90-day administrative stay and the start of the longer two-year stay.
[31] 40 C.F.R. Part 60, Subpart XXX and 40 C.F.R. Subpart 60, Subpart Cf, published at 81 Fed. Reg. 59276 (Aug. 29, 2016) and 81 Fed. Reg. 59332 (Aug. 29, 2016).
[32] 82 Fed. Reg. 24878 (May 31, 2017).
[33] 43 C.F.R. § 3179.7 *et seq.*, published at 81 Fed. Reg. 83008 (Nov. 18, 2016).
[34] 82 Fed. Reg. 27430 (June 15, 2017). In the Federal Register notice of the APA Section 705 stay, BLM States that it also intends to conduct notice-and-comment rulemaking to suspend or extend the compliance dates of those sections affected by the November 2016 Methane and Waste Prevention Rule. 82 Fed. Reg. at 27431.

Council v. Pruitt, D.C. Circuit No. 17-01145, as was the administrative stay of the MSW landfill gas standards (*Natural Resources Defense Council v. Pruitt*, D.C Circuit No. 17-1157). The stay of the BLM Methane and Waste Prevention Rule has been challenged by various groups in the U.S. District Court for the Northern District of California (*Sierra Club v. Zinke*, Case No. 3:17-CV-03885). The balance of this paper will review the D.C. Circuit's decision in the Methane Rule case and discuss its implications, both for the regulated community subject to the Methane Rule and for EPA's other efforts to stay or delay the implementation of Obama-era rules.

IV. The Court Decision Vacating the Methane Rule Administrative Stay

On April 18, 2017, EPA Administrator Pruitt announced that EPA would convene a proceeding to reconsider certain elements of the Methane Rule.[35] The rule elements that were identified as specific subjects of the reconsideration proceeding include: (1) the fugitive emissions monitoring and repair requirements of 40 C.F.R. Section 60.5397a, including the inclusion of low-production wells and the provisions relating to approvals for alternative means of compliance; (2) the requirement that the design and capacity assessment of a closed vent system used to comply with the rule be performed by a Professional Engineer; and (3) the requirement that the determination that it is technically infeasible to route a pneumatic pump to a control device or process be made and certified by a Professional Engineer.[36]

As noted above, EPA announced an initial 90-day administrative stay of these particular Methane Rule requirements under CAA Section 307(d)(7)(B) along with the Federal Register notice of reconsideration.[37] EPA subsequently proposed a longer two-year stay, relying on its general authority to propose and revise its regulations.[38] The public comment period on the proposed two-year stay will remain open until August 9, 2017.[39]

EPA's 90-day administrative stay of the Methane Rule requirements was challenged in the D.C. Circuit, and on July 3, 2017, a D.C. Circuit panel issued a decision vacating the that initial stay.[40] As described above, CAA Section 307(d)(7)(B) gives EPA the authority to convene a reconsideration proceeding where a commenter raises an objection and can demonstrate that it was impracticable to raise that objection during the public comment period, or that the grounds for the objection arose after the close of the comment period. The court, in a 2-1 decision,[41] in which one member of the panel dissented, found that it was *not* impracticable for the industry petitioners to have raised, during the rulemaking process, the issues that EPA cited as grounds for the reconsideration and stay of the rule.[42] In rejecting EPA's grounds for

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[35] Letter from EPA Administrator E. Scott Pruitt to Mr. Howard J. Feldman, American Petroleum Institute, (Apr. 18, 2017), available at < https://www.epa.gov/sites/production/files/2017-04/documents/oil_and_gas_fugitive_emissions_monitoring_reconsideration_4_18_2017.pdf >.

[36] *Id.*

[37] 82 Fed. Reg. 25730 (June 5, 2017).

[38] 82 Fed. Reg. at 27645 (June 16, 2017).

[39] *Id.*

[40] *Clean Air Council v. Pruitt*, No. 17-1145 (D.C. Cir., July 3, 2017).

[41] One member of the panel dissented, taking the position that EPA's issuance of the initial administrative stay was not a "final agency action" subject to judicial review. *Clean Air Council v. Pruitt*, No. 17-1145, Dissenting Opinion at 8. The two judges that issued the majority opinion were appointed during Democratic administrations; the dissenting judge was appointed during a Republican administration.

[42] *Clean Air Council v. Pruitt*, No. 17-1145 at 23.

convening a reconsideration proceeding, the court necessarily rejected EPA's grounds for issuing the 90-day administrative stay that EPA has the option to issue when it convenes a reconsideration proceeding. The court also rejected EPA's claim that, separate and apart from CAA Section 307, it had "inherent authority" to issue a brief stay of the Methane Rule during reconsideration.[43]

Finding that there was no basis for the mandatory reconsideration or stay of the Methane Rule, the D.C. Circuit panel vacated EPA's administrative stay. At the same time, the court acknowledged that its decision was limited in scope:

> We emphasize, however, that nothing in this opinion in any way limits EPA's authority to reconsider the final rule and to proceed with its June 16 NPRM [i.e., the June 16, 2017 proposed rule that would delay the effective date of these Methane Rule requirements by two years]. Although EPA had no section 307(d)(7)(B) *obligation* to reconsider the methane rule, it is free to do so as long as "the new policy is permissible under the statute . . , there are good reasons for it, and . . . the agency *believes* it to be better.[44]

Nothing in the July 3 decision limits EPA's authority to reconsider the Methane Rule, or to proceed with the proposed two-year delay in effective date for those Methane Rule requirements.

V. Implications of the Methane Rule Stay Decision for Methane Rule Affected Sources

The vacatur of EPA's CAA Section 307(d)(7)(B) administrative stay of the Methane Rule requirements creates significant uncertainty for the regulated community.

Under the Methane Rule, affected sources had a June 3, 2017 deadline to conduct their first fugitive emissions monitoring surveys and begin repairing leaks.[45] EPA published the notice of administrative stay on June 5, 2017, though the notice states that it is effective as of June 2, 2017.[46] EPA then proposed the follow-on 90-day and two-year stays under separate authority in an attempt to ensure that the stayed Methane Rule requirements would *remain* stayed for the duration of the reconsideration proceeding. With the initial administrative stay vacated on July 3, 2017, the court has created the scenario that EPA was attempting to avoid: the Methane Rule fugitive monitoring requirements springing back into place based on the court's decision, though likely only for an interim period, as EPA is expected to move forward with the additional 90-day and two-year stays proposed under separate authority.

The fugitive monitoring requirements sprung back into effect immediately upon issuance of the D.C. Circuit's opinion because the court *also* issued its mandate on July 3, 2017. The D.C. Circuit does not always issue the mandate on the same day that it issues a decision; the mandate making the decision effective is frequently issued 45 days after the issuance of the decision. For this Methane Rule stay decision, however, both the decision and the mandate were

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[43] *Clean Air Council v. Pruitt*, No. 17-1145 at 12.
[44] *Clean Air Council v. Pruitt*, No. 17-1145 at 23.
[45] *See* 40 C.F.R. § 60.5397a(f).
[46] 82 Fed. Reg. 25730 (June 5, 2017).

issued on July 3, and there was no lag between (A) the court's decision to vacate the stay and (B) the stay actually being vacated.

EPA subsequently filed a request that the court withdraw or recall the mandate, so that the regulated community would "be afforded a reasonable amount of time to make the necessary adjustments to ensure compliance." EPA also stated that it needed more time to evaluate its options for appeal and to figure out what it must do, implementation-wise. On July 13, 2017, the court issued an Order granting EPA's request in-part and withdrawing the mandate for 14 days. In accordance with that Order, the court's decision to vacate EPA's 90-day administrative stay of the Methane Rule will take effect on July 28, 2017 (as opposed to July 3).

While the D.C. Circuit's decision to temporarily withdraw the mandate delayed the applicability of the Methane Rule fugitive monitoring requirements, it likely makes little impact on the challenging situation facing the regulated community. The Methane Rule fugitive monitoring requirements (along with the other requirements subject to the administrative stay) will spring back into effect on July 28, 2017 – though EPA is expected to proceed with the proposed actions that would delay the compliance dates for those requirements. As a result, there will be a period during which these Methane Rule requirements will be effective and compliance theoretically required (starting July 28), but that period of applicability will likely end when EPA finalizes its proposed longer Methane Rule stays under separate authority (likely in September). Adding to the confusion is the fact that any future EPA amendment of the Methane Rule to delay compliance with these requirements will assuredly be challenged in court, just like the initial 90-day stay that was challenged.

The vacatur of the initial stay creates a confusing situation for the regulated community. While sources subject to the Methane Rule would appear reasonable in relying on EPA exercising its enforcement discretion with regard to these requirements, the reaction of state agencies may be less consistent. In addition, there may be risk of citizen suits – though if these Methane Rule requirements once again "disappear" with subsequent EPA rulemaking further delaying the compliance date, that action may frustrate any potential CAA citizen suit activity with regard to these provisions, given the advance notification requirements and that a CAA citizen suit seek redress for ongoing or repeat violations.[47]

VI. Implications of the Methane Rule Stay Decision for Other Delay Actions

EPA's administrative stay of the Methane Rule was the first EPA stay of an Obama-era rule to face judicial review – and the challenge to the stay was successful. In evaluating the potential broader implications of the Methane Rule stay decision, however, it appears unlikely that the Methane Rule decision will dictate the outcome of the legal challenges to the stay or delay actions for those other rules. The Methane Rule stay decision was focused on whether a reconsideration was mandatory under CAA Section 307(d)(7)(B). Moreover, the decision was based on the administrative record in that particular case. While the court's decision may signal that a court may hold EPA's feet to the fire with regard to the grounds for a mandatory

[47] *See* CAA § 304(a)(1) [42 U.S.C. § 7604(a)(1)].

reconsideration, the court itself emphasized that its holding was a narrow one – even within the realm of what was happening to the Methane Rule.

With regard to the other stays previously discussed in this paper:

- **RMP Amendments.** EPA has already issued a final rule changing the effective date of the RMP amendments, relying on its general authority to revise its own rules under CAA Section 307(d). The Methane Rule stay decision should not impact a court's assessment of EPA's authority to amend the RMP amendments' effective date through notice-and-comment rulemaking. The public comments and EPA's responses to those comments preview the upcoming court battle over EPA's authority to delay the effective date, with certain commenters citing *NRDC v. Reilly* and arguing that EPA did not have the authority to modify the compliance dates under its general rulemaking authority. EPA distinguished its RMP delay action from the *Reilly* case, pointing to the overriding statutory deadline that dictated the outcome in the *Reilly* case, and the fact that no such overriding statutory deadline governed its work on the RMP amendments.

- **Methane Rule (two-year stay).** Assuming EPA moves forward with a final rule changing the compliance dates for the Methane Rule requirements, the authority for that action, and the legal arguments in support of and against that action, will be distinct from the case that was decided on July 3. Assuming that EPA relies on its CAA Section 307(d) authority to revise the rules, the challenge to the longer Methane Rule stay will, like the RMP amendments case, revolve around whether EPA's action is allowed under *Reilly*. Provided that there is no overriding statutory deadline that can be viewed as giving EPA a non-discretionary duty to promulgate the requirements by a certain date, EPA will argue that *Reilly* is inapposite, and that it has the authority to revise its own rules – including the compliance dates for those rules.

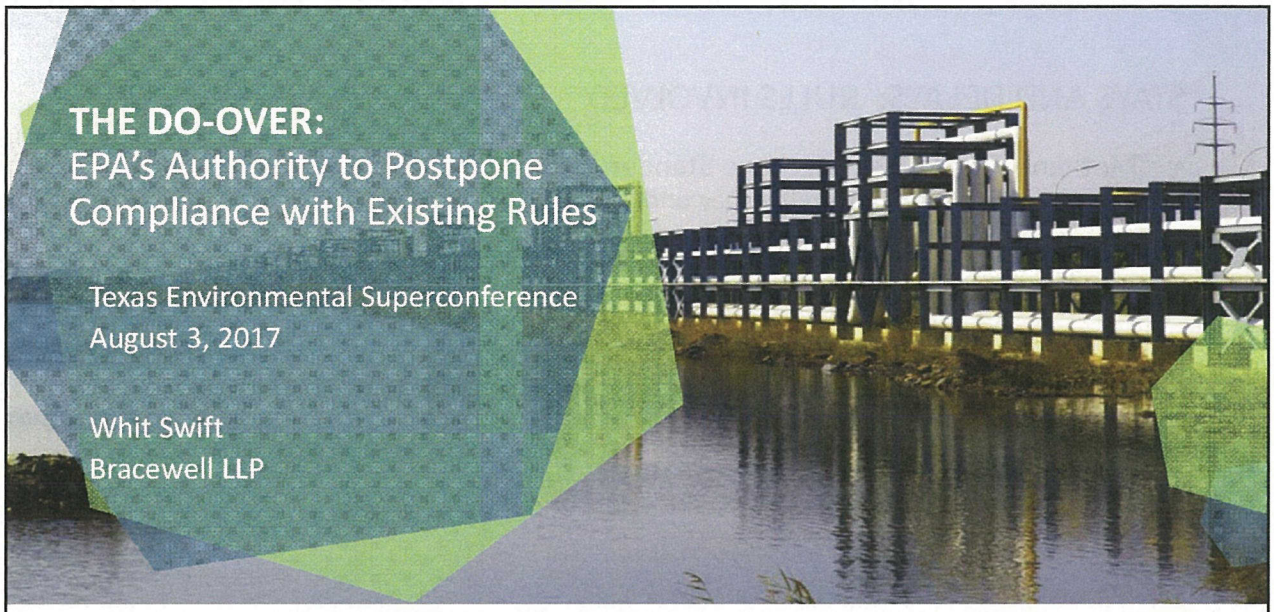
- **Landfill Gas/Methane Standards for MSW Landfills**. The challenge to the MSW landfill gas standards is pending in the D.C. Circuit. The court challenge to this particular stay, issued under CAA Section 307(d)(7)(B), is more likely to be impacted by the decision in the Methane Rule stay case. EPA is relying on the same CAA provision for the stay of the MSW landfill gas standards, and the petitioners will look to make the same arguments – that the issues on which EPA granted reconsideration (and the stay) do not qualify for mandatory reconsideration, because it was *not* impracticable for commenters to raise the issue during the rulemaking process. If a court finds that EPA has again been overly generous in finding that reconsideration is required, the administrative stay of the MSW landfill gas standards could meet a similar fate to the administrative stay of the Methane Rule requirements.

- **BLM Methane and Waste Prevention Rule.** BLM granted this stay under APA Section 705. An evaluation of the Federal Register notice shows that the BLM avoided describing the APA Section 705 stay as giving it time to complete a reconsideration proceeding, but at the same time, the notice does not present a detailed assessment of the four-factor test for issuing a stay as described by the court in *Jackson*. Though, given EPA's statement in the Federal Register notice that it intends to seek a change to the compliance dates through notice-and-comment rulemaking, it would appear that BLM

will be delaying the dates with a mechanism that is not subject to the challenges made in *Jackson.*

VII. Conclusion

EPA is seeking to stay or delay the implementation of a number of Obama-era rules, and has relied on different forms of statutory authority in doing so. While the recent decision in the Methane Rule administrative stay case was a setback for EPA, it appears unlikely that the Methane Rule case would serve as precedent or otherwise drive the outcome in the judicial review of EPA's actions in further delaying the Methane Rule, or in any other challenge it its action to delay implementation of its rules. EPA appears focused on changing those dates through notice-and-comment rulemaking which, while slower than issuance of a Stay Notice under the other laws, provides EPA broader authority to change compliance deadlines, consistent with its authority to amend any aspect of its rules.



THE DO-OVER:
EPA's Authority to Postpone Compliance with Existing Rules

Texas Environmental Superconference
August 3, 2017

Whit Swift
Bracewell LLP

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EPA'S AUTHORITY TO POSTPONE COMPLIANCE WITH EXISTING RULES

- Rules involved and authorities cited by EPA for stay or delay
- D.C. Circuit decision on the Methane Rule stay
- Implications of the Methane Rule decision for sources subject to Methane Rule
- Implications of Methane Rule decision for other stays and delays

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STAYS AND DELAYS: RULES INVOLVED

- "Methane Rule" – *i.e.,* Methane Standards for Oil and Gas Sources
  - Notice: 90-day administrative stay under **CAA § 307(d)(7)(B)**
    - 82 Fed. Reg. 25730 (June 5, 2017)
  - Proposed Rule: 2-year stay to follow 90-day "reconsideration" stay under [_____]
    - 82 Fed. Reg. 27645 (June 15, 2017)
- Risk Management Plan (RMP) Rule Amendments
  - Notice: 90-day administrative stay of effective date under **CAA § 307(d)(7)(B)**
    - 82 Fed. Reg. 13968 (Mar. 16, 2017)
  - Proposed Rule: 20-month delay of effective date under **CAA § 307(d)**
    - 82 Fed. Reg. 16146 (Apr. 3, 2017)
  - Final Rule: 20-month delay of effective date under **CAA § 307(d)**
    - 82 Fed. Reg. 27133 (June 14, 2017)

STAYS AND DELAYS: RULES INVOLVED

- Landfill Gas/Methane Standards for MSW Landfills
  - Notice: 90-day administrative stay under **CAA § 307(d)(7)(B)**
    - 82 Fed. Reg. 24878 (May 31, 2017)
- Bureau of Land Management (BLM) Methane and Waste Prevention Rule
  - Notice: indefinite postponement of compliance dates pending judicial review under **APA § 705**
    - 82 Fed. Reg. 27430 (June 15, 2017)
- Electric Generating Unit (EGU) Effluent Limitation Guidelines
  - Notice: indefinite postponement of effective date pending judicial review under **APA § 705**
    - 82 Fed. Reg. 19005 (Apr. 25, 2017)
  - Proposed Rule: postpone compliance dates
    - 82 Fed. Reg. 26017 (June 6, 2017)

D.C. CIRCUIT DECISION ON METHANE RULE STAY

- Clean Air Council v. Pruitt, No. 17-1145 (D.C. Cir., July 3, 2017)
- Challenge to initial 90-day administrative stay under **CAA § 307(d)(7)(B)**
- 2-1 decision vacating the stay
  - It was not impracticable for commenters to have raised the issues cited by EPA as basis for the reconsideration and stay
  - EPA has no "inherent authority" to issue a brief stay during reconsideration
- Decision does not:
  - Limit EPA's authority to reconsider the rule; or
  - Limit EPA's authority to proceed with the 2-year stay proposed on June 16, 2017
- July 13, 2017: court issued order withdrawing the mandate for 13 days
  - The stayed Methane Rule requirements sprung back into effect on July 28, 2017

IMPLICATIONS OF THE DECISION – REGULATED COMMUNITY

- Interim period of rule applicability
- EPA moving forward with separate 2-year stay
- Judicial review of 2-year stay
- Potential for enforcement and weighing risks
- Compliance self-reporting?

IMPLICATIONS OF THE DECISION – OTHER STAYS AND DELAYS

- Decision limited to 90-day administrative stay under **CAA § 307(d)(7)(B)**
- Fact-specific determination based on the administrative record
- Challenges to other stays and delays will evaluate EPA's authority under:
  - CAA § 307(d)
  - APA § 705
  - *CAA § 301(a)(1) [?]*

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FEDERAL NEW SOURCE REVIEW: Time For Reform?

Texas Environmental Superconference
August 3, 2017

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FEDERAL NEW SOURCE REVIEW: TIME FOR REFORM?

- Background
- White House interest
- New Source Review reform concepts
  - Streamlining
  - Applicability
- Prospects and viability

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BACKGROUND – FEDERAL NEW SOURCE REVIEW

- Air quality preconstruction permits
- New Major Sources and Major Modifications
- Prevention of Significant Deterioration
  - Best Available Control Technology (BACT)
  - Air dispersion modeling demonstration – NAAQS and Increments
- Nonattainment New Source Review
  - Lowest Achievable Emission Rate (LAER)
  - Offsets
- Past NSR reform

WHITE HOUSE INTEREST

- January 24, 2017: The White House; *Presidential Memorandum Streamlining Permitting and Reducing Regulatory Burdens for Domestic Manufacturing*
- February 24, 2017: The White House; Presidential Executive Order 13777, *Enforcing the Regulatory Reform Agenda*
- March 7, 2017: Department of Commerce; Request for information – *Impact of Federal Regulations on Domestic Manufacturing*
- April 13, 2017: Environmental Protection Agency; request for comment – *Evaluation of Existing Regulations*

NSR REFORM CONCEPTS: HOW TO STREAMLINE PERMITTING

- Emissions offsets
  - Expand opportunities to use out-of-area offsets
  - Streamline pollutant interchangeability
  - Increase offset inventory by allowing emissions decreases required by state rule to be "surplus" for purposes of generating offsets
- NAAQS demonstration requirements
  - Allow for "grandfathering" of permit applications for NAAQS applicability purposes based on date of application submittal (or other date prior to permit issuance)
- Air dispersion modeling
  - Employ "probabilistic" modeling to eliminate unnecessary over-conservatism
  - Use of monitored data in lieu of air dispersion modeling

NSR REFORM CONCEPTS: HOW TO STREAMLINE PERMITTING

- Limit EPA oversight of state permitting decisions
- Start of construction
  - Allow for construction to start on certain equipment prior to permit issuance

NSR REFORM CONCEPTS: AFFECTING NSR APPLICABILITY

- Expansion of "Project Netting" to avoid NSR
- Use of General Permits for specific source categories
- Revisit the NSR reforms proposed in 2006
  - "Debottlenecking" policy
  - Project aggregation clarity
- Revisit past NSR reforms thwarted by court challenges
  - Expand/clarify activities that qualify as routine maintenance, repair, and replacement (RMRR)
  - Exclusion of pollution control projects from definition of "modification"

NSR REFORM CONCEPTS: AFFECTING NSR APPLICABILITY

- Additional flexibility in contemporaneous netting
  - Use of actual-to-projected-actual (ATPA) emissions
- Expand application of the "demand growth" exclusion
- Change the emissions test used to determine applicability
  - Potential-to-Potential
  - NSPS emissions test (short-term/maximum hourly emissions increase)

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NSR REFORM: PROSPECTS AND VIABILITY

- White House/EPA Interest
- Priority within a crowded de-regulatory agenda
- Time
- Potential legal challenges and judicial review

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Mike is counsel for parties in ongoing EPA regulatory proceedings relating to carbon dioxide, interstate air quality, regional haze, and coal combustion residuals, including appeals pending before the United States Courts of Appeals for the Fifth, Eighth, Tenth, and D.C. Circuits, as well as the Supreme Court of the United States. Mike helps coordinate multi-state outreach efforts regarding these and other regulations impacting the electric power and mining sectors, appears at hearings and energy policy events across the country, and is published in several trade, law, and business journals on environmental law and energy policy topics.

Mr. Nasi is a Past Chairman of the State Bar of Texas Environmental and Natural Resources Law Section and serves as a guest lecturer in the "Energy Law & Policy" course at the University of Texas Law School and contributed to Rice University's "Leadership & Decision Making in the Energy Industry" course.

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EVOLVING REGULATION OF POWER PLANTS:

Shifts in Regulatory Priorities With the New Presidential Administration

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I. Introduction

There has been a seismic shift in the U.S. environmental regulatory landscape with the election of President Trump in November 2016 and his inauguration in January 2017. This shift is particularly significant concerning the regulation of power generation facilities and electric utilities. Like a pendulum that swung to expansive and strict environmental regulatory requirements under the previous Obama administration, the pendulum is swinging back to a less burdensome environmental regulatory state.

As with the election of any new president, there have been significant changes in the executive branch. There are new Administrators/Secretaries in each of the regulatory agencies and departments that regulate electric generation and related environmental concerns, including but not limited to: Environmental Protection Agency ("EPA") Administrator Scott Pruitt,[1] Department of Energy ("DOE") Secretary Rick Perry,[2] and Department of Interior ("DOI") Secretary Ryan Zinke.[3] Numerous new members of the Federal Energy Regulatory Commission ("FERC") have also been nominated.

While not turning away from the potential of renewable energy sources, each of these new Administrators/Secretaries emphasize energy independence and expansive use of traditional fossil fuels. These changes are driven internally at each respective agency, but they are also guided by the President via Executive Order, Executive Memoranda, and other Executive guidance, which have called for a prioritization of domestic energy production and relaxation of regulatory burdens.[4]

The policy preferences of the new Administration were recently outlined in the Trump Administration's Unified Agenda of Regulatory and Deregulatory Actions ("Unified Agenda"), prepared by the Office of Information and Regulatory Affairs ("OIRA"), within the Office of Management and Budget ("OMB"), and released on July 20, 2017. As summarized by the OIRA, the "Agenda represents the beginning of fundamental regulatory reform and a reorientation toward reducing unnecessary regulatory burden on the American people," with the goal of "amending and eliminating regulations that are ineffective, duplicative, and obsolete."[5] Across

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[1] Confirmed February 17, 2017, Senate Vote 52-26.

[2] Confirmed March 2, 2017, Senate Vote 62-37.

[3] Confirmed March 1, 2017, Senate Vote 68-31.

[4] Energy specific Executive Orders/Memoranda are discussed below. More generally, the President has also issued an Executive Order to reduce regulatory burdens across all industries, including the creation of the Regulatory Reform Task Forces within agencies to evaluate existing regulations and make recommendations to the agency head regarding their repeal, replacement, or modification. Each Task Force is ordered to identify regulations that: (i) eliminate jobs, or inhibit job creation; (ii) are outdated, unnecessary, or ineffective; (iii) impose costs that exceed benefits; (iv) create a serious inconsistency or otherwise interfere with regulatory reform initiatives and policies; (v) are inconsistent with the requirements of section 515 of the Treasury and General Government Appropriations Act, 2001; or (vi) derive from or implement Executive Orders or other Presidential directives that have been subsequently rescinded or substantially modified. *See Presidential Executive Order on Enforcing the Regulatory Reform Agenda*, February 24, 2017.

[5] *See* OIRA, Current Unified Agenda of Regulatory and Deregulatory Actions, https://www.reginfo.gov/public/do/eAgendaMain (last accessed July 23, 2017).

all agencies of the federal government, the Unified Agenda states that agencies have: withdrawn 469 actions proposed in the Fall 2016 Agenda; reconsidered 391 active actions by reclassifying them as long-term (282) and inactive (109), allowing for additional review; and reduced the number of economically significant regulations by roughly 50 percent since the Fall 2016 Agenda. Agencies are also now required, for the first time, to post and make public their list of "inactive" rules, providing notice to the public of regulations still being reviewed or considered.

The new Administration's preferences are also demonstrated in proposed budget cuts that call for large reductions in spending and manpower at these agencies/departments. For example, the proposed EPA FY 2018 budget calls for a roughly one-third reduction in spending, one-quarter reduction in staff, and the elimination of 56 programs.

It is under this regulatory environment that there have been advancements and changes to the majority of the environmental regulations impacting the electric generation industry, including but not limited to, EPA's regulation of greenhouse gas ("GHG") emissions, interstate transport of air emissions, haze-causing air emissions, disposal of coal combustion residuals, and impacts to water bodies and streams, as well as other agency actions and rules. Many of these rules were subject to ongoing litigation, and in many of these cases, these challenges have been stayed, abated, or continued while EPA formulates plans to reconsider, repeal, or take other action regarding these rules. These rules and actions are discussed in detail below.

II. Regulation of Greenhouse Gas Emissions

A. Energy Independence Executive Order

President Trump's March 28, 2017 Executive Order – Promoting Energy Independence and Economic Growth ("Energy Independence Executive Order," "Executive Order," or "Order") – began the process of suspending, revising, or rescinding a significant portion of the Obama Administration's efforts to reduce GHG emissions nationwide, particularly in the electric generation industry. The Order requires taking affirmative steps to repeal the Clean Power Plan ("CPP" or "111(d) Rule"),[6] the new-source electric generating unit ("EGU") 111(b) Rule ("111(b) Rule"),[7] and other related climate orders/memoranda, such as National Environmental Policy Act ("NEPA") guidance to consider GHG emissions and the Social Cost of Carbon Technical Support Document ("Social Cost of Carbon TSD").

The broad policy goals of the Executive Order are to encourage energy production, economic growth and job creation, and to ensure geopolitical security. It is further the policy of the Administration to secure affordable, reliable, safe, secure, clean energy from all sources (including coal, natural gas, nuclear, hydro, and renewables). As such, the President ordered

[6] U.S. EPA, Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 80 Fed. Reg. 64661 (October 23, 2015). 111(d) refers to the Clean Air Act provision upon which the rule is based.

[7] U.S. EPA, Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units, 80 Fed. Reg. 64509 (October 23, 2015). 111(b) refers to the Clean Air Act provision upon which the rule is based.

executive departments and agencies to immediately review existing regulations and any other similar agency actions that potentially burden[8] the development or use of domestically produced energy resources (with particular attention to oil, natural gas, coal, and nuclear energy resources) and suspend, revise, or rescind those regulations/actions that unduly burden the development of domestic energy resources beyond the degree necessary to protect the public interest or otherwise comply with the law.

The Order's emphasis on removing barriers to domestic energy production, and request to review existing regulations that could impose a burden on this development, is a far reaching policy goal that will likely be a key component and reference point for potential future agency actions.

The Executive Order also revoked or rescinded these prior climate-related presidential actions:

- Executive Order 13653 of November 1, 2013 – Preparing the United States for the Impacts of Climate Change, which outlined general climate-related goals of the Obama Administration;
- The Presidential Memorandum of June 25, 2013 – Power Sector Carbon Pollution Standards, which outlined the Obama Administration's desire that the EPA promulgate the Clean Power Plan and 111(b) Rule;
- The Presidential Memorandum of November 3, 2015 – Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment, which directed various agencies to develop climate-related mitigation plans, as well as undertake other related actions;
- The Presidential Memorandum of September 21, 2016 – Climate Change and National Security, which declared that climate change is a threat to national security and requested agencies and departments to take certain actions;
- The Report of the Executive Office of the President of June 2013 – The President's Climate Action Plan, which outlined the Obama Administration's broad goals regarding climate-related regulation; and
- The Report of the Executive Office of the President of March 2014 – Climate Action Plan Strategy to Reduce Methane Emissions, which outlined plans to reduce methane from oil and gas (and other) industries.

The effect of these revocations is immediate. Since these above-referenced prior actions are Presidential Memoranda and Executive Orders, they do not have the same force of law as regulations (or statutes) and can be revoked by the subsequent President's own Memoranda/Executive Orders. Likewise, revocation of the GHG NEPA Guidance was also accomplished with the stroke of a pen.

The Executive Order also disbanded the Interagency Working Group on Social Cost of

[8] "Burden" is defined in the Executive Order to mean "to unnecessarily obstruct, delay, curtail, or otherwise impose significant costs on the siting, permitting, production, utilization, transmission, or delivery of energy resources."

Greenhouse Gases ("IWG"), which was convened by the Council of Economic Advisers and the Director of the OMB. Documents generated by this working group were also withdrawn, including, as mentioned above, the Social Cost of Carbon TSD and relevant updates and addenda. These documents served as the economic foundation for an array of major air quality rulemakings. In place of the Social Cost TSD (and related documents), the Order requires that to monetize the value of changes in GHG emissions resulting from regulations, including with respect to the consideration of domestic versus international impacts and the consideration of appropriate discount rates, agencies shall ensure, to the extent permitted by law, that any such estimates are consistent with the guidance contained in OMB Circular A-4 of September 17, 2003.

The Order also began lifting the federal land coal-leasing moratorium. Specifically, the Executive Order required the Secretary of the Interior to take steps necessary and appropriate to amend or withdraw Secretary's Order 3338 dated January 15, 2016, (Discretionary Programmatic Environmental Impact Statement (PEIS) to Modernize the Federal Coal Program) and to lift any and all moratoria on Federal land coal leasing activities related to that Order. It also required the Secretary of the Interior to commence Federal coal leasing activities consistent with all applicable laws and regulations. Interior Secretary Zinke issued his own Department of Interior ("DOI") Order to implement the Executive Order the day after the Energy Independence Executive Order.[9] Secretary Zinke's order "direct[ed] a reexamination of the mitigation policies and practices across the Department of the Interior [...] in order to better balance conservation strategies and policies with the equally legitimate need of creating jobs for hard-working American families." Secretary Zinke's order rescinds a previous order, which had implemented a landscape-scale mitigation policy. [10]

The Executive Order also required numerous other actions related to oil and gas rules. The Executive Order required the EPA Administrator to review the 2016 methane (and VOC) rule for new, reconstructed, and modified sources in the oil and natural gas sector, as well as similar rules and related guidance.[11]

In order to implement this Executive Order, impacted agencies were required to develop implementation plans and reports to be submitted to the Director of the OMB, which have been (are being) developed.

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[9] DOI, Secretarial Order No. 3349, American Energy Independence, March 29, 2017.

[10] That previous order was adopted pursuant to a now-rescinded Presidential Memorandum requiring the DOI and others to implement mitigation policies on lands and resources administered by those agencies.

[11] *See* U.S. EPA, Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources, 81 Fed. Reg. 35824 (June 3, 2016). These additional rules include: the final rule entitled "Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands," 80 Fed. Reg. 16128 (March 26, 2015); the final rule entitled "General Provisions and Non-Federal Oil and Gas Rights," 81 Fed. Reg. 77972 (November 4, 2016); the final rule entitled "Management of Non-Federal Oil and Gas Rights," 81 Fed. Reg. 79948 (November 14, 2016); and the final rule entitled "Waste Prevention, Production Subject to Royalties, and Resource Conservation," 81 Fed. Reg. 83008 (November 18, 2016).

B. Clean Power Plan or 111(d) Rule

The Clean Power Plan, also known as the 111(d) Rule, was finalized in August 2015.[12] Ostensibly to control GHG emissions from fossil fuel electric generators, it outlined a regulatory structure imposing requirements and burdens on the entire electric generation industry, including renewable generation and electric distribution. It was subject to numerous legal challenges and requests that the rule's implementation, which was supposed to begin in mid-2016, be stayed. The United States Court of Appeals for the District of Columbia Circuit ("D.C. Circuit") rejected requests that the rule be stayed, but on February 9, 2016, the U.S. Supreme Court stayed implementation of the rule pending judicial review – something the Supreme Court has never done in its history. Oral argument was held in front of the entire *en banc* panel of judges of the D.C. Circuit on September 27, 2016.[13]

Oral arguments on the Clean Power Plan were extensive. Scheduled to last for three and a half hours, arguments took nearly seven hours to complete. The majority of the discussion focused on EPA's efforts to look "beyond the fence" of power plants to require generating shifting (coal to natural gas or coal/natural gas to renewables) as part of its Best System of Emissions Reduction ("BSER") analysis. Petitioners argued that EPA had gone far beyond its statutory authority in this rule and that its actions did not warrant *Chevron* deference. Other arguments discussed the role of EPA in relation to areas traditionally reserved to state authorities; issues regarding conflicting statutory provisions; and achievability of the rule. While a decision was expected in early 2017, the Court never reached (or possibly, has yet to reach) a decision in the matter.

The day the Energy Independence Executive Order was released, EPA Administrator Pruitt signed an Announcement of Review of the Clean Power Plan. This Announcement included that EPA is reviewing the rule, providing advanced notice of forthcoming rulemaking and, if appropriate, that EPA will initiate proceedings to suspend, revise or rescind the CPP. The Announcement cites the Executive Order and concerns about EPA's legal authority and record, as well as the number of states and other parties that have sought judicial review of the rules. Citing existing case law, the Announcement also outlines that EPA's "ability to revisit existing regulations is well-grounded in the law." The Announcement went on to add that states have not been expected to work towards meeting the compliance dates set in the CPP, since the rule is stayed; the compliance dates are being reevaluated. This Announcement was published in the *Federal Register* on April 4, 2017.[14] On April 3, 2017, EPA also withdrew the proposed rule related to model trading rules and the clean energy incentive program, both components of

[12] *See* U.S. EPA, Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units; Final Rule, 80 Fed. Reg. 64662 (Oct. 23, 2015).

[13] Customarily, a three-judge panel hears a case. Once that panel reaches a decision, a party may request that the entire court hear the case *en banc*. The D.C. Circuit, presumably anticipating that a decision to hear the case *en banc* would be granted regardless of the panel's decision, went directly to an *en banc* hearing. A court of ten judges heard the case, excluding Judge Merrick Garland who was under consideration for the U.S. Supreme Court at that time.

[14] U.S. EPA, Review of Clean Power Plan, Announcement of Review, 82 Fed. Reg. 16,329 (Apr. 4, 2017).

implementing the CPP.[15]

On the day the Executive Order was signed, the Attorney General filed a Motion to Hold the Case in Abeyance. Numerous protestants against the CPP filed supporting motions, which included requests that the case be held in abeyance until 30 days after the conclusion of review and any resulting forthcoming rulemaking. Subsequently, the D.C. Circuit required additional briefing on these issues.

On May 15, 2017, the parties filed briefs in response to the D.C. Circuit's requests to provide supplemental briefing regarding whether the case should be held in abeyance. Numerous briefs were filed. On one side were environmental/public health groups, pro-rule power generators, and pro-rule states. These briefs advocated against holding the case in abeyance. Essentially, these pro-rule groups argued that holding the case in abeyance would be the equivalent of indefinitely suspending the rule, without EPA having to go through the normal process for revoking a rule. Therefore, these parties requested either that the court just make its decision in the 111(d) Rule case or remand the rule back to the EPA. Remand would effectively lift the stay of the 111(d) Rule while EPA conducts its new rulemaking. According to these parties, the stay was only meant to apply during the course of the litigation, not while EPA administratively reconsiders the 111(d) Rule. On the other side of these cases were industry and states against the rule. These industry/states requested that the case be held in abeyance, which received the support of EPA, based on long-standing precedent in support of holding the case in abeyance pending agency reconsideration of the rule. At the time of the drafting of this paper, the D.C. Circuit had yet to rule on the motions requesting abeyance.

It was reported in late May 2017 that EPA had developed a draft rule to roll back the Clean Power Plan and that it was developing a related economic analysis to support this rollback.[16] The Trump Administration's Unified Agenda also states that the CPP will be withdrawn "on grounds that it exceeds the statutory authority provided under section 111 of the Clean Air Act." The Unified Agenda does not provide a timeline for this action, and at the time of the drafting of this paper, this rollback rule had yet to released.

C. Carbon Pollution Standards or 111(b) Rule

The Carbon Pollution Standards rule, otherwise known as the 111(b) Rule, was finalized in August of 2015. It established emissions limits for coal and natural gas-fired EGUs. The emissions limit for coal-fired EGUs was dependent on partial use of carbon capture and sequestration ("CCS"), a yet-to-be-commercially demonstrated technology, that effectively made the construction of new coal-fired generation economically unachievable for the short to medium term. The rule – while challenged at the D.C. Circuit – was never stayed; it is currently in effect.

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[15] U.S. EPA, Withdrawal of Proposed Rules: Federal Plan Requirements for Greenhouse Gas Emissions From Electric Utility Generating Units Constructed on or Before January 8, 2014; Model Trading Rules; Amendments to Framework Regulations; and Clean Energy Incentive Program Design Details, Withdrawal of proposed rules, 82 Fed. Reg. 16,144 (Apr. 3, 2017).

[16] *See* E&E News, Emily Holden, *EPA has early draft of rollback*, May 25, 2017.

Similar to the CPP, the day the Energy Independence Executive Order was released, EPA Administrator Pruitt signed an Announcement of Review of the 111(b) Rule. This Announcement included that EPA is reviewing the rule, providing advanced notice of forthcoming rulemaking and, if appropriate, that EPA will initiate proceedings to suspend, revise or rescind the Rule. The Announcement cites the Executive Order and concerns about EPA's legal authority and record, as well as the number of states and other parties that have sought judicial review of the rules. Citing existing case law, the Announcement also outlines that EPA's "ability to revisit existing regulations is well-grounded in the law." This Announcement was published in the *Federal Register* on April 4, 2017.[17]

Again, like the CPP, on the day the Executive Order was signed, the Attorney General filed a Motion to Hold the Case in Abeyance in the 111(d) Rule case. On March 30, 2017, the D.C. Circuit issued an Order canceling the oral argument in the 111(b) Rule case that was previously scheduled for April 17, 2017, pending the court's disposition of the Motion to Hold the Case in Abeyance. On May 15, 2017, the parties filed briefs in response to the D.C. Circuit's requests to provide supplemental briefing regarding if the case should be held in abeyance. Numerous briefs were filed. The parties took similar positions as were taken in the CPP case. The parties requested that the D.C. Circuit make its decision on the merits. However, regarding abeyance v. remand, these parties generally did not have the same strength of opinion as in the 111(d) case, since the 111(b) Rule was never stayed by the courts. The majority of the pro-rule parties argued that under either an abeyance or remand, the 111(b) Rule would remain in effect; however, the pro-rule states (California, Connecticut, etc.) requested that the Court provide additional clarification if a remand is issued. At the time of the drafting of this paper, the D.C. Circuit had yet to rule on the motions requesting abeyance.

D. Withdrawal from the Paris Climate Accord

On June 1, 2017, President Trump announced that the United States would begin withdrawing from the Paris Climate Accord. The President cited to unfair terms of the agreement; that the United States would have borne an unequal burden in the accord. He cited to impacts on jobs and other negative economic impacts to the United States. Finally, he stated that he would take actions to seek a better deal either under the construct of the Paris Accord or under a separate/different agreement. This process is ongoing, but since the agreement was non-enforceable, this withdraw itself (compared to the Executive Order and other agency actions) has not had a direct impact on the current regulatory state. The most significant short-term impact of this action will most likely occur in the context of United States ultimate participation in the funding of the "Green Climate Fund" (whether withdrawn, reduced or redirected). At the time of this writing, no formal announcement has been made on that front.

[17] U.S. EPA, Review of the Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Stationary Sources: Electric Generating Units, Announcement of Review, 82 Fed. Reg. 16,330 (Apr. 4, 2017).

III. Interstate Transport of Pollutants and Regional Haze

A. CSAPR Developments

On July 6, 2011, EPA finalized the Cross-State Air Pollution Rule (CSAPR), setting emissions caps for NOx and/or SO_2 in 27 states.[18] While Texas was only included for a limited, seasonal, NOx program in the original proposal published one year earlier, Texas was required to comply with both the NOx and SO_2 annual programs under the Final Rule. The rule had a January 1, 2012 compliance date. The rule has been subject to a lengthy court battle, which included a two-year stay of the rule during 2012-2013, and an initial D.C. Circuit decision to strike down the rule based on a facial challenge. Then, on April 29, 2014, the United States Supreme Court in a 6-2 decision, reversed the D.C. Circuit's initial decision and held that EPA has the authority to proceed with CSAPR as designed and implemented, except that the Court expressly recognized that its decision did not foreclose "as-applied" challenges by states and affected parties (specifically referencing circumstances that matched those experienced by Texas).[19]

Subsequent to the 2014 Supreme Court decision, various parties pursued the "as-applied" challenges to CSAPR with the D.C. Circuit – many of which were successful. In a July 18, 2015 decision (known as the *EME Homer City II* decision), the D.C. Circuit found that CSAPR's SO_2 budgets for Alabama, Georgia, South Carolina, and Texas, as well as the 2014 ozone-season NOx budgets for Florida, Maryland, New Jersey, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Texas, Virginia, and West Virginia were overly burdensome.[20] However, while the Court remanded these budgets for EPA to propose new ones, it did so *without* vacating them; which means that these emissions budgets would remain in effect, as they continued to do – and largely still do today.

EPA effectively side-stepped the court's decision regarding ozone-season NOx budgets by finalizing ozone-season limits based on the 2008 ozone NAAQS in its September 7, 2016 CSAPR Update Rule.[21] The original CSAPR was based on the less burdensome 1997 ozone NAAQS. Therefore, despite the victory in the D.C. Circuit, this actually meant the reduction in allocations for certain states, including Texas.

Regarding the SO_2 and NOx annual limits, EPA was able to meet some form of agreement with all of the states subject to the D.C. Circuit's July 2015 decision, except for Texas. Rather than promulgating new limits for Texas, on November 3, 2016, EPA released its proposed rule to withdraw the federal implementation plan ("FIP") imposing CSAPR annual budgets for SO_2 and

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[18] U.S. EPA, Federal Implementation Plans: Interstate Transport of Fine Particulate Matter and Ozone and Correction of SIP Approvals; Final Rule, 76 Fed. Reg. 48,208 (August 8, 2011).

[19] *EPA v. EME Homer City Generation, L.P.*, 134 S. Ct. 1584, 188 (2014).

[20] *EME Homer City Generation, L.P. v. EPA*, 795 F.3d 118 (D.C. Cir. 2015).

[21] U.S. EPA, Cross-State Air Pollution Rule Update for the 2008 Ozone NAAQS, 81 Fed. Reg. 74,504 (Oct. 26, 2016). This established new allocations for all states subject to the Ozone Season NOx limit, not just those subject to the *EME Homer City II* decision.

NOx on Texas.[22] Rather than providing new budgets as indicated in the *EME Homer City II* decision, EPA instead offered that Texas (and the other similarly positioned states) self-impose, via a state implementation plan ("SIP"), the Phase 2 SO_2 emissions budget that was rejected by the Court.[23] EPA stated that the benefit to Texas for accepting this deal would be EPA's recognition that compliance with the Phase 2 SO_2 budget would equal compliance with BART requirements. If Texas did not accept EPA's offer, it would mean that in a short period of time, EPA would pursue a FIP, conducting site-specific BART analyses on Texas' BART-eligible units (*see* discussion below).

B. BART and Regional Haze Developments in Texas and Other States

On January 15, 2009, EPA concluded that 34 states (including Texas) had failed to submit Clean Air Act SIPs properly addressing regional haze impacts on federal Class I areas.[24] EPA stated at the time that this started a two-year clock to promulgate FIPs for these states. EPA entered into a consent decree with the National Parks Conservation Association, Sierra Club, Environmental Defense Fund, and numerous other petitioners to issue FIPs (or act on submitted SIPs) for these states on specific timelines.[25] Over time, EPA implemented FIPs in various states, reached agreements with states over their SIP submissions, and made it through most of the 34 states initially identified. Some of the states with remaining issues included Louisiana, Arkansas, and Texas.

Since the change in Administration, the course of Regional Haze discussions has shifted. EPA recently proposed approving components of Louisiana's BART submission. EPA is in the process of shifting from a proposed BART & Reasonable Progress BART FIP to a state-led SIP revision replacement. The largest and most complicated Regional Haze regulatory context yet to be resolved is in Texas.

There were multiple extensions of consent decree deadlines to promulgate a FIP for Texas. The most recent extension, by order dated December 15, 2015, modified EPA's deadline to:

- Require EPA to finalize a FIP (or approve a SIP) by December 9, 2016, for regional haze requirements not associated with BART for EGUs. This applied to the Regional Haze Reasonable Progress Rule discussed in greater detail below.

- Require EPA to finalize a FIP (or approve a SIP) by September 9, 2017, imposing BART on EGUs.

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[22] U.S. EPA, Interstate Transport of Fine Particulate Matter: Revision of Federal Implementation Plan Requirements for Texas, Proposed Rule, 81 Fed. Reg. 78,954 (Nov. 10, 2016).

[23] The other states were Alabama, Georgia, and South Carolina. EPA claims in this proposed rule that these states have adopted, or are in the process of adopting, SIPs agreeing to self-impose the CSAPR trading programs on their impacted units.

[24] Class I federal lands include areas such as national parks, national wilderness areas, and national monuments.

[25] *National Parks Conservation Association v. Jackson*, No. 11-1548 (D.D.C.). Consent decree approved March 30, 2012.

The relevant Clean Air Act regional haze provisions require source-specific BART *and* a demonstration that there will be reasonable progress and a long-term strategy to reduce regional haze. Typically, these requirements are addressed in a single rulemaking. However, in Texas, EPA separated its regional haze rule into two separate rulemakings.

The final Texas Regional Haze Reasonable Progress Rule ("Reasonable Progress FIP") was published in the *Federal Register* on January 5, 2016.[26] An EPA FIP, it required scrubber upgrades on eight Texas EGUs and new scrubbers on seven Texas EGUs. It was immediately subject to legal challenge based on numerous concerns, including that no reasonable progress rule had ever attempted to impose source specific controls on a state's EGUs. On July 15, 2016, the U.S. Court of Appeals for the Fifth Circuit ("Fifth Circuit") found that the appropriate venue to challenge the rule was the Fifth Circuit and stayed the effectiveness of the rule during the litigation over the rule's merits.[27] On March 22, 2017, the court granted EPA's request to remand the FIP to EPA for revisions; it also upheld the stay. EPA has yet to release a revised rule under this remand.

To address BART, EPA proposed a FIP, which was published in the *Federal Register* on January 4, 2017; after the election but before the inauguration.[28] This proposed FIP would only apply to BART-eligible units with a demonstrated impact on regional haze in Class I areas. The majority of requirements and costs would be imposed on coal-fired EGUs and are associated with complying with SO_2 limits. These limits would require scrubber upgrades at four Texas EGUs and new scrubbers at twelve other EGUs. The proposed FIP also included BART limits for SO_2 emissions from natural gas units that occasionally burn oil,[29] particulate matter ("PM") emissions standards and work practice standards, and incorporated CSAPR requirements to reduce NOx emissions during the summer ozone season. The coal units subject to the SO_2 limits would also be subject to a PM BART limit of 0.030 lbs/MMBtu and work practice standards during periods of startup and shutdown.

The Proposed FIP requested comments from operators subject to a scrubber upgrade requirement regarding EPA's scrubber efficiency calculations and unit-specific comments regarding an operator's disagreement on whether the SO_2 emission limit can be achieved via an upgrade. EPA has yet to act on this proposed FIP (*see* Section III.C. below).

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[26] Approval and Promulgation of Implementation Plans; Texas and Oklahoma; Regional Haze State Implementation Plans; Interstate Visibility Transport State Implementation Plan to Address Pollution Affecting Visibility and Regional Haze; Federal Implementation Plan for Regional Haze, Final Rule, 81 Fed. Reg. 296 (Jan. 5, 2016).

[27] *Texas, et al v. U.S. Environmental Protection Agency*, No. 16-60118 (5th Cir. 2016).

[28] U.S. EPA, Promulgation of Air Quality Implementation Plans; State of Texas; Regional Haze and Interstate Visibility Transport Federal Implementation Plan, Proposed Rule, 82 Fed. Reg. 912 (Jan. 4, 2017).

[29] The proposed limit is a fuel oil sulfur content (percent by weight) of 0.7, and it applies to Graham 2, Newman 2, Newman 3, O W Sommers 1, O W Sommers 2, Stryker Creek ST2, and Wilkes 1. Newman Units 2 and 3 are further limited to burning fuel oil for no more than 876 hours per year.

C. CSAPR and BART Relationship: Texas Example

CSAPR and BART/Reasonable Progress rules are ostensibly separate regulatory programs, which are derived from distinct sections of the Clean Air Act. However, these distinct regulatory programs were linked together by EPA's 2012 finding that "the trading programs in [CSAPR] achieve greater reasonable progress towards the national goal of achieving natural visibility conditions in Class I areas than source-specific Best Available Retrofit Technology (BART) in those states covered by the Transport Rule."[30] Importantly, within states subject to CSAPR, EPA has found that CSAPR allows states/sources to demonstrate EGU BART compliance (for NOx and SO_2) so long as CSAPR is being met for those pollutants. This is known as "CSAPR is greater or equal to BART," and it provided states "an out" from promulgating unit-specific emissions limits at BART units.

Texas finds itself in a unique position, in that EPA has proposed to withdraw Texas from CSAPR in order to proceed with a BART approach. However, EPA has yet to act on the CSAPR withdrawal, as it is in the process of developing a rule to address the BART consent decree deadline. The current status of both of these rules is in flux as EPA is in the midst of settlement negotiations with the State of Texas and impacted parties in hopes of addressing both of these rules concurrently. Ultimately, an action of some kind will be taken by EPA by the September 9, 2017 consent decree deadline, even if that is simply a request for extension.

IV. Other Agency and Court Actions

A. Mercury & Air Toxics Standards Rule

The Mercury & Air Toxics Standards ("MATS") Rule was finalized in late 2011, imposing significant reductions in mercury and other hazardous air pollution ("HAP") emissions from coal-fired power plants.[31] The bulk of these limitations went into effect April 2016, which forced the shutdown of numerous coal-fired power plants. Like CSAPR, legal challenges reached the United States Supreme Court.

The Supreme Court's decision rested primarily on the interpretation of a three-word phrase in Section 112(n)(1)(A) of the Clean Air Act, which includes:

> "...The Administrator shall regulate electric utility steam generating units under this section, if the Administrator finds such regulation is **appropriate and necessary** after considering the results of the study required by this subparagraph."

[30] U.S. EPA, Regional Haze: Revisions to Provisions Governing Alternatives to Source-Specific Best Available Retrofit Technology (BART) Determinations, Limited SIP Disapprovals, and Federal Implementation Plans, 77 Fed. Reg. 33,642, 33,643 (June 7, 2012).

[31] U.S. EPA, National Emission Standards for Hazardous Air Pollutants From Coal- and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial Commercial Institutional, and Small Industrial-Commercial-Institutional Steam Generating Units; Final Rule, 77 Fed. Reg. 9,304 (Feb. 16, 2012).

On June 29, 2015, the Court in a 5-4 decision, with Justice Scalia writing the majority's decision, found that EPA interpreted this section of the Clean Air Act "unreasonably when it deemed cost irrelevant to the decision to regulate power plants."[32] The Court remanded the challenge to the D.C. Circuit, but left the rule in place while EPA developed a revised economic analysis. This supplemental economic analysis was released in April 2016,[33] which again was subject to legal challenges – on both the supplemental economic analysis and EPA's decision to deny petitions for reconsideration on various provisions of the rule.

Oral argument on these two issues was supposed to take place on May 18, 2017, but following arguments of the EPA, the D.C. Circuit agreed to an open-ended continuance of the arguments while EPA reconsiders its position on the supplement finding "in light of the recent change in administration," which could also affect EPA's stance on reconsideration petitions. EPA has not provided an exact length of time it will require to conduct this review. However, and importantly, the MATS Rule remains in effect as EPA conducts this review.

B. Ozone National Ambient Air Quality Standards

In 2015, EPA lowered the primary ozone national ambient air quality standard ("NAAQS") from 75 parts per billion ("PPB") to 70 PPB. This action was subject to legal challenge from industry and certain states, which played out over the previous two years. In April 2017, EPA sought – and the D.C. Circuit granted – a delay in the oral argument in the litigation in order to provide the EPA time to reconsider the rule.

EPA has yet to state exactly what it intends to do regarding the ozone NAAQS, but has taken other actions regarding the NAAQS. For instance, on June 6, 2017, EPA Administrator Scott Pruitt announced that EPA would be delaying, by one year, attainment designations under the 2015 ozone NAAQS (which lowered the primary standard from 75 parts per billion ("PPB") to 70 PPB). In late 2016, states – including Texas – made their nonattainment designation recommendations. EPA was supposed to confirm or make their own designations by October 2017, but EPA has pushed those designations back to 2018. Administrator Pruitt cites to "insufficient information," the ability to rely on "the most recent air quality data," and EPA's review of the 2015 ozone NAAQS as the reasons for the delay, specifically adding:

> "Although the new ozone standard was set on October 1, 2015, there remains a host of complex issues that could undermine associated compliance efforts by states, localities and regulated entities. As part of the review process, the Agency is evaluating these issues primarily focusing on: fully understanding the role of background ozone levels; appropriately accounting for

[32] *Michigan v. EPA*, 135 S. Ct. 2699 (2015).

[33] U.S. EPA, Supplemental Finding That It Is Appropriate and Necessary To Regulate Hazardous Air Pollutants From Coal- and Oil-Fired Electric Utility Steam Generating Units, Final Rule, 81 Fed. Reg. 24419 (Apr. 25, 2016).

international transport; and, timely consideration of exceptional events demonstrations."[34]

C. Coal Combustion Residuals Rule

Although not an air quality rule, another federal rule of significance to the electric generation fleet that relates to the by-products/co-products of air emission control systems, is the "Coal Combustion Residuals Rule" (the "CCR Rule"). On December 19, 2014, EPA finalized its CCR Rule to impose a new series of standards to regulate the handling and disposal of coal combustion residuals.[35] The rule outlined a series of standards, with varying due dates over subsequent years, based on non-hazardous ("Subtitle D") provisions of the Resource Conservation and Recovery Act ("RCRA"). Importantly, though, these standards did not recognize, nor allow for, states to implement their own state-led programs. This changed on December 16, 2016 when President Obama signed the Water Infrastructure Investment for the Nation Act (the "WIIN Act"), which included a subtitle providing EPA authority to approve state programs addressing CCR units through either permit programs or other state systems of prior authorization (e.g., registration programs).

The Act requires EPA to approve state CCR permitting programs, or "other system[s] of prior approval" that are at least as protective as those found in the federal CCR Rule, codified in 40 CFR §257. The WIIN Act gives EPA authority to implement a federal permitting program in nonparticipating states. Under the WIIN Act, EPA must review state programs at least every twelve years; within three years after changing the applicable federal requirements; one year after a "significant release" in a state; or by request of a state asserting adverse impacts due to a release or potential release in another state with an approved program. The WIIN Act grants EPA authority to commence judicial or administrative enforcement actions under certain circumstances. Before commencing such an action, EPA must give notice to the state with the allegedly non-compliant unit. Under the WIIN Act, CCR units will be considered sanitary landfills if the unit is operating in accordance with 40 CFR §257 or a state or federal permit. EPA's process for reviewing and approving state CCR permit submissions will be subject to a notice and comment period; however, it is not clear if this process will be defined via an EPA rulemaking.

The WIIN Act does not reverse or revoke the existing federal CCR rule codified in 40 CFR §257; those requirements remain in effect if/until a state-led program is created and approved by EPA. The requirements that are already in effect for landfills (e.g. fugitive dust control plans, inspections, run-on and run-off control system plans, closure and post-closure plans) and ponds (e.g. fugitive dust control plans, liner requirement compliance, engineering review of hazard potential, hydrologic and hydraulic capacity analyses and initial flood control system plans) remain in effect. Further, the deadlines to determine whether groundwater monitoring

[34] Letter from EPA Administrator Pruitt to Governor Doug Ducey, Arizona, June 6, 2017.

[35] U.S. EPA, Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals From Electric Utilities, Final Rule, 80 Fed. Reg. 21,302 (Apr. 17, 2015).

systems meet the rule's requirements for landfills (outlined in 40 CFR §257) or the groundwater monitoring systems have been installed for ponds remains October 2017.

Multiple states are in the process of developing their own state-led program, though this will take some time. Therefore, even with options for states to take over implementation, parties began filing Petitions for Reconsideration of the rule, starting in April 2017. A Petition for Reconsideration filed on behalf of a large group of companies and interested parties in the CCR industry highlighted some revisions that need to occur in the rule and requested an extension of approaching deadlines in the rule. These extensions would provide time for states to develop their own programs.

D. DOE Electrical Grid Study and Other Actions

On April 14, 2017, Energy Secretary Rick Perry ordered a study of the United States electrical grid to examine whether policies that favor wind and solar energy are accelerating the retirement of coal and nuclear plants critical to ensuring steady, reliable power supplies. Secretary Perry has provided for a 60-day review to complete this analysis. Secretary Perry highlights concerns about the "erosion" of resources providing baseload power. Secretary Perry's memorandum further notes concerns regarding the diminishing diversity of the nation's electric generation mix and what it could mean for baseload power and grid resiliency.

The Trump Administration's Unified Agenda indicates that numerous DOE efficiency standards are up for review, including those for manufactured housing, residential clothes washers, fans, blowers, heat pumps and air conditioners.

V. Conclusion

The Obama Administration had eight years to promulgate new environmental rules, many of which were subject to years of litigation. The new presidential administration has only been in power for roughly half a year, with Agency heads being in power even less time than that. A broad agenda of rolling back regulations has just begun to be implemented, and it will likely be some time – potentially years assuming actions will be subject to legal challenge – before the dust settles. Until that time, there continues to be an evolving regulatory landscape, but unlike the years under the Obama Administration, it appears clear that this evolution will be towards a less burdensome and perhaps more certain regulatory state.



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Cindy Smiley's practice is devoted to counseling clients on federal, state, and local laws relating to water rights, water quality, and waste matters. Recent work includes matters relating to regional and state water planning activities, surface water permitting and management questions, and matters relating to characterization, remediation, and risk-based closures of potentially impacted soils and groundwater. She represents clients before the Texas Commission on Environmental Quality on matters involving surface water rights, water quality, groundwater protection, petroleum storage tanks, waste characterization, remediation of releases to the environment, and other issues under the agency's jurisdiction. She also works on matters involving the U.S. Environmental Protection Agency, the Texas Water Development Board, and other entities having water or waste-related authorities. In addition to regulatory counseling, she enjoys working with clients and environmental professionals to evaluate potential environmental liabilities associated with a proposed activity or real estate transaction. She is a contributing author to *Essentials of Texas Water Resources* (published by TexasBarBooks) on the topic of "State Water Planning."

***Professional Experience*:**

Attorney/Owner -- Smiley Law Firm, Austin, Texas, 2012 to present
Partner -- Kelly Hart & Hallman LLP, Austin, Texas, 2004 to 2012
Special Counsel -- Baker Botts L.L.P., Austin, Texas, 1994 to 2004
Senior Attorney -- Jones, Day, Reavis & Pogue, Austin, Texas, 1988 to 1994
Attorney -- Texas Water Commission/Texas Department of Water Resources, Austin, Texas, 1983 to 1988
Attorney -- Exxon Company, U.S.A., Houston, Texas, 1981 to 1983

***Education*:**

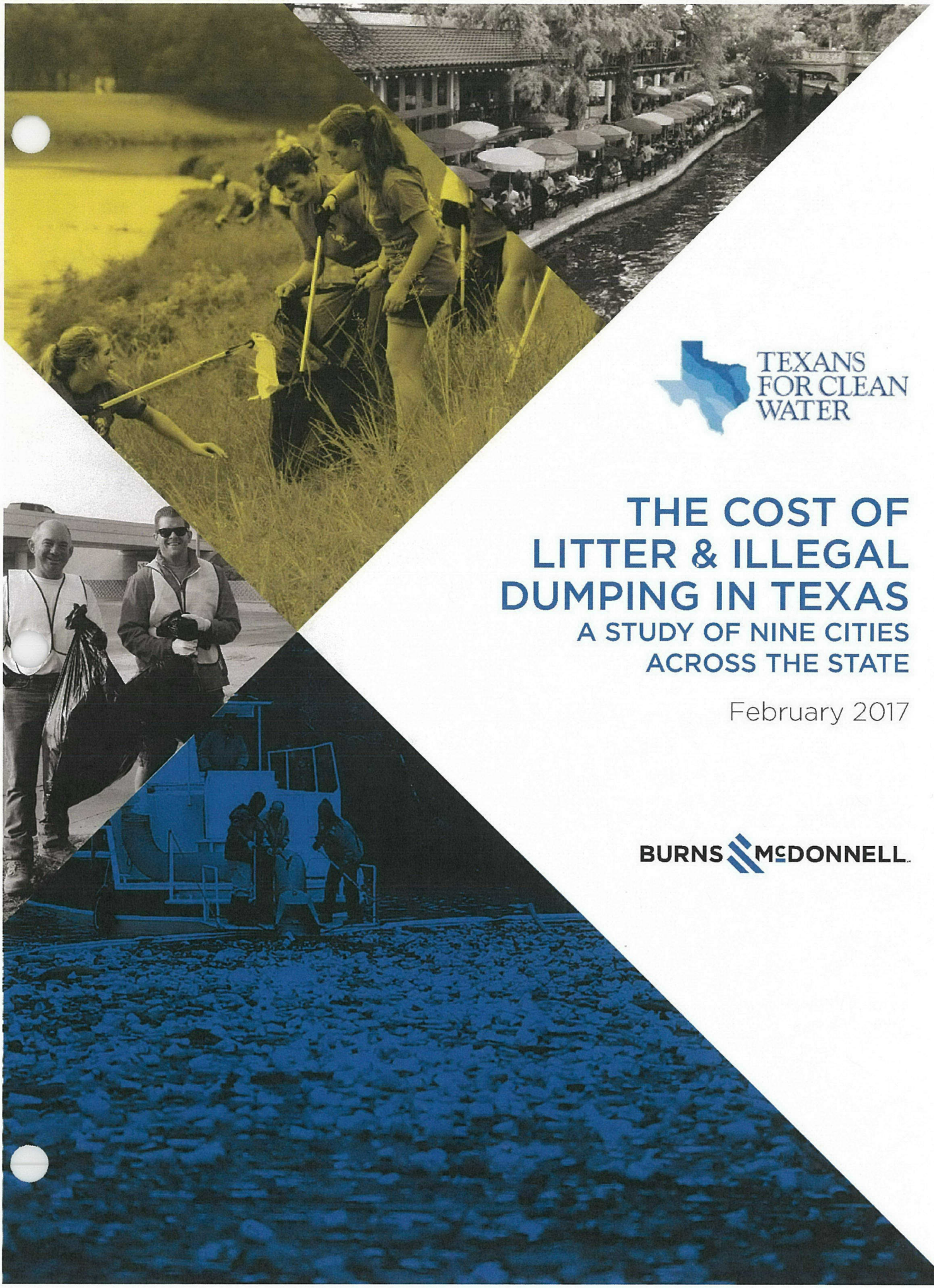
J.D., The University of Texas School of Law, 1981
B.A. (with highest honors), Plan II (liberal arts honors program), The University of Texas at Austin, 1978

Honors and Professional Associations:

Best Lawyers in America (2008-2017) (recognized in areas of Water Law and Environmental Law)
Past Chair (2011-2012) and Current Member, Environmental and Natural Resources Law Section, State Bar of Texas
Director, Southwest Section, Air & Waste Management Association (2011-2017)

Maia Corbitt is a governmental affairs consultant with Booth, Ahrens, and Werkenthin, P.C. where she works to build policy through stakeholder collaboration along with educating clients on state and federal environmental matters, especially topics involving solid waste and materials management. Mrs. Corbitt was previously the executive director of the State of Texas Alliance for Recycling (STAR). There, she helped grow, manage, and guide the nonprofit alliance to the forefront of recycling advocacy. Before her tenure at STAR, she worked on water issues and environmental leadership projects with the Lower Colorado River Authority (LCRA). Mrs. Corbitt studied geography, including remote sensing and geographical information systems, and geological science at the University of Texas at Austin.

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TEXANS FOR CLEAN WATER

THE COST OF LITTER & ILLEGAL DUMPING IN TEXAS

A STUDY OF NINE CITIES ACROSS THE STATE

February 2017

BURNS McDONNELL

February 20, 2017

Mr. Kim Mote
Executive Director
Texans For Clean Water
1901 Lexington
Houston, Texas 77098

Re: The Cost of Litter and Illegal Dumping in Texas: A Study of Nine Cities Across the State

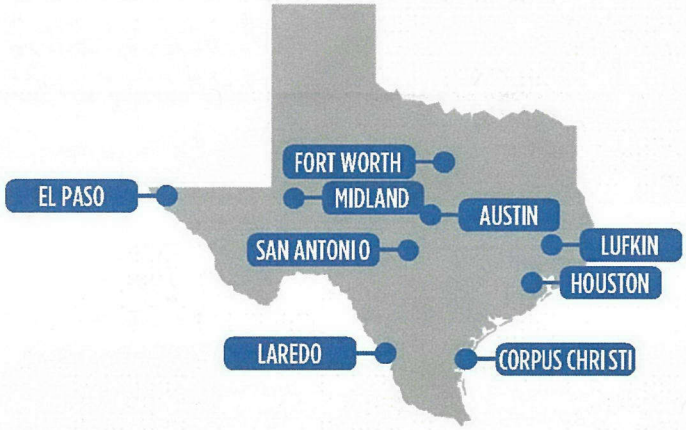
Dear Mr. Mote:

Every day, Texas cities expend significant efforts to address litter and illegal dumping across their communities and waterways. As documented in this Study commissioned by Texans For Clean Water and prepared by Burns & McDonnell, nine cities in Texas spend more than $50 million annually on prevention, education, abatement, and enforcement efforts.

The purpose of this Study was to document the costs that nine cities in Texas incur to manage litter and illegal dumping. Together, these cities represent more than 25 percent of the state's population.

Regardless of size and geography, each of the nine case study communities spend significant sums annually to prevent, combat, and clean up litter and illegal dumping, and to keep it from ending up in the state's rivers, lakes, bayous, and the Gulf of Mexico. Together, these nine cities spend more than $50 million annually.

Burns & McDonnell appreciates the opportunity to have partnered with the Texans For Clean Water to develop a study that is intended to serve as a resource for the entire state of Texas. This effort would not have been accomplished without the extensive input and participation by Texans For Clean Water and 175 representatives from the case study cities. Should you have any questions regarding this Study, please contact Scott Pasternak at (512) 872-7141 or spasternak@burnsmcd.com.



Sincerely,

Scott Pasternak
Senior Project Manager

8911 North Capital of Texas Hwy., Suite 3100 \ Austin, TX 78759
O 512-872-7130 \ F 512-872-7127 \ burnsmcd.com





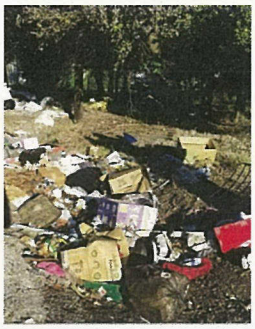




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BURNS McDONNELL

EXECUTIVE SUMMARY

While we often describe litter and illegal dumping as being ugly or a health concern, less frequently do we think about their cost. Every day, Texas cities expend significant effort to address litter and illegal dumping across their communities and waterways. As documented in this Study commissioned by Texans For Clean Water and prepared by Burns & McDonnell, nine cities in Texas spend more than $50 million annually on prevention, education, abatement, and enforcement efforts.

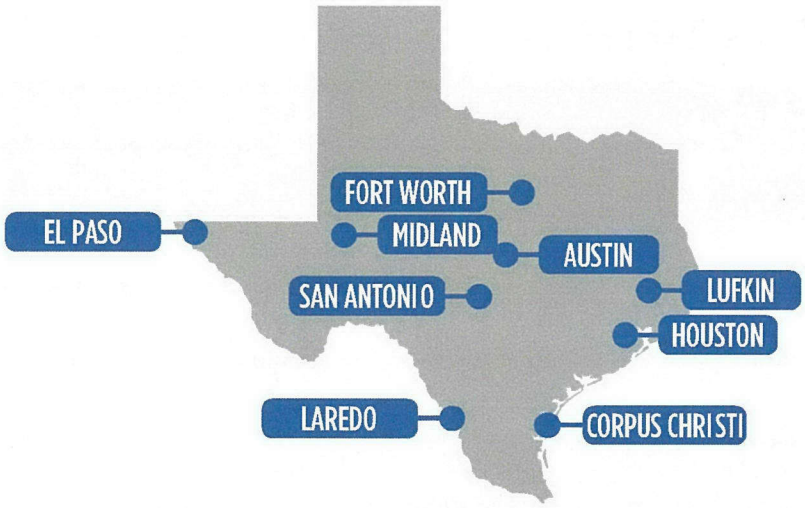
STUDY AT A GLANCE

Purpose: Document the costs incurred by nine cities in Texas to manage litter and illegal dumping. Together, these cities represent more than 25 percent of the state's population.

Participating Communities: Nine cities representing a wide range of population and geographies participated as case studies, as shown on the map.

Research Approach: Through a combination of interviews, extensive data provided by the participating communities, and other available data, Burns & McDonnell documented the annual costs for addressing litter and illegal dumping. The Study only includes actual provided costs and does not make data extrapolations. By erring on the side of caution, the actual average costs and per capita expenses are probably greater than the amounts indicated.

Costs Included: The Study documents program expenditures from local governments, non-governmental organizations, and non-profits for costs associated with prevention, education and outreach, abatement, and enforcement of litter and illegal dumping activities. While the value of volunteer time is excluded from the total costs in the Study, many cities rely on volunteers to help with litter abatement. Where cities provided volunteer information, either hours worked or an estimated value of volunteer time, it is referenced to provide a better understanding of the effort required to abate litter. Expenditures by private businesses are not included in this Study but they are likely significantly more than the costs cited.



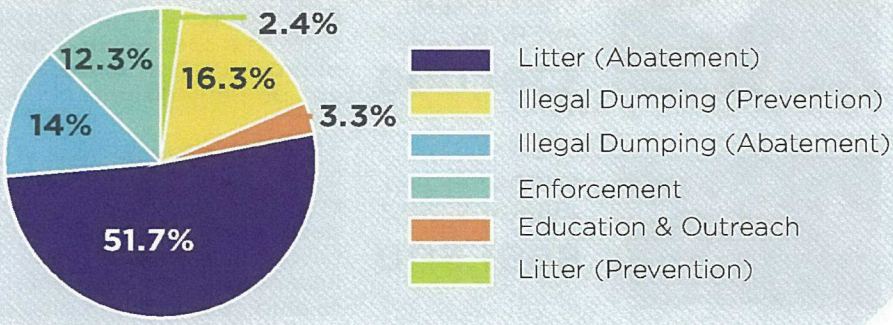
KEY RESULTS

Regardless of size and geography, each of the nine case study cities, which together represented more than 25 percent of the population of Texas, spend significant sums annually to prevent, combat and clean up litter and illegal dumping, and to keep it from ending up in the state's rivers, lakes, bayous, and the Gulf of Mexico. **Together, these nine cities spend more than $50 million annually.**

CITY	PREVENTION		EDUCATION & OUTREACH	ABATEMENT		ENFORCEMENT	TOTAL	POPULATION
	LITTER	ILLEGAL DUMPING		LITTER	ILLEGAL DUMPING			
Austin	$ - *	$14,000*	$68,000*	$930,500*	$1,316,100	$ - *	$2,328,600	932,000
Corpus Christi	$20,000	$639,600	$96,100	$734,200*	$23,700*	$177,600*	$1,691,200	324,000
El Paso	$ - *	$2,110,000	$26,500*	$1,102,400*	$1,625,000	$86,000*	$4,949,900	681,000
Fort Worth	$822,200*	$1,118,200	$897,100	$3,392,000*	$1,257,500	$1,059,200	$8,546,200	833,319
Houston	$250,000*	$2,200,000	$200,000	$13,390,600*	$617,400*	$4,462,900*	$21,120,900	2,296,000
Laredo	$88,800*	$ - *	$134,300	$4,090,000*	$5,000*	$140,000	$4,458,100	255,000
Lufkin	$ - *	$16,600*	$2,000*	$149,900*	$13,700	$50,600	$232,800	36,000
Midland	$ - *	$139,500	$10,900	$122,800*	$ - *	$227,000	$500,200	133,000
San Antonio	$16,500*	$1,958,400	$255,300	$2,100,000*	$2,171,000	$20,200*	$6,521,400	1,469,800
Total	$1,197,500	$8,196,300	$1,690,200	$26,012,400	$7,029,400	$6,223,500	$50,349,300	6,960,119

*In some cases, the responding entity did not have complete cost data. An asterisk indicates the entity has a program in place but that the direct cost data was not available for this Study.

Direct Costs of Managing Litter and Illegal Dumping



DIRECT COSTS OF MANAGING LITTER AND ILLEGAL DUMPING

Here are average costs per city and examples of key activities from the nine case studies.



LITTER PREVENTION, AVERAGE COST

$133,100

To prevent littering, several cities implement a variety of best management practices. Houston provides litter receptacles in its city parks. Cities such as Austin and Laredo have attempted to reduce the number of plastic bags littering the environment by implementing ordinances that limit the use of single-use plastic bags. Fort Worth has multiple programs, including a program working with homeless people to minimize littering.



ILLEGAL DUMPING PREVENTION, AVERAGE COST

$910,700

Illegal dumping prevention focuses on stopping large items or refuse from being discarded. Several cities – such as Corpus Christi, El Paso, Fort Worth, Houston, Midland, and San Antonio - operate collection facilities where residents can drop off items that may otherwise be illegally dumped.



EDUCATION & OUTREACH, AVERAGE COST

$187,800

Education and outreach programs are intended to promote awareness and provide information about legal options for proper disposal or recycling. Many cities and non-governmental organizations provide education programs and curriculum materials to local schools to teach children about the negative effects of litter. Several cities have public outreach campaigns, often managed by stormwater or solid waste management departments. Education and outreach campaigns include traditional materials like brochures, storm drain stenciling, and water or roadway adoption programs, as well as the use of social media and online applications.



LITTER ABATEMENT, AVERAGE COST

$2,890,300

As the highest cost category, substantial sums are expended by all of the case study cities to clean up litter. Many of the cities have programs for street sweeping, litter clean-up events, and city-staffed cleanup programs. As a city with many waterways, Houston incurs extensive costs cleaning up bayous and other waterways.



ILLEGAL DUMPING ABATEMENT, AVERAGE COST

$781,000

Cleaning up dump sites is important from an environmental perspective, as well as to minimize the potential for more illegal dumping. Austin, El Paso, Fort Worth, Houston, and San Antonio are examples of cities that use staff and specialized equipment (such as boom or grapple trucks) to clean up illegal dump sites and properly dispose of the refuse.



ENFORCEMENT, AVERAGE COST

$691,500

Taking legal action against the people responsible for littering and illegally dumping is an important step in changing behavior and minimizing illegal activity. For decades, collaborative efforts in the Houston region have served as an example of a model approach for how multiple governmental entities can work together to enforce illegal dumping crimes.

CASE STUDY

This Study highlights the efforts being undertaken by each of the nine case study cities. Each case study is organized in the same order, based on the categories described in this Executive Summary. Each case study reflects the information provided by a number of city departments, as well as a range of organizations working within the cities on litter and illegal dumping issues, such as counties, river authorities, councils of governments, and Keep Texas Beautiful affiliates. The intent was to develop case studies that capture the key activities being undertaken within a community, and there was a recognition that all of the costs may not fall within the exact boundaries of each city. Costs used in this Study are based on the most recently available data from 2015 or 2016. With regard to allocating costs to the various categories, in some cases, the cities provided varying levels of detail regarding how they divided costs. For example, Fort Worth provided the most detailed understanding of its costs across the categories. Recognizing the varying levels of detail provided by each city or organization, all costs are rounded to the nearest $100.

Alternative Revenues

Many of the case study cities identified alternative sources of revenue that help to offset the cost of litter and illegal dumping prevention and abatement activities. Alternative revenues are highlighted in the case study for each of the following cities:

- Austin
- Corpus Christi
- El Paso
- Fort Worth
- Houston
- Laredo
- Midland
- San Antonio

Prior to conducting the case studies, each city was invited to participate in the project. During the project, multiple representatives from each city participated in interviews, provided data, and reviewed the draft case studies. In some cases, Burns & McDonnell used existing data from prior financial studies completed on behalf of some of the cities. **Several cities also identified programs focused on addressing litter and illegal dumping, but did not have cost data. For these cities, descriptions have been included without cost data and are noted in the tables and text with an asterisk.**

CONCLUSION

A diverse set of governmental agencies and non-profit organizations are very focused on litter and illegal dumping abatement and enforcement, yet given the extensive efforts to provide convenient alternatives to illegal dumping, communities continue to search for solutions to better prevent litter and illegal dumping. While critical to appreciate the amounts that are being expended by these nine cities to address litter and illegal dumping, it is additionally important to understand how these funds are spent. **Nearly 80 percent of costs are incurred on abatement and enforcement efforts, which places cities in a reactionary mode.** Development of more effective prevention programs and management practices may necessitate additional state coordination.

This Study focused on nine cities that represent diverse geography, populations, and local engagement on the issues of litter and illegal dumping. Consequently, the findings are likely applicable to many other communities in the state. Although economic data is mostly available at the municipal level, it is important to understand that this is a costly issue for other local, regional, and state governmental entities as well as non-profit organizations and private businesses, which all share the costs, consequences, and impacts of litter and illegal dumping.

AUSTIN:
THE CAPITOL CITY

The Colorado River system is a central feature to the City of Austin (City). Access to an abundant, reliable, and clean source of water played a key role in the original decision in 1835 to locate the City just downstream of Barton Springs along the Colorado River (Lady Bird Lake near downtown Austin) and to select it as the state's capital in 1839. Austin's water features continue to be the source of intense pride for its residents and a powerful magnet for visitors, new residents, and businesses.

However, flash flooding caused by rain events like the five 400-plus year storms that hit Austin in 2015 and 2016 funneled trash and debris from the creek system into Lady Bird Lake. Each year, City staff and volunteers pull 250 tons of trash from Lady Bird Lake (in addition to the 6,500 tons removed annually from Austin streets).

Cost Summary

ACTIVITY	LITTER	ILLEGAL DUMPING
Prevention	$ -*	$14,000*
Education and Outreach	$68,000*	
Abatement	$930,500*	$1,316,100
Enforcement	$ -*	
2015 Litter & Illegal Dumping Costs	$2,328,600	

ALTERNATIVE REVENUES

The Clean Community Fee is an $8.05 monthly fee that residents pay, including single-family homes and apartment and condo dwellers, and a $19.85 monthly fee that commercial properties pay for services that keep Austin clean. In 2016, the City collected $20,100,000 from the Clean Community Fee. The funds are distributed across programs in the Austin Resource Recovery Department (ARR) and Austin Code Department (Code) such as street and boulevard sweeping, litter abatement, and illegal dumping cameras.

Key Takeaways

- The Clean Community Fee is a significant source of revenue for the City to distribute across litter and illegal dumping programs.
- The Austin Code Department (Code) enforcement is limited in their effort to combat illegal dumping by the lack of authority to pull over vehicles.
- The City of Austin believes the Single-use Carryout Bag Ordinance has reduced the number of plastic bags littering the community.

*In some cases, the responding entity did not have complete cost data. An asterisk indicates the entity has a program in place but that the direct cost data was not available for this Study.

PREVENTION

The ARR Department has a "What Do I Do With" search engine[1] on its website that allows a user to enter a waste item (e.g., furniture, electronics, and yard trimmings) and the search engine lists disposal alternatives offered in Austin by ARR and other entities. Additionally, residents can use the "My Schedule" application to get a personalized collection calendar for all residential curbside services. Residents can download their collection schedule to a personal calendar or sign up for text, email, or phone call reminders of their collection days and special bulk pickups. These services cost $14,000 annually.

The ARR Recycling and Reuse Drop-Off Center offers Austin and Travis County residents the ability to dispose of electronics and large and small appliances for free.*

Fast Facts

Location: Central Texas

Population: 932,000

Waterways:
- Colorado River
- Lady Bird Lake
- Lake Austin
- Lake Travis
- Barton Creek
- Boggy Creek
- Bull Creek
- Onion Creek
- Shoal Creek
- Slaughter Creek
- Waller Creek
- Williamson Creek
- Walnut Creek
- Walter Long Lake

Annual Precipitation: 34.5 inches

City officials estimated that Austin residents used 263 million plastic bags per year prior to 2013 when the City implemented the Single-use Carryout Bag Ordinance, commonly known as the "bag ban." The ordinance prevents the use of plastic bags thinner than 4 mils, which includes most common shopping bags, except in limited cases where necessary to prevent moisture damage. Businesses within the City are required to provide reusable bags with handles, such as paper or thicker plastic bags.

Sad Couch

In 2015, Code created a social media campaign to raise awareness of illegal dumping in student housing areas adjacent to the University of Texas by introducing "Sad Couch," a disheartened couch that has been illegally dumped. This character "travels" around West Campus to different locations where trash, debris, furniture, and other bulk items have been dumped improperly. Sad Couch provides education to the public by engaging on Twitter (@SadCouchATX) and Facebook, and giving tips on how to dispose of trash and debris correctly.

[1] http://www.austintexas.gov/what-do-i-do

EDUCATION & OUTREACH

Keep Austin Beautiful (KAB), in partnership with the Watershed Protection Department (Watershed), sponsors Clean Creek Campus, an education program that engages third through eighth graders in hands-on, standards-aligned activities connecting classroom learning with on-the-ground service projects that focus on protecting water quality. Service projects include students learning how to conduct a litter audit and cleanup and a 3-hour service learning field trip to a local creek or park during which students rotate through stations emphasizing creek restoration and water quality. Participating schools also receive two in-class lessons focused on watersheds, litter, pervious and impervious ground cover, and the importance of healthy soil. Clean Creek Campus programming for the 2016-2017 school year is full.*

Key Organizations

- City of Austin
  - Austin Resource Recovery Department (ARR)
  - Code Department (Code)
  - Parks and Recreation Department (PARD)
  - Watershed Protection Department (Watershed)
- Keep Austin Beautiful (KAB)

With funding from ARR, Watershed spent $68,000 in 2015 on anti-litter campaigns such as "Let's Can It!" and associated advertisements.

The Code Community Volunteers partner with Code by acting as neighborhood liaisons, providing education on city codes to their neighbors, and participating in community cleanups and other events. Code also offers Code Speakers, a program where Code Compliance officers give presentations to community and civic organizations on city ordinances.*



Installed public art made from litter collected along Austin creeks

ABATEMENT: LITTER

The City of Austin removes litter from the community through a variety of departments and KAB.

ORGANIZATION	DESCRIPTION
Austin Resource Recovery (ARR)	Nightly street sweeps of designated streets in the downtown Central Business District. This litter clean -up service costs the City $477,100 in 2015.
Parks and Recreation (PARD)	Provides 100 maintenance personnel who spend half of their time picking up litter in parks. These personnel are supplemented with temporary staff during peak periods. The 2015 PARD budget for these services was $150,000, including staff and temporary staff pay. Sponsors, "It's My Park Day!", in partnership with the Austin Parks Foundation, in the Spring and Fall where volunteers cleanup local parks.* Sponsors an Adopt-a-Park Program, in partnership with the Austin Parks Foundation, to create neighborhood ownership of parks.*
Watershed Protection Department (Watershed)	Operates a barge to remove litter and debris from Lady Bird Lake on a daily basis. Installed and maintains hard booms at all major influent points. KAB, in partnership with Watershed, organizes Rapid Rain Responders, a team of volunteers with watercraft to clean up litter in Lady Bird Lake after large rain events. KAB sends out notification emails when volunteers are needed.*
Keep Austin Beautiful (KAB)	In partnership with Watershed, KAB oversees an Adopt-a-Creek program where groups adopt a ¼-mile segment of waterway to reduce the amount of trash entering creeks, improve water quality, and restore riparian habitats. Adopters are required to conduct at least four cleanups per year for a minimum of two years. KAB also sponsors large-scale bi-monthly clean-ups of Lady Bird Lake. Similar to the Adopt-a-Creek program is KAB's Adopt-a-Street program. Groups are responsible for at least four cleanups along a ½-mile stretch of roadway for one year. Signage is placed along the segment recognizing the volunteer group. KAB hosts Clean Sweep, a city-wide service day spanning more than 130 sites in 31 zip codes throughout Austin. In 2015, over 29 tons of trash were removed by more than 4,000 volunteers who contributed 8,700 combined service hours. Clean Sweep is followed by a Volunteer Appreciation Party. Supplies numerous community clean-up activities sponsored and unsponsored by KAB. In 2015, KAB spent $303,400 in direct costs to host these cleanup programs. While excluded from the cost totals in this Study, KAB received $120,100 in in-kind donations.

ABATEMENT: ILLEGAL DUMPING

Seven days per week, ARR has about 30 crews containing a grapple truck and rear loader that respond to illegal dumping in City rights-of-way and other properties. These crews cost ARR $1,066,100 annually to operate. One of their responsibilities is to respond to one illegal dump site and one homeless camp per month at Austin parks reported by PARD.

According to the City, Code spends over $250,000 per year on contractor costs to remediate illegal dumping sites.

Austin Materials Marketplace

A local online marketplace for commercial transactions of items that have the potential to be illegally dumped, Austin Materials Marketplace connects businesses seeking to divert unwanted items, such as furniture and other commercial materials, with business needing those items.

Source: http://austinmaterialsmarketplace.org/

ENFORCEMENT

Through authority provided by the Texas Water Code, the Watershed Protection Department is able to patrol creek banks and require property owners to clean up litter and illegal dumping on their property to prevent it from reaching the waterways. The property owners are required to clean up the debris even if it was transported from another location during a rain event.

With privatized waste hauling (hauler-for-hire) services, the City has had problems ensuring haulers correctly dispose of their waste instead of illegally dumping the material. In response, Code has three compliance officers who exclusively oversee the hauler-for-hire program. Code reports one limitation is the lack of authority to pull over vehicles; they must rely on the Austin Police Department (APD).

Code pursues two goals with illegal dumping – ensuring the dump site is cleaned up and catching the violator. Code has installed and monitors over 30 cameras in known illegal dumping areas to document the illegal activities. In addition to the cameras, Code relies on calls to 311. If caught, offenders may be required to clean up the dump site and pay a fine up to $2,000. When Code issues illegal dumping citations, the cases are sent to an administrative panel appointed by the City Council to hear cases. Violators are typically given 10 days to clean up the property before fines are levied. Two Code officers are responsible for illegal dumping. However, cleaning up the dump site is ultimately the responsibility of the property owner.*



Austin youth participating in KAB's Clean Sweep

CORPUS CHRISTI: SPARKLING CITY BY THE SEA

The City of Corpus Christi (City) prides itself on its beaches and bayfront. Its tourism industry relies on water-based attractions such as the USS Lexington, the Texas State Aquarium, and beaches on Corpus Christi Bay and Padre and Mustang Islands. Corpus Christi is home to the Port of Corpus Christi on the Nueces River Delta, the fifth largest port in the nation, with an expansive petrochemical industry presence. Recognizing the attractive nature of Corpus Christi's water resources, Texas A&M sited its Corpus Christi campus on Ward Island in Oso Bay.

Regular high winds and disregard by some residents to proper disposal contribute to challenging conditions for the City and its partners to keep Corpus Christi free of litter and illegal dumping. In response, the City continues to implement an aggressive education and outreach campaign across multiple departments to combat litter and illegal dumping.

Cost Summary

ACTIVITY	LITTER	ILLEGAL DUMPING
Prevention	$20,000	$639,600
Education and Outreach	$96,100	
Abatement	$734,200*	$23,700*
Enforcement	$177,600*	
2015 Litter & Illegal Dumping Costs	$1,691,200	

ALTERNATIVE REVENUES

Customers are charged $0.25 per month for recycling and anti-litter campaigns on the utility bill. This provides an additional $250,000 per year to the Solid Waste Services Department (SWSD). Another source of alternative revenue at approximately $400,000 per year is generated by violations of heavy brush set outs. The City charges $75.00 for customers who fail to meet the set out schedule.

Key Takeaways

- The Corpus Christi Marina continues to struggle with stormwater outfalls that release substantial amounts of litter into Corpus Christi Bay even with multiple anti-litter campaigns.
- In lieu of an illegal dumping ordinance, code officers have the authority to issue citations through a solid waste improper set out ordinance. Five Parks and Recreation Department (PRD) code enforcement officers spend approximately 10 percent of their time educating and citing for litter and illegal dumping.

*In some cases, the responding entity did not have complete cost data. An asterisk indicates the entity has a program in place but that the direct cost data was not available for this Study.

PREVENTION

The J.C. Elliot Collection Center is a neighborhood drop off center where at no charge residents may dispose of household hazardous waste, household garbage and refuse (i.e., mattresses, clothes, and furniture), large household appliances, household brush, and non-commercial construction and demolition materials (excluding dirt, rock, concrete, and brick). This service aids in the prevention of illegal dumping according to City staff. In 2015, the J.C. Elliot Collection Center cost the City $534,200.

The SWSD offers "Litter Critter" services where two or more neighbors can request a large brush collection truck to dispose of brush and small household items. This on-call service at no cost to the customer is a proactive approach to keep brush and debris from building up on private properties and rights-of-way. "Litter Critter" equipment and personnel time cost the City $22,900 in 2015. Also, SWSD provides free bi-monthly roll off services to Padre Island residents to keep the beaches clean, in addition to their residential subscription. This free service to Island residents costs the City $82,500 in collection and disposal costs.

Fast Facts

Location: Texas Coastal Bend

Population: 324,000

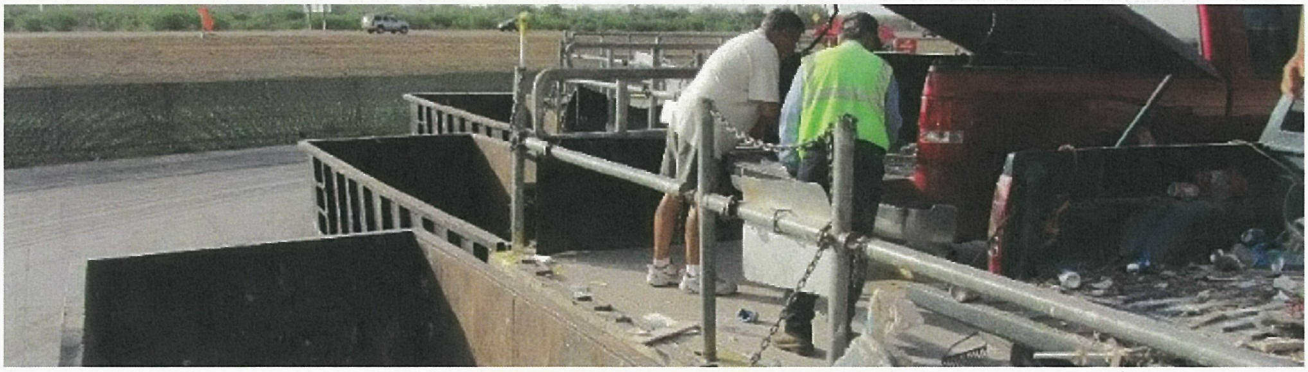
Waterways:
- Nueces Bay
- Nueces River
- Oso Bay
- Oso Creek
- Corpus Christi Bay
- Laguna Madre
- Barney Davis Reservoir

Annual Precipitation: 31.8 inches



Yellow trash bag kiosk at the beach

An effective litter prevention strategy has been the Parks and Recreation Department (PRD) distribution at local beaches of mesh yellow trash bags with "Don't Litter" across the bag. The yellow bags are handed out to visitors as they enter the beach and are available at kiosks along the beach. Since its inception in 2015, PRD staff have noticed a significant reduction of litter on Corpus Christi beaches, especially over Spring Break. Annually, this program costs PRD $20,000.



J.C. Elliot Collection Center

EDUCATION & OUTREACH

SWSD spent $500,000 on the "Leave It Better than you Found It" campaign in 2010. Seeking to improve from the 2010 results, SWSD is in the process of developing a new anti-litter campaign for 2017. SWSD currently employs two full-time Stormwater "Keep it Clean!" Campaign employees to coordinate the campaigns and educate local school children with mascots, like Picky Pete the pelican. The Picky Pete program rewards students for picking up litter. The SWSD education and outreach program cost the City $40,000 in 2015.

Key Organizations

- City of Corpus Christi
  - Code Enforcement
  - Marina
  - Parks and Recreation (PRD)
  - Police Department (CCPD)
  - Solid Waste Services (SWSD)
  - Stormwater Utilities Department (SUD)
- Beautify Corpus Christi Association (BCCA)
- Port of Corpus Christi

Over 18,300 stormwater inlets drain into Corpus Christi Bay, so the Stormwater Utility Department (SUD) has an active "Keep It Clean!" education and outreach campaign that spends $50,000 per year on billboards, school presentations and demonstrations, outreach events, giveaways, and stencils on drains.



Stormwater "Keep it Clean!" Campaign

My Waste App

The My Waste Application (App) provides a service collection schedule customized by service zone. This app helps customers plan their set outs with the goal of reducing the amount of time trash and recyclables are left curbside. The App costs the City $3,700 per year.

Community Storm Drain Support

The Stormwater Stenciling Program, which began in 1992, promotes ownership of stormwater inlets by allowing volunteers to place stencils on inlets and then teaches volunteers how to inspect inlets and distribute educational material in their neighborhood. This program cost the City $2,400 in 2015.

ABATEMENT: LITTER

The City and partnering organizations remove litter from the community through a variety of activities.

ORGANIZATION	DESCRIPTION
City of Corpus Christi - Solid Waste Services Department (SWSD)	During the annual BucDays parade, staff handed out $2,500 in trash bags to spectators and spent $17,900 for post-parade litter cleanup in 2015.
City of Corpus Christi - Parks and Recreation (PRD)	Beach, neighborhood, and downtown park maintenance to address trash and disposal costs the City approximately $178,600 per year.
City of Corpus Christi - Stormwater Utility Department (SUD)	Performs regular sweeping of city streets at an annual cost of $285,200.
Marina	The marina spends $250,000 per year on litter abatement. After heavy rains in 2015, 10 to 12 marina maintenance staff worked 8-hour shifts nonstop for 7 days to remove approximately 14 tons of litter and debris that flowed into the Bay from stormwater outfalls.
Beautify Corpus Christi Association (BCCA)	Among Adopt-a Beach, the Great American Cleanup, and Don't Mess with Texas Trash-Off, BCCA-led events removed 20,000 pounds of litter from the City. BCCA also facilitates cleanups for smaller groups and supplies cleanup materials.*
Port of Corpus Christi	With new port leadership focused on improving aesthetics, there is a renewed effort by Port maintenance crews to keep the grounds free of litter within the Port.*



Stormwater Department crew cleaning a storm drain



Litter along the seawall in the marina

ABATEMENT: ILLEGAL DUMPING

When illegal dumping is reported by a 311 work order or SWSD code officer (see Enforcement), brush collection crews are diverted from their route to remediate the site. These two-person crews are equipped with a rear-steer loader and a dump truck or a grapple truck. The SWSD estimates that diverting their brush collection crews to abate illegal dumping sites costs the City $23,700 in 2015.

Beaches are a frequent location for illegal dumping sites. The Police Department (CCPD) Code Enforcement Division administers an annual contract with a local abatement business to clean up illegal dump sites on the beaches.*



SWSD Brush/Illegal Dumping Collection – rear-steer loader and dump truck

ENFORCEMENT

The City divides code enforcement responsibilities among three departments: SWSD, PRD, and CCPD. SWSD Code has authority over City rights-of-way, PRD oversees the beaches and parks, while CCPD's Code Enforcement Division enforces ordinances on private property.* SWSD Code and PRD identified that they spent $177,600 on personnel and vehicle costs in 2015.

SWSD has two solid waste compliance officers who work full time to educate the community on nuisance ordinances before issuing notices or warnings. In lieu of an illegal dumping ordinance, code officers have the authority to issue citations through a solid waste improper set out ordinance. Five PRD code enforcement officers spend approximately 10 percent of their time educating and citing for litter and illegal dumping. CCPD Code Enforcement Division employs 18 code officers who spend approximately 30 percent of their time enforcing litter and illegal dumping ordinances. Using social media, CCPD Code Enforcement posts photos of illegal dumping sites to solicit information from the public.

EL PASO: THE SUN CITY

The City of El Paso (City) is connected to its waterways even though it is in a desert locale. Separating El Paso and Ciudad Juarez, the Rio Grande River forms a natural international boundary that runs between Texas and Mexico and empties into the Gulf of Mexico. The Rio Grande River has significant economic importance with numerous international bridge crossings servicing the second largest Foreign Trade Zone by volume in the United States.[1] The City relies on a drainage system of arroyos as a vital part of its stormwater conveyance and retention system. Some arroyos are also central features of municipal parks (e.g., Billy Rogers Arroyo Park). Open irrigation canals traverse parts of the City to provide water for local crop production.

The City is unique in that sparse vegetation from its desert climate allows for visible litter and illegal dumping to stand out. Litter typically migrates to arroyos and ultimately to the Rio Grande River.

Cost Summary

ACTIVITY	LITTER	ILLEGAL DUMPING
Prevention	$-*	$2,110,000
Education and Outreach	$26,500*	
Abatement	$1,102,400*	$1,625,000
Enforcement	$86,000*	
2015 Litter & Illegal Dumping Costs	$4,949,900	

ALTERNATIVE REVENUES

The City collects a monthly environmental fee ($5.00 per residential customer and $15.00 per commercial customer) that is included in customer refuse bills. The environmental fee funds the Streets and Maintenance Department's cleanup of downtown areas managed by the Downtown Management District, specifically alley cleanups, and other solid waste management services such as the City's illegal dumping site cleanups At the landfill, haulers delivering unsecured loads are charged an additional $5.00 per load.

The El Paso Water Utility (EPWU) charges a monthly stormwater fee ranging between $1.79 and $7.13 per residential customer that is assessed on the monthly water bill. EPWU brought in approximately $16,000,000 in 2015 with a quarter of the revenue for stormwater maintenance. A portion of the stormwater maintenance revenue is allocated for litter and illegal dumping cleanup.

Key Takeaways

- The El Paso Water Improvement District # 1 (EP WID #1) collected 10,000 illegally dumped tires within the City in 2015.
- Daily migration across the US-Mexico border contributes to the challenge of communicating an anti-litter and illegal dumping message.
- Even with strategically placed trash cans, the Parks and Recreation Department (PRD) reports litter still has to be picked up at an annual cost of $726,000.
- Even with increased levels of prosecution, the El Paso County Attorney's Office Environmental Crime Unit (ECU) does not believe the incidence rate of litter and illegal dumping is decreasing in the County.

*In some cases, the responding entity did not have complete cost data. An asterisk indicates the entity has a program in place but that the direct cost data was not available for this Study.

[1] El Paso Chamber of Commerce

PREVENTION

The City's Environmental Services Department (ESD) operates four Citizen Collection Stations (CCS) strategically located across the City. The CCS accept tires, electronics (including TVs and computers), bulky items, and yard waste at no cost to City residents who pay monthly solid waste fees. According to ESD staff, the CCS have significantly reduced illegal dumping in the City. The CCS cost the City $2,100,000 in 2015.

Fast Facts

Location: Far West Texas

Population: 681,000

Waterways:
- Rio Grande River
- Mulberry and Thorn Reservoirs (seasonal)
- Ascarate Lake
- Numerous unnamed arroyos
- Irrigation channels

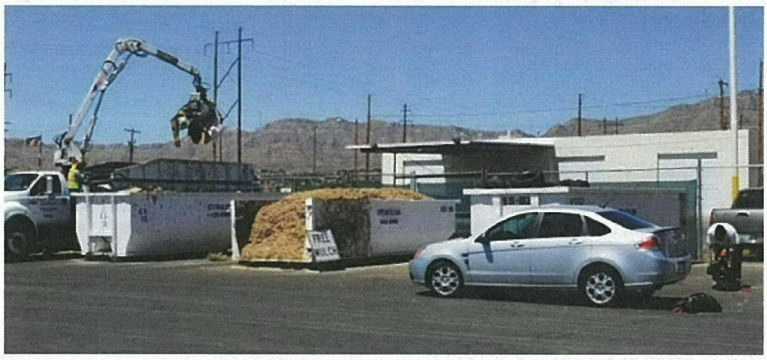
Annual Precipitation: 9.8 inches

The El Paso Water Improvement District #1 (EP WID #1) operates a system of irrigation canals—some of which run through the City. Illegal dumping of tires is an issue for those canals and EP WID #1 offers two to three tire amnesty collection events per year. In 2015, the EP WID #1 collected approximately 10,000 tires from the events inside the city limits at a cost of $10,000.

EDUCATION & OUTREACH

The effectiveness of education and outreach can be difficult with a large transient population. Fluctuating populations at Fort Bliss and daily migration across the US-Mexico border contribute to the challenge of communicating an anti-litter and illegal dumping message.

The U.S. International Boundary and Water Commission (USIBWC), headquartered in El Paso, administers the Texas Clean Rivers program, which aims to improve surface water quality within the Texas portion of the Rio Grande River Basin. The USIBWC supports the Texas Clean Rivers Program by informing and engaging stakeholders through public information and education activities, including providing educational material to children in local schools. The USIBWC estimates that it spent $21,400 in 2015 on Texas Clean Rivers program.



ESD Citizen Collection Station – grapple truck operating on the left

During busy holidays, the Parks and Recreation Department (PRD) works with the City's marketing staff to develop press releases and coordinate TV interviews on local news stations to educate the community about keeping El Paso parks clean.* According to PRD staff, the education and outreach has been successful, and litter has decreased in City parks during the peak visitation periods.

From 2010-2011, the EPWU led a $40,000 campaign against illegal dumping called "Get Mad!" where EPWU paid for billboard advertising and other public service announcements

with an "angry grandmother theme." The EPWU public information officer spends approximately five percent of her time educating the public on the impact of litter and illegal dumping into the stormwater system. In 2015, EPWU spent $2,700 on education and outreach.



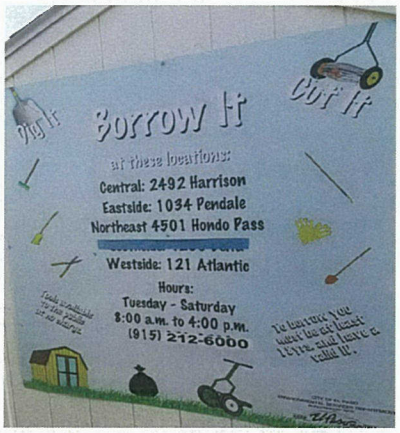
EPWU's Illegal Dumping Campaign

With an all-volunteer staff, Keep El Paso Beautiful (KEPB) focuses its efforts on empowering community groups to lead litter cleanup events. In addition to community tool sheds across the City (see Abatement: Litter), KEPB has a comprehensive website where citizens can learn how to report environmental crimes, lead cleanup events, and obtain contact information for other litter and illegal dumping questions. Managing the webpage cost KEPB $2,400 in 2015.

ABATEMENT: LITTER

The City removes litter from the community through a variety of departments and KEPB.

ORGANIZATION	DESCRIPTION
City of El Paso - Parks and Recreation (PRD)	Litter abatement at parks is performed by a contractor at an annual cost to the City of $726,000. Even with strategically placed trash cans, PRD staff report that they have to pick up litter. Plastic bottles from athletic events are the most common item picked up.
City of El Paso - Streets and Maintenance	Contracts supplemental labor to clean alley ways at an annual cost of $366,400.
City of El Paso - Water Utility (EPWU)	A crew of 40 staff spends approximately 15 percent of their time maintaining stormwater drains, channels, and other waterways.*
Keep El Paso Beautiful (KEPB)	Maintains 30 community tool sheds in partnership with the El Paso Fire Department where residents can access free litter grabbers, gloves, and trash bags for cleanup events. Supplying these tool sheds cost KEPB $10,000 in 2015.





KEPB Community Tool Shed

ABATEMENT: ILLEGAL DUMPING

The City and its local partners report that the majority of illegal dumping activities occur in unincorporated areas outside the city limits, but that illegal dumping within the City often occurs in waterways (e.g., irrigation channels, arroyos, and stormwater retention basins). The primary items illegally dumped in the City are tires, mattresses, sofa sets, and yard waste.

According to ESD staff, the special collections crew that normally provides on-demand curbside brush and bulky collections typically spends 10 percent of its time cleaning up illegal dump sites. Work orders generated by citizen reports to 311 or code enforcement direct the crew to illegal dumping sites; however, the crew also cleans up illegal dump sites discovered while traveling within the City. The ESD estimates that diverting the special collections crew from their regular routes cost the City $1,600,000 in 2015.

Along with windblown litter, the City experiences illegal dumping around its landfill. As a result, ESD deploys two crews of two staff to police a 2-mile radius from the landfill perimeter for 2.5 hours daily, collecting litter and illegally dumped material. The crews typically fill three 30-cubic yard roll-offs per week. Landfill staff report that "No illegal dumping" signage has reduced the amount of illegal dumping in the area. These efforts cost ESD $25,000 annually.

ENFORCEMENT

Within ESD, code compliance officers respond to complaints reported to 311. Code enforcement officers are deployed to the identified properties. ESD estimates that code officers enforcing illegal dumping ordinances costs the department $52,900 per year. The officers inspect the property then call the ESD special collections crew to remove the illegally dumped material when appropriate. Presently, code enforcement officers are unable to write citations for littering or illegal dumping and must wait for an El Paso Police officer to arrive to write a citation.

Within the El Paso County Attorney's Office is the Environmental Crime Unit (ECU). With the cooperation of local and Federal law enforcement agencies, the ECU's full-time environmental prosecutor prosecutes polluters engaged in illegal dumping, trash burning, and other misdemeanor environmental crimes.[2] Prosecution costs, approximately $33,100 in 2015, span from sheriff's deputies' salaries to jury fees to the Public Works Department that provides maps to be used as evidence during trials. Even with increased levels of prosecution, ECU does not believe the County is experiencing decreased levels of litter and illegal dumping.

[2] http://www.epcounty.com/CA/environment.htm

FORT WORTH: WHERE THE WEST BEGINS

As the 16th largest city in the country and fifth largest in Texas, Fort Worth is segmented by the Clear and West Forks of the Trinity River that converge between downtown and the historic Stockyards. A popular destination in Fort Worth is the Trinity River Trails, a recreational hub-and-spoke trail system that lines the banks of the Clear and West Forks. Recently land adjacent to the Trinity River Trails has become popular for local development.

Cost Summary

ACTIVITY	LITTER	ILLEGAL DUMPING
Prevention	$822,200*	$1,118,200
Education and Outreach	$897,100	
Abatement	$3,392,000*	$1,257,500
Enforcement	$1,059,200	
2015 Litter & Illegal Dumping Costs	$8,546,200	

In 2015, the City of Fort Worth (City) recognized that mitigation of litter and illegal dumping is a challenge in Fort Worth. The City hosted a Litter Summit in early 2016 with stakeholders from the City, non-governmental organizations, businesses, and other community organizations to coordinate litter and illegal dumping efforts. As of August 2016, the Environmental Management Division within the Code Compliance Department developed the City's 5-Year Litter Management Plan. Input from the Litter Summit helped to inform litter prevention actions included in the City's Litter Management Plan to be implemented by stakeholders. The City is also planning to host additional Litter Summit sessions.

The City provided a detailed analysis of the individual program costs. In some cases, the City allocated the cost of an individual program across multiple categories. For example, a program that is primarily targeted at litter prevention may also have an education and outreach component; therefore, the City allocated a portion of its cost to litter prevention and education and outreach. Within this case study the total cost of a particular program is reported in the activity section for which the City allocated the highest percentage of the cost. Programs with costs allocated to more than one category are identified by a "+". The total costs in the Cost Summary are allocated based on the allocated cost summary table at the end of this case study.

ALTERNATIVE REVENUES

Property owners within the Downtown Fort Worth Inc. (DFWI) PID #1 pay a special assessment rate on their taxes ($0.10 for every $100.00 in value). For example, a $35 million commercial high-rise will pay $35,000 annually into the PID. A portion of this special assessment is allocated to litter abatement.

The North Texas Tollway Authority (NTTA) signage and roadway litter abatement contract is funded by NTTA's operating fund, which is funded directly by toll revenues.

To fund stormwater inlet maintenance and other stormwater maintenance services, the City charges a stormwater utility fee to residential and commercial properties. The fee is based on

*In some cases, the responding entity did not have complete cost data. An asterisk indicates the entity has a program in place but that the direct cost data was not available for this Study.

the amount of impermeable cover on the property and ranges from $2.70 to $10.80 for residential property. The fee is based on impermeable surface area for commercial properties ($5.40 for every 2,600 square feet of impermeable surface).

In addition to the stormwater utility fee, the City charges a monthly environmental fund fee ranging from $0.50 for apartment customers to $35 for industrial customers. A portion of that revenue is allocated to the Environmental Management Division's floatable litter abatement efforts to maintain compliance with their sewer/stormwater permit.

Fast Facts

Location: North Central Texas

Population: 833,000

Waterways:
- Clear Fork of the Trinity River
- Benbrook Lake
- Mary's Creek
- Lake Worth
- Eagle Mountain Lake
- West Fork of the Trinity River
- Marine Creek
- Marine Creek Reservoir
- Lake Arlington
- Trinity River
- Sycamore Creek
- Big and Little Fossil Creeks

Annual Precipitation: 35.8 inches

Key Takeaways

- Solid Waste Services (SWS) Division reports that it removed 2,800 tons of debris from illegal dump sites from July 2014 to July 2015. The number of SWS staff has decreased in the last 20 years and the number of illegal dumping sites has increased.
- In 2015, litter and illegal dumping violations were the third highest on record at 750 violations per month.
- The City's Stormwater Management Division offers a stormwater utility fee credit for non-residential property owners that implement best management practices.

Credits for Cleanliness

The Stormwater Management Division offers a stormwater utility fee credit for non-residential property owners that implement best management practices, which includes implementation of stormwater educational curricula. Stormwater utility fee credits worth about $93,700+ were awarded during fiscal year 2015 (10/1/2014 – 9/30/2015). These costs do not include administrative costs. Additionally, a non-residential property owner can receive a 5 percent credit off the Stormwater Utility fee for one year after conducting a litter cleanup event. The Adopt-a-Creek credit is not a significant part of stormwater utility fee credits. In FY 2015 it was $1,400.

PREVENTION

The City offers three free drop-off stations across Fort Worth for its residents, and plans to open a fourth location in 2017. Customers can dispose of items such as tires, yard trimmings, old furniture, appliances, electronics, and extra household garbage, items that are commonly illegally dumped. The City is currently replacing the underused "Swap Shop" area of each drop-off station with an attended donation center that will help expand the type and volume of materials diverted from illegal dumping and landfill disposal, to be reused by others. The City estimates these litter prevention services cost the City $1,357,600* annually.

Alternative Approach

The Fort Worth Police Department has an informal arrangement with the homeless community whereby, in lieu of a ticket, the police distribute free grey trash bags at homeless campsites to promote cleanliness and prevent litter. Staffing and supplies cost the Police Department $1,800 per year.

Along the Chisholm Trail Parkway, the NTTA placed several "Litter Costs You Money" signs. The NTTA signage costs are negligible.

The Fort Worth Police Department spends $1,800 per year to provide trash bags for the homeless to help prevent litter accumulation on city streets.

EDUCATION & OUTREACH

The City conducts an anti-litter campaign called "Still Littering - Seriously?" with banners promoting this message at the City's three drop-off stations, on banners on city trailers, and on postcards. Giveaways such as pocket ashtrays and car litter bags passed out at community and neighborhood events help reemphasize the anti-litter message. Additionally, the City of Fort Worth Community Engagement Office conducts six different programs including: Captain Crud and the Cruddies, What's Wrong with this Picture?, Freddie the Fish, Recycle Right, and Captain Crud and the Buddies that include a litter prevention message. Keep Fort Worth Beautiful (KFWB) staff and board members promote no littering during presentations for career days to school-aged students, tables at community events and other speaking engagements to groups such as Rotary Club and neighborhood associations.

Additionally, KFWB provides materials for litter education events and promotes litter-related news stories in local media to raise awareness of the impact of litter within the community. KFWB spent approximately $10,000 on these efforts in 2015.



Ten on Tuesday logo

The City of Fort Worth engages residents to embrace a non-littering life style through financial support of the Tarrant Regional Water District (TRWD) Reverse Litter Program and by cross-promoting messages on the City and KFWB websites and social media channels. The TRWD, responsible for managing Tarrant County's flood control system, sponsors, along with the cities of Dallas, Fort Worth, and Denton, a Metroplex-wide litter abatement campaign. "Ten on Tuesday" encourages businesses, schools, community groups, and individuals to reverse litter by picking up ten pieces of trash and recyclable materials each Tuesday. As of January 2017, the campaign website reported nearly 23,000 "Ten on Tuesday" pledges. This campaign costs TRWD $400,000* per year, plus additional funds from community partners, including $200,000* from the City of Fort Worth.

Additional TRWD educational and outreach programs include Adopt-a-River and Adopt-a-Drain that cost TRWD $25,200* annually. Adopt-a-River allows groups to adopt and clean a designated section of the Trinity River while Adopt-a-Drain provides groups with storm drain awareness placards installed at a location of their choice. In return, the Adopt-a-Drain sponsors are responsible for keeping the exterior of the drain free of litter and debris. The City of Fort Worth also provides various anti-litter education through stormwater quality, recycling, and other environmentally-conscious education campaigns and outreach projects.

Social media is integral in the TRWD outreach process of all the aforementioned TRWD programs from advertising and promotion to storytelling through digital interaction. Channels like Facebook, Twitter, and Instagram help TRWD connect these programs with citizens interested in an environmentally conscious lifestyle. TRWD spent $1,500 in 2015 in social media advertisements.

ABATEMENT: LITTER

The City and partnering organizations remove litter from the community through a variety of activities.

ORGANIZATION	DESCRIPTION
City of Fort Worth - Solid Waste Services (SWS) Division	Five litter abatement crews of five SWS employees work weekdays picking up litter in City rights-of-way. Historically, the courts have supplemented these crews with community service sentences plus a team of five illegal dump investigators; however the courts are shifting towards fines. These crews cost the City $1,100,000* per year in salaries, vehicles, and equipment.
City of Fort Worth - Transportation & Public Works Department	Stormwater maintenance crews regularly clean the City's 36,000 storm drains and accompanying infrastructure, which includes vegetated conveyances (non-street) and culverted street crossings. Litter removal costs the department $777,400* per year.
Keep Fort Worth Beautiful (KFWB)	Coordinates and hosts two citywide cleanup events: one in the spring (Cowtown Cleanup) and one in the fall (Neighborhood Litter Stomp). These events will often occur on the same days as TRWD's Trinity River Trash Bash. TRWD focuses on recruiting volunteers to clean the river corridor and KFWB focuses on recruiting volunteers to clean the neighborhoods. Jointly, KFWB and TRWD promote the message "All litter in the street ends up in our waterways." KFWB spent $112,000* in direct costs on litter abatement activities in 2015. While excluded from the cost totals in this Study, KFWB estimated the total value generated by volunteer and participant labor is $197,100 and in-kind donations totaled $14,100.
Tarrant Regional Water District (TRWD)	Sponsors the biannual Trinity River Trash Bash—a volunteer clean-up event with locations along the West Fork, East Fork, and Clear Forks of the Trinity River. TRWD spends $166,400* annually on these events. While excluded from the cost totals in this Study, the value of the volunteer labor is an additional $185,800*. Additionally, TRWD manages the Reverse Litter Program, which brings awareness to the consequences litter can have on area waterways. The amount TRWD spends annually on abatement is directly related to annual rainfall totals. TRWD deploys its litter abatement crews each time the rain gauge reads at least a ½-inch of rain, when an inquiry is received through the website, by phone, or while performing floodway maintenance. TRWD uses contract labor primarily for vegetative maintenance; however, the contract laborers spend weekends on litter cleanup resulting in an allocated cost to TRWD of $158,500 annually.



TRWD's Trinity River Trash Bash



DFWI Street Maintenance Staff

Key Organizations

- City of Fort Worth
  - Police Department
  - Code Compliance
    - Environmental Management
    - Solid Waste Services (SWS)
    - Keep Fort Worth Beautiful (KFWB)
  - Transportation and Public Works
    - Stormwater Management
  - City Attorney's Office
- Tarrant Regional Water District (TRWD)

Additional Organizations

- Fort Worth Independent School District (FWISD)
- Fort Worth Transportation Authority (FWTA)
- North Texas Toll Authority (NTTA)
- BNSF Railway (BNSF)
- Downtown Fort Worth, Inc. (DFWI)

ORGANIZATION	DESCRIPTION
North Texas Tollway Authority (NTTA)	Hires a contractor to keep the right-of-way free of litter and debris, including tires, tire tread, hazardous material, and other potentially dangerous material on Chisholm Trail Parkway. The contractor also clears and disposes of litter and debris from detention ponds adjacent to the roadway. In 2015, NTTA spent $248,000 on these services.
Downtown Fort Worth Inc. (DFWI)	DFWI provides trash cans in the downtown area to prevent litter. DFWI also employs contractors to sweep streets in the downtown area daily and prior to special events. Additionally, DFWI also contracts for vacuuming the curb and gutter line of streets using a walk-behind sweeper. These efforts in the downtown area alone contribute 8,400 additional gutter miles of street sweeping annually. Based on a recent resident survey published in the 2015 State of Downtown, 98.3 percent of residents rated the streets and sidewalks in Downtown as clean or very clean. According to DFWI, cleanliness directly correlates to the perception of safety in Downtown. DFWI reports that it spent $1,000,000+ in 2015 on litter pick-up.
Fort Worth Independent School District (FWISD)	At each school the custodians are responsible for cleaning litter from the school property. FWISD estimates that time and material directed at these efforts is around $50,000+ per year.
Fort Worth Transportation Authority (FWTA)	Removes illegal dumping and litter from FWTA properties, which costs about $345,000 per year.
BNSF Railway (BNSF)	Removes illegally dumped material when notified by agencies or BNSF employees.*

ABATEMENT: ILLEGAL DUMPING

According to the City's annual sewer and stormwater report (July 2014-July 2015), SWS removed 2,800 tons of debris from illegal dump sites. Some of the sites were identified by code compliance officers. Five crews including a boom operator and truck driver collected the material. These crews have made significant progress in abating legacy illegal dump sites and the total tonnage collected, such that the number of staff has reduced from 24 employees in 1996 to 12 employees today. However, the number of new illegal dumping sites has increased. This program costs the City $1,000,000+ annually.

In 2015, TRWD spent approximately $85,000 in litter and illegal dumping abatement. These expenditures cover landfill fees, TRWD labor, tools, and equipment related to debris removal from dams and trash collectors.

The FWTA spent $5,000 in 2015 to remove items illegally dumped at bus shelters and train stations.

ENFORCEMENT

When the Fort Worth Code Compliance Department (Code) typically receives a complaint via phone, email, or a submittal from their website about a residential or commercial property, a compliance officer goes to investigate the complaint. If there is a code violation, the officer will serve a notice to the property owner. If the violation is not resolved, the officer will issue a citation. It is up to the officer's discretion to set the level of the fine, which is typically based on the quantity of litter observed. In 2015, litter and illegal dumping violations in the City were the third highest on record at approximately 750 violations per month. The Department Code Officers dealing with litter and illegal dumping are divided among the following three sectors: 40 in neighborhood, six in commercial, and four nuisance abatement officers. These officers spend approximately 50 percent of their time addressing litter and illegal dumping enforcement, resulting in an allocated cost for the City of $1,464,000+. With increased enforcement Code reports improvements in substandard properties.

In an effort to reduce the workload for compliance officers, the Code Rangers Program trains citizen organizations to identify and submit reports of suspected code violations to Code, allowing Code officers the opportunity to devote more time to chronic, dangerous, or complicated issues affecting the neighborhood. This training cost the City $37,400 in 2015. In 2015, the Code Rangers reported approximately 1,800 code violations.[2] Also supporting the code officers are health inspectors who have been trained to identify problem litter areas and educate the businesses on property maintenance ordinances.

The City's Litigation and Code Section within the City Attorney's Office handles municipal code violations. Their prosecutors typically offer plea bargains to remedy problem properties. However the City Attorney's Office has the ability to file lawsuits against the owners, seeking injunctive relief and civil penalties. Court costs for litter and illegal dumping cases cost the City $1,400 in 2015.

Additionally, when BNSF railway police find litter and illegal dumping cases along railways, BNSF works to identify and locate the potentially guilty parties and prosecute them.*

2 Not detailed by violation type

COST ALLOCATION TABLE

The City of Fort Worth provided a detailed analysis of the individual program costs. This allocation summary table provides a breakdown of the total costs by activity reported in the Cost Summary.

Program	Department or Organization	Allocated Costs by Activity						
		Litter Prevention	Illegal Dumping Prevention	Education & Outreach	Litter Abatement	Illegal Dumping Abatement	Enforcement	Total
Litter Prevention								
"Litter Costs You Money" signage along tollway	North Texas Tollway Authority (NTTA)	$ - *	$ - *	$ - *	$ - *	$ - *	$ - *	$ - *
Homeless Outreach	Fort Worth Police Department (FWPD)	$1,800	$ - *	$ - *	$ - *	$ - *	$ - *	$1,800
Illegal Dumping Prevention								
Drop-off Stations	City of Fort Worth - Solid Waste Services (SWS) Division	$339,400	$1,018,200	$ - *	$ - *	$ - *	$ - *	$1,357,600
Education and Outreach								
Educational events and materials, and litter-related news stories	KFWB	$ - *	$ - *	$10,000	$ - *	$ - *	$ - *	$10,000
Reverse Litter Campaign	Tarrant Regional Water District (TRWD)	$200,000	$ - *	$200,000	$ - *	$ - *	$ - *	$400,000
Reverse Litter Campaign	City of Fort Worth contribution to program cost	$100,000	$ - *	$100,000	$ - *	$ - *	$ - *	$200,000
Adopt-a-River and Adopt-a-Drain Programs	TRWD	$12,600	$ - *	$12,600	$ - *	$ - *	$ - *	$25,200
Social Media Outreach Activities	TRWD	$ - *	$ - *	$1,500	$ - *	$ - *	$ - *	$1,500
Litter Abatement								
Litter Abatement Crews	SWS Division	$110,000	$ - *	$165,000	$495,000	$ - *	$330,000	$1,100,000
Stormwater Maintenance Crews	City of Fort Worth - Transportation and Public Works, Stormwater Management Division	$ - *	$ - *	$ - *	$621,900	$155,500	$ - *	$777,400
Direct Costs for Litter Abatement Activities and Events	KFWB	$16,800	$ - *	$16,800	$78,400	$ - *	$ - *	$112,000
Trash Bash	TRWD	$41,600	$ - *	$41,600	$83,200	$ - *	$ - *	$166,400
Litter Abatement Events	TRWD	$ - *	$ - *	$ - *	$158,500	$ - *	$ - *	$158,500
Right-of-way Cleanup	NTTA	$ - *	$ - *	$ - *	$248,000	$ - *	$ - *	$248,000
Downtown Cleanup	Downtown Fort Worth Inc. (DFWI)	$ - *	$ - *	$ - *	$1,000,000	$ - *	$ - *	$1,000,000
School Property Cleanup	Fort Worth Independent School District (FWISD)	$ - *	$ - *	$ - *	$50,000	$ - *	$ - *	$50,000
Property Cleanup	Fort Worth Transportation Authority (FWTA)	$ - *	$ - *	$ - *	$345,000	$ - *	$ - *	$345,000
Illegal Dumping Abatement								
Illegal Dumping Abatement Crews	SWS Division	$ - *	$100,000	$100,000	$ - *	$700,000	$100,000	$1,000,000
Illegal Dumping Abatement Crews	TRWD	$ - *	$ - *	$ - *	$ - *	$85,000	$ - *	$85,000
Illegal Dumping Cleanup at Bus Stops	FWTA	$ - *	$ - *	$ - *	$ - *	$5,000	$ - *	$5,000
Enforcement								
Neighborhood Code Enforcement, Nuisance Abatement Team, and Commercial Code Enforcement	City of Fort Worth Code Compliance Department (Code)	$ - *	$ - *	$249,600	$312,000	$312,000	$590,400	$1,464,000
Code Rangers Liaison	Code Compliance	$ - *	$ - *	$ - *	$ - *	$ - *	$37,400	$37,400
Code Violation Prosecution	City Attorney's Office	$ - *	$ - *	$ - *	$ - *	$ - *	$1,400	$1,400
	Totals	$822,200	$1,118,200	$897,100	$3,392,000	$1,257,500	$1,059,200	$8,546,200

HOUSTON: THE BAYOU CITY

Covering 600 square miles and home to 2.3 million people, the City of Houston (City) is the fourth largest city in the U.S. Since its founding in 1837 along the banks of Buffalo Bayou, waterways have been an integral part of the City, ranging from the many bayous to the economic engine that is the Port of Houston, the second busiest port nationally. As a city with many waterways, Houston incurs extensive costs cleaning bayous and other waterways.

Given the importance of its waterways and sheer size of the community, extensive collaboration occurs among the City and multiple other entities to address litter and illegal dumping. This collaboration has resulted in the development of extensive efforts focused on abatement and enforcement.

Cost Summary

ACTIVITY	LITTER	ILLEGAL DUMPING
Prevention	$250,000*	$2,200,000
Education and Outreach	$200,000	
Abatement	$13,390,600*	$617,400*
Enforcement	$4,462,900*	
2015 Litter & Illegal Dumping Costs	$21,120,900	

ALTERNATIVE REVENUES

In an effort to offset the costs of illegal dumping, the Harris County District Attorney will request that illegal dumpers pay $300 in restitution for the use and maintenance of the cameras and a clean-up fee based on the costs incurred for the clean-up (if the property owner does not clean up the site). These amounts are in addition to any fines or jail or community service.

Key Takeaways

- The total amount spent on litter and illegal dumping amounts to more than $9 per person, and the range of litter and floatable removal cost is $20 to $189 per cubic yard depending on a range of factors including location.
- The Harris County District Attorney's Office has found the use of surveillance cameras is an effective tool to prosecute cases of illegal dumping.
- The Harris County Attorney requests illegal dumpers pay restitution fees for surveillance camera and clean-up costs.

*In some cases, the responding entity did not have complete cost data. An asterisk indicates the entity has a program in place but that the direct cost data was not available for this Study.

PREVENTION

To minimize litter in the City's extensive network of parks, the Parks Department provides litter receptacles across the City.* The City's Department of Neighborhoods has a mow down program focused on controlling overgrown lots, which is intended to prevent litter and illegal dumping, costing the City $250,000 annually.

In an effort to reduce illegal dumping, the City operates six neighborhood depositories, which accept a wide range of materials. Operating these facilities costs the City $2,200,000 annually. The City's objective for these facilities is to provide a convenient and no-cost alternative to illegal dumping, as residents can use the sites up to four times per month at no charge.

Fast Facts

Location: Southeast Texas

Population: 2,296,000

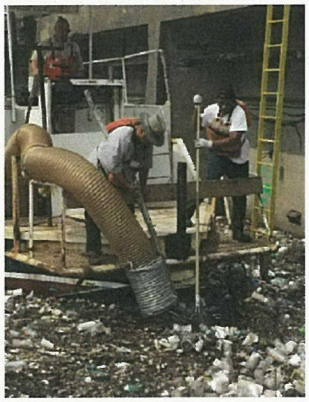
Waterways:

- Buffalo Bayou fed by Barker Reservoir
- Mason Creek
- Langham Creek
- South Mayde Creek
- Brays Bayou
- Greens Bayou
- Hunting Bayou
- Sims Bayou
- Whiteoak Bayou
- Little Whiteoak Bayou
- Lake Houston fed by the East Fork of the San Jacinto River
- San Jacinto River fed by Lake Houston
- Cypress Creek

Annual Precipitation: 54.9 inches

EDUCATION & OUTREACH

As an example of the collaborative approach to reducing litter and illegal dumping, multiple city departments provide education and outreach services. The Solid Waste Management Department has focused its messaging on the importance of reducing and cleaning up illegal dump sites across the City. The Public Works and Engineering Department emphasizes the need to reduce litter and illegal dumping via multiple programs. One example is emphasizing the importance of litter reduction as part of an exhibit at one of the City's water treatment plants. The annual outreach budget for the programs in the Public Works and Engineering Department is $200,000.





Buffalo Bayou Partnership litter and floatables waterway cleanup crews.

ABATEMENT: LITTER

The City removes litter from the community through a variety of collaborative efforts. The Harris County Flood Control District (HCFCD) coordinates multiple litter abatement efforts as a part of the District's Phase 1 Municipal Separate Storm Sewer System (MS4) permit, which is a joint permit between HCFCD, the City, Harris County and the Texas Department of Transportation. The following table summarizes key efforts by the Task Force and other organizations to abate litter.

ORGANIZATION	DESCRIPTION
Harris County Flood Control District (HCFCD)	Removal of 5,043 tires, 4,987 cubic yards of litter and floatables, 163 cubic yards of miscellaneous debris and 31,972 cubic yards of organics and wood at an annual cost of $1,616,700 in 2015.
City of Houston	Sweeps 6,117 miles of streets sweeping at an annual cost of $410,000 and removed 7,027 cubic yards of litter and floatables in 2015 removal at an annual cost of $1,327,400, about $189 per cubic yard.
Harris County	Sweeps 52,588 miles of streets sweeping at an annual cost of $4,816,600 and removed 129,500 cubic yards of litter and floatables in 2015 at a cost of $2,546,900, about $20 per cubic yard.
Texas Department of Transportation	Removal of litter at an annual cost of $538,300 in 2015.
Buffalo Bayou Partnership	With a combination of booms, vacuum boats, and manual clean-up, this partnership focuses on cleaning floatables from bayous at an annual cost of $500,000, about $137 per cubic yard.
Houston Parks Board	Focused on the walkways along the bayous, cleaned approximately 1,131 acres at an annual cost of $761,000.
Houston-Galveston Area Council Trash Bash	Regarded as the largest waterway clean-up in Texas, River, Lakes, Bays 'n Bayous Trash Bash had participation from 4,600 volunteers and collected 54 tons of trash. Annual program costs from staff time, grants, and sponsorships totaled $60,500. While excluded from the cost totals in this Study, in-kind donations totaled $80,000.
Keep Houston Beautiful (KHB)	Working to remove litter from neighborhoods and bayous, KHB has an annual budget of $813,200. While excluded from the cost totals in this Study, KHB and received $456,000 in in-kind services (such as the City oroviding collection vehicles for disposal) and volunteers provided more than 68,000 hours of litter clean-up efforts.
Management Districts	There are multiple management districts, also known as "improvement districts," in specific geographic areas of the City that focus on supporting capital improvements, neighborhood revitalization, and services. Management district services include providing litter removal within the district.*



Houston-Galveston Area Council's River, Lakes, Bays 'n Bayous Trash Bash

ABATEMENT: ILLEGAL DUMPING

The City's Solid Waste Management Department has multiple programs focused on illegal dumping abatement. The City operates a Tree Waste and Junk Collection Program, alternating collections on a monthly basis. During lighter collection months for tree waste, the City will send crews to clean up illegal dump sites.*

Working with the City's Health Department, the Solid Waste Management Department has provided heavy trash and rear-loader crews to conduct cleanups in an effort to reduce the potential spread of the Zika Virus at an annual cost of $550,000. Efforts are coordinated to focus on key areas of the City's council districts. As an example of the extent of illegal dumping, six heavy trash and six rear-load crews collected 113 tons of illegal dumping in a single day.

The Houston Police Department (HPD) spends $27,000 on clean-up costs. The HPD Environmental Investigations Unit spent an additional $40,400 on clean-up and sampling costs related to illegal dumping sites. While excluded from the total costs in this Study, HPD estimated that volunteers contributed more than $74,000 of value.

Key Organizations

- City of Houston
  - City Council Districts
  - Solid Waste Management Department
  - Neighborhoods Department
  - Parks Department
  - Police Department (HPD)
  - Public Works and Engineering (PWE)
- Harris County
  - County Attorney (HCAO)
  - District Attorney (DAO)
  - Environmental Crimes Unit (HCECU)
  - Flood Control District (HCFCD)
  - Pollution Control Services Department (HCPCS)
- Keep Houston Beautiful
- Buffalo Bayou Partnership
- Houston-Galveston Area Council
- Houston Parks Board

Additional Organizations

- Multiple management districts
- Texas Department of Transportation

ENFORCEMENT

Due to illegal dumping and littering issues within the community, there is a substantial commitment by the City and multiple organizations within Harris County to address environmental crimes and to track their costs. Key enforcement efforts include the following.

ORGANIZATION	DESCRIPTION
City of Houston-Environmental Investigations Unit of the Police Department (HPD)	Addressing a range of environmental crimes, the combination of 14 peace officers, civilian code enforcement officers, community outreach staff, and administrative personnel investigate hundreds of illegal dumpsites annually, mainly focused on construction and demolition debris, scrap tires, and household hazardous waste. This program costs the City $1,442,900 per year in salaries, vehicles, and equipment.
Harris County - Office of the District Attorney (DAO)	With two staff, the Harris County District Attorney spearheads all criminal environmental enforcement cases brought forth by the County, with many cases focusing on illegal dumping. This program costs the County $468,000 per year in salaries and administrative costs.
Harris County - Attorney's Office (HCAO)	With a staff of 3.5 people, the HCAO oversees the civil environmental enforcement cases brought forth by the County. While there is a preference to prosecute cases criminally (as provided by the District Attorney), civil cases are sometimes preferred because the process for filing several violations at once is more simple and streamlined than with criminal prosecution.*
Harris County – Environmental Crimes Unit (HCECU)	Working closely with HPD and a number of other local authorities, the Environmental Crimes Unit proactively investigates illegal dumping cases, using cameras and other technology. With a staff of six investigators and three administrators, their annual budget is $1,300,000.
Harris County Pollution Control Services Department (HCPCS)	With a staff of 20 investigators addressing air, water, and solid waste pollution complaints, three staff members focus on solid waste issues. With an in-house lab, HCPCS often performs laboratory analysis that is provided to the HCAO for prosecution. Annual costs for the three investigators total $200,000.
City of Houston - Health Department	Conducting inspections of environmental complaints costs $79,000 per year.
City of Houston - Public Works and Engineering (PWE)	Conducting inspections of environmental complaints costs $973,000 per year.



Before and After: As a chronic illegal dump site, the HCECU monitored the site, resulting in efforts to have it cleaned up. The proactive enforcement efforts have kept the site clean.

Effective Collaboration between the City of Houston and Harris County: Surveillance Cameras

In 2012, during talks between the City of Houston and Harris County on how to better serve the community and stop illegal dumping, which was rising in some areas, Councilman Jerry Davis pushed for more enforcement in those city council district's (Districts B, D, K, I, H) that were seeing increased illegal dumping. The initial agreement between the City and County was for each district to receive five cameras for enforcement, for a total cost of $250,000. After starting the camera program, the HCECU reduced the costs of the cameras by building them in-house, which allowed funding to be used for video monitoring and storage. The Harris County District Attorney's Office has found that the use of these cameras is very effective in prosecuting cases.

LAREDO: THE GATEWAY CITY

The City of Laredo (City) is developing a hub-and-spoke trail system along its creeks to improve the quality of life. An 8-mile hike and bike trail along Chacon Creek from Texas A&M International University (TAMIU) to the Rio Grande River in southeast Laredo, including a 3-mile greenbelt, already exists along Zacate Creek, which runs parallel to Interstate 35.

With four international bridges linking Laredo to Nuevo Laredo, the City is challenged by a highly mobile population consisting of primarily commercial vehicle traffic. According to City officials, a highly mobile population feels a lack of connection and ownership of the cleanliness of the community.

ALTERNATIVE REVENUES

Keep Laredo Beautiful (KLB), street sweeping and tire collections are funded through stormwater fees. The monthly residential and multifamily fee per unit is $6.50 and the commercial rate ranges from $8.00 to $120.00 depending on property square footage. The City reports KLB received $101,000 in 2015 and Public Works received $1,400,000 for street sweeping and tire collection.

Cost Summary

ACTIVITY	LITTER	ILLEGAL DUMPING
Prevention	$88,800*	$ - *
Education and Outreach	$134,300	
Abatement	$4,090,000*	$5,000*
Enforcement	$140,000	
2015 Litter & Illegal Dumping Costs	$4,458,100	



Lake Casa Blanca

Key Takeaways

- A highly mobile population feels a lack of connection and ownership of the cleanliness of the community.
- The City's Commercial Litter Prevention Ordinance has reduced the amount of litter found on commercial properties.
- The City has experienced less illegal dumping when it raises the profile and awareness of illegal dumping prosecutions through local media.

*In some cases, the responding entity did not have complete cost data. An asterisk indicates the entity has a program in place but that the direct cost data was not available for this Study.

PREVENTION

Recognizing the negative impact of commercial litter on Laredo, City Code contains a Commercial Litter Prevention Ordinance that requires most commercial establishments to place trash receptacles in their parking areas. Further, for medium and large commercial establishments, the Code requires those businesses to submit a Commercial Litter Prevention Plan (Plan) to the City prior to the start of their operations. Each Plan must contain:

- A detailed property map with prevailing wind direction, placement of required trash receptacles and anti-litter signs (if applicable)
- Summary of commercial litter found on property
- Schedule for receptacle collection services
- Schedule for litter cleanup activities
- Signed certification that the business will comply with the Plan
- Signed certification that the business will dispose of all their trash at a registered landfill

Fast Facts

Location: South Texas

Population: 255,000

Waterways:
- Chacon Creek
- Lake Casa Blanca
- Rio Grande River
- San Idelfonso Creek
- Zacate Creek
- Link Lake

Annual Precipitation: 20.2 inches



Zacate Creek Greenway

In 2014, the Laredo City Council passed a Checkout Bag Reduction Ordinance in part to "reduce costs associated with floatable trash controls and the maintenance of the municipal separate stormwater sewer system." Historically, Laredoans consumed 120 million single-use plastic bags annually. The ordinance applies to all commercial establishments. City staff from the Stormwater Division have seen significant decreases in the amount of plastic bags in the stormwater sewer system since the ordinance took effect in April 2015. The Rio Grande International Study Center (RGISC) distributed over 10,000 "Loving Laredo" reusable bags in 2015 while the ESD handed out 80,000. These bags cost RGISC $8,800 and the City $80,000. As of September 2016, a state appeals court struck down the Checkout Bag Reduction Ordinance, as being incongruent with current state law.

To prevent illegal dumping of appliances, the Solid Waste Department (SWD) allows free disposal at the landfill on Saturday and a subsidized rate of $2.00 per appliance on weekdays.*

In response to litter found to obstructing downtown storm drains, the City offers additional special collections for downtown merchants.*

To combat the problem of illegal dumping of tires, the City passed an ordinance in 2014 that requires tire businesses to collect used or scrap tires from the customer at the time the customer purchases new or used tires. If the customer does not leave the old tires, then a $10 deposit per tire is charged. Any person caught illegally dumping tires can be fined from $500

to $2,000 per offence, and businesses failing to comply with the ordinance are subject to license revocation and can be fined up to $2,000.*

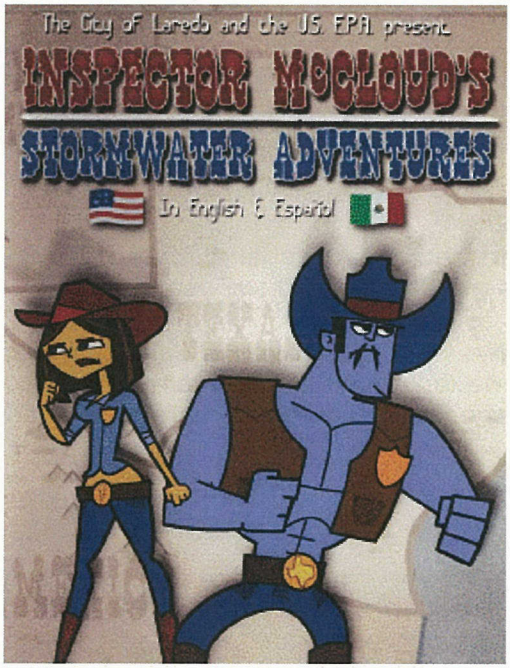
Key Organizations

- City of Laredo
  - Environmental Services Department (ESD)
    - Stormwater
    - Keep Laredo Beautiful (KLB)
  - Solid Waste Department (SWD)
- Rio Grande International Study Center (RGISC)

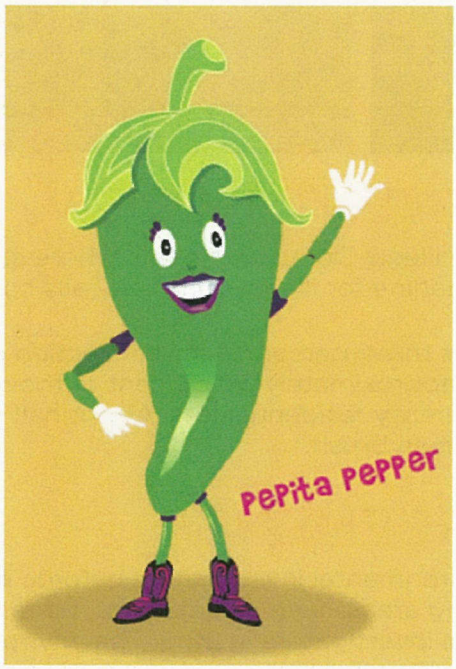
EDUCATION & OUTREACH

The Stormwater Division within the Environmental Services Department (ESD) has a bilingual education and outreach program coordinator who develops anti-litter curriculum for school-aged children. Supplementing the school presentations is an extensive supply of multi-media educational material on the ESD website.[1] Educators can access material such as videos with age-targeted mascots, color story books, and music. In total, these education and outreach materials and presentations cost the ESD $128,000 in 2015.

The RGISC has taken a lead on educating the public on the environmental impact of plastic bags. It produced a bilingual 30-second public service announcement and held informational meetings for schools, civic groups, and government officials. The RGISC is quick to note in their education and outreach that the Rio Grande River is on the World Wildlife Fund's "10 Rivers at Risk." The RGISC spent approximately $6,300 in 2015 on education and outreach.



Mascot for Older Children



Mascot for Younger Children

[1] http://esd.ci.laredo.tx.us/esdweb/news/edu.cfm

ABATEMENT: LITTER

The City removes litter from the community through the ESD and with the support of Keep Laredo Beautiful, TAMIU, and the RGISC.

ORGANIZATION	DESCRIPTION
City of Laredo - Environmental Services (ESD)	Contracts monthly creek cleanups along Laredo's three major creek systems. This contract is valued at $554,000 per year. The Stormwater Division spends $220,000 per year in personnel, equipment, disposal fees, fuel, and supplies for two vacuum truck crews that remove litter and debris from the City's storm sewer system.
City of Laredo - Public Works (PWD)	The PWD spends $1,500,000 per year on creek cleaning, and the street cleaning division spends $1,700,000 per year sweeping city streets.
Texas A&M International University (TAMIU)	Hosts "The Big Event" annually where over 300 students collected more than 27 tons of litter within 140 city blocks in 2016.*
Keep Laredo Beautiful (KLB)	Hosted 20 cleanup events, including eight waterway cleanups in 2015. KLB spent $114,000 in direct costs to host these events. A total of 2,150 volunteers contributed 10,750 hours and collected 36.7 tons of trash and more than five tons of tires (436 tires). While excluded from the cost totals in this Study, KLB estimated that volunteers contributed the equivalent of $247,300 in effort, and KLB received $345,000 in in-kind donations.
Rio Grande International Study Center (RGISC)	Hosts three large-scale community cleanups annually with 100 to 400 volunteers per event and 5 to 7 smaller cleanup events with 30 to 100 volunteers for a severely impaired wetland or creek area. Direct costs to host these events totaled $2,000 in 2015. The RGISC received $82,900 in in-kind donations and 400 volunteers contributed 7,360 hours.

ABATEMENT: ILLEGAL DUMPING

ESD offers an Illegal Dumping Hotline where callers can report illegal dumping activities. Staffing this hotline for illegal dumping calls costs the City $5,000 per year.

The SWD runs three-person special collection crews with a grapple truck and rear loader. These crews spend approximately 30 percent of their time remediating illegal dumping sites, which are typically empty residential lots. About half of the illegally dumped material is trash while the other half is clean brush.*

ENFORCEMENT

Two ESD environmental investigators enforce illegal dumping ordinances by inspecting known illegal dumping areas, such as dead end roads. ESD estimates that it spent $140,000 on its environmental investigators in 2015. The environmental investigators are unable to identify offenders in a majority of illegal dumping cases. However, when they do identify offenders, the investigators write citations that can range from $500 to $4,000. The City approaches illegal dumping prosecutions by creating high case visibility. Illegal dumping prosecutions are reported in the local newspaper and television stations. ESD reports that it has seen a reduction in illegal dumping when it takes this approach.

LUFKIN: CROSSROADS OF EAST TEXAS

Nestled between the Davy Crockett and Angelina National Forests, Lufkin has a robust business community. Brookshire Brothers Grocer, Lufkin Industries (now GE Oil and Gas), and the Atkinson Candy Company are headquartered in Lufkin. Residents and visitors enjoy City Lake in Ellen Trout Park, adjacent to the zoo. The City of Lufkin (City) relies on its numerous creeks and drainages for stormwater conveyance.

Litter and illegal dumping are primarily found in abandoned and blighted areas within the Lufkin city limits. According to City staff, city streets without a curb and gutter seem to attract litter in drainage ditches. Wind and water eventually deposit this litter into surrounding creek beds. The City also reports illegal dumping under bridges that cross creeks. The primary items illegally dumped in Lufkin are filled trash bags, tires, and household electronics. City staff believe the filled trash bags are likely from area residents outside the City limits without refuse collection services.

Cost Summary

ACTIVITY	LITTER	ILLEGAL DUMPING
Prevention	$ - *	$16,600*
Education and Outreach	$2,000*	
Abatement	$149,900*	$13,700
Enforcement	$50,600	
2015 Litter & Illegal Dumping Costs	$232,800	

ALTERNATIVE REVENUES

The Solid Waste District (SWD) receives revenue from its residential and commercial solid waste customers to fund its anti-litter and illegal dumping efforts. The City has no alternative funding sources.

Key Takeaways

- Trash bags, tires, and household electronics comprised most illegally dumped items, which City staff believe are dumped by residents outside the City limits without refuse collection services.
- The Code Enforcement Department (CED) believes increased levels of enforcement would result in less visible litter.

*In some cases, the responding entity did not have complete cost data. An asterisk indicates the entity has a program in place but that the direct cost data was not available for this Study.

PREVENTION

The City and Angelina Beautiful/Clean (AB/C), a nonprofit that empowers residents to enhance the community environment, offer free drop-off days at the City of Lufkin Recycling Center during the Household Hazardous Waste Collection Day in the spring and the Tire and Electronic Recycling Day in the fall. Residents can drop off discarded white goods (e.g., refrigerators and hot water heaters) electronics, and other hazardous items (e.g., car batteries and tires). Event organizers say these events curb the amount of material that is illegally dumped. Each event collects around 4,000 tires and cost the City a total of $16,600 in 2015.

Fast Facts

Location: Deep East Texas

Population: 36,000

Waterways:
- Cedar Creek
- Hurricane Creek
- City Lake
- Jones Lake
- Lake Mynad
- Numerous unnamed creeks and drainages

Annual Precipitation: 48.9 inches

In the past, the Police Department has assisted the Code Enforcement Department (CED) by placing cameras in areas where illegal dumping is common, and the Street Department will install "No Dumping" signage. These efforts have deterred illegal dumping in those areas.*

EDUCATION & OUTREACH

For Lufkin's primary schools, Keep Lufkin Beautiful (KLB) volunteers present curriculum from Keep America Beautiful's Waste-in-Place program. The Waste-in-Place program emphasizes responsible solid waste handling practices through hands-on activities. While excluded from the cost totals in this Study, volunteers contributed 270 hours in Lufkin schools in 2015.

During the summer, the Texas Forestry Museum holds EEK! Week (Environmental Education Kamp) for pre-teens. The camp includes a tour of the Angelina County Landfill the Lufkin Recycling Center, and litter prevention topics. Hosting the camp costs the Texas Forestry Museum $2,000 per year.



Tire and Electronics Recycle Day

ABATEMENT: LITTER

The City removes litter from their community through a variety of departments and KLB.

ORGANIZATION	DESCRIPTION
Solid Waste (SWD)	A litter abatement crew collects litter in City rights-of-way and main thoroughfares in town. These crews cost the City $51,500 in 2015.
Parks and Recreation (PRD)	Oversees 16 municipal parks within Lufkin. Two staff are regularly dedicated to maintaining park cleanliness, which includes litter pick-up. During the summer months when the number of citizens using parks is high the PRD contracts temporary workers to support cleanup efforts. In total, the PRD spends $98,100 per year on park cleanup.
Streets (SD)	Removes litter and debris from creeks, storm drains, and detention ponds to prevent back flow and street flooding during rain events using a grapple truck, a vehicle with a rear-mounted excavator, with one or two tandem dump trucks.*
Keep Lufkin Beautiful (KLB)	Hosts the Don't Mess with Texas Trash-Off spring cleanup event and another cleanup event in the fall. KLB estimates the direct cost to host these community-wide events was $300 in 2015. While excluded from the cost totals in this Study, over 150 volunteers participated in the cleanups in 2015.*

ABATEMENT: ILLEGAL DUMPING

When illegal dumping is reported by a 311 work order, CED, or SD, the SWD deploys its special collections crew with a grapple truck and rear-loader (separate from the Street Department's equipment) to clear the pile. The SWD estimates that it spends $13,700 annually to address illegal dump sites.

Key Organizations

- City of Lufkin
  - Police Department
  - Solid Waste Department (SWD)
  - Code Enforcement Department (CED)
  - Parks and Recreation Department (PRD)
  - Street Department (SD)
- Keep Lufkin Beautiful (KLB)/ Angelina Beautiful Clean (ABC)
- Texas Forestry Museum

ENFORCEMENT

The CED code enforcement officers respond to online complaints and phone calls reported to 311. When necessary, the CED distributes notices of violation to residents and businesses where litter has proliferated on sidewalks and rights-of-way in front of their property. The code officers attempt to contact the owner or tenant before contacting the SWD to assign the litter abatement or special collections crew to remove the litter or illegally dumped debris. Once contacted by the CED, the owner or tenant has 24 hours to remove the litter or debris. If the violator does not comply with the notice of violation, the CED files a citation in the municipal court where the violator could be fined up to $500. The CED reports that addressing litter and illegal dumping cases costs the City $50,600. With increased levels of enforcement, the CED believes there are decreased levels of visible litter.

MIDLAND: FEEL THE ENERGY!

With an economy that relies heavily on the oil and gas sector, Midland is home to numerous oil and gas companies that operate in the area. As such, the City of Midland (City) and the Midland Chamber of Commerce (Chamber) work to attract businesses to the community. These companies seek a high standard of living with community cleanliness as one of the factors. Recognizing cleanliness as a key facet to Midland livability, the City and the Chamber formed the predecessor to Keep Midland Beautiful (KMB) in the early 1980s.

Cost Summary

ACTIVITY	LITTER	ILLEGAL DUMPING
Prevention	$ - *	$139,500
Education and Outreach	$10,900	
Abatement	$122,800*	$ - *
Enforcement	$227,000	
2015 Litter & Illegal Dumping Costs	$500,200	

Located in the semi-arid Permian Basin, Midland has no natural waterways. Manmade drainage ditches run through Midland and collect much of the windblown litter and illegal dumping. With an increase in oil and gas activity, the community experiences higher levels of litter and illegal dumping. Oil field workers are a highly mobile population, which may contribute to a feeling of a lack ownership in the cleanliness of the community and results in elevated levels of litter and illegal dumping.

ALTERNATIVE REVENUES

To supplement litter abatement, special cleanups, and beautification, such as funding KMB, the Solid Waste Department (SWD) charges a $1 monthly fee. In 2015, this fee generated $435,800.

In an effort to reduce windblown litter sourced from overflowing trash cans, SWD will penalize customers who allow litter to accumulate around their trash cans. SWD charges violators $20 to $200 on their monthly water bill and collected $4,700 in 2015.

Key Takeaways

- Keep Midland Beautiful (KMB) offers "Trash For Cash," a program where non-profit organizations can organize groups of volunteers to pick up litter and receive up to $3,000 per year for their generated value.
- At assigned times of the year, the City allows residents to dispose of yard waste on designated City-owned vacant lots to prevent illegal dumping.
- The Solid Waste Department (SWD) employs a full-time environmental officer to address litter-related code issues. Code Enforcement (Code) responded to 6,900 litter and illegal dumping cases in 2015.
- SWD may issue customers penalties of $20 to $200 on their monthly water bill if litter is encountered around trash cans. SWD collected $4,700 in penalties in 2015.

*In some cases, the responding entity did not have complete cost data. An asterisk indicates the entity has a program in place but that the direct cost data was not available for this Study.

PREVENTION

For residential customers, the SWD will pick up furniture and appliances curbside at no additional charge when the customer calls in the request. The SWD does not collect yard waste, construction debris, tires, or vehicle batteries curbside. However, residents may drop off yard waste at the Citizen Collection Station. The SWD estimates that the curbside service and to operate the citizen collection station costs the City $139,500 per year.

Fast Facts

Location: West Texas

Population: 133,000

Waterways:
- Beal Park Lake

Annual Precipitation: 14.8 inches

EDUCATION & OUTREACH

In coordination with KMB, the SWD has an education coordinator who presents customized curriculum on litter awareness at local schools and social and civic organizations. KMB and SWD estimate that this service to the community costs $10,900 per year.

KMB has an active Facebook account that engages citizens in litter prevention, beautification, and waste management activities.



Educational Presentations

ABATEMENT: LITTER

The City removes litter from the community through the SWD and KMB.

ORGANIZATION	DESCRIPTION
Solid Waste (SWD)	A litter abatement crew collects litter in City rights-of-way and main thoroughfares in town resulting in an annual cost of $66,300.
Keep Midland Beautiful (KMB)	Hosts annual cleanup campaigns in late spring (Trash-Off) and the fall (Make A Difference Day) that regularly see 3,000 participants. KMB spent $1,900 in direct costs to host the semi-annual cleanups in 2015. While excluded from the cost totals in this Study, KMB received $25,000 in in-kind donations and estimated that volunteers contributed the equivalent of $222,600 in effort. KMB also offers a program called "Pick Up Some Trash to Pick Up Some Cash" where non-profit organizations can receive funding by organizing groups of volunteers to clean up designated areas. KMB calculates the value the non-profit earns based on $5 per hour per volunteer up to $500 per cleanup event. Each non-profit organization can submit documentation of six cleanups per year to receive up to $3,000. In 2015, KMB distributed $54,600 to non-profit organizations for litter cleanup.

ABATEMENT: ILLEGAL DUMPING

When illegal dumping is reported by a 311 work order, Code Enforcement, or Street Department, the SWD deploys its special collections crew (also referred to as litter abatement) with a grapple truck and rear-loader to clear the pile.*

Key Organizations

- City of Midland
  - Solid Waste Department (SWD)
  - Code Enforcement Department (Code)
  - Mayor's Office
- Keep Midland Beautiful (KMB)

ENFORCEMENT

The City municipal code does not permit litter accumulation on private property. Fines may reach $2,000. The SWD has a full-time environmental officer who addresses litter-related code issues. The SWD spent $77,000 on personnel and litter-related code issues in 2015. In addition to the environmental officer, Code Enforcement (Code) responded to 6,900 litter and illegal dumping cases in 2015. This represents approximately 30 percent of the total Code cases. Code estimates that it spent $150,000 in 2015 personnel costs on litter and illegal dumping cases.

Not In My Town

In 2014, the Mayor's Office led an anti-litter campaign called "Not in My Town," modeled after TxDOT's Don't Mess With Texas campaign. The City spent $100,000 on billboards, public service announcements on radio and TV, additional funding for the Cash for Trash Program, funding for code enforcement sweeps, a pledge program for customers to tie their garbage bags, and a partnership with the school district ("Not On Our Campus"), where campus cleanliness was promoted and more trash cans were installed.

SAN ANTONIO: THE RIVER CITY

Eighteenth-century Spanish missions line the San Antonio River south of downtown. Upstream, modern urban infrastructure like restaurants, hotels, and businesses stretch along the famed River Walk. The San Antonio River Authority (SARA), an independent river authority responsible for the San Antonio River basin, released a 2014 study[1] on the economic impact of the River Walk that found 11.5 million people visit the River Walk annually. Of these, 9.3 million come from outside Bexar County. These visitors stimulate an overall economic impact of $3 billion and directly influence 21,000 San Antonio jobs.

ALTERNATIVE REVENUES

Centro San Antonio PID is funded through a property tax on all property owners within the district. In 2015, the PID collected $3,200,000 in 2015 from a property tax rate of $0.15 per $100 of assessed value for commercial property and $0.09 per $100 of assessed value for residential property.

As part of residential and commercial monthly solid waste billing, customers pay an environmental services fee of $2.24. Solid Waste Management Department (SWMD) receives revenue from its residential and commercial solid waste customers to fund its illegal dumping efforts.

Cost Summary

ACTIVITY	LITTER	ILLEGAL DUMPING
Prevention	$16,500*	$1,958,400
Education and Outreach	$255,300	
Abatement	$2,100,000*	$2,171,000
Enforcement	$20,200*	
2015 Litter & Illegal Dumping Costs	$6,521,400	



San Antonio River Walk

Key Takeaways

- Area governments through the Bexar Regional Watershed Management (BRWM) leverage their resources as a regional group to maintain clean waterways.
- The City's Neighborhood Enforcement Team (NET) is a team of enforcement officers who proactively coordinate code investigations and special projects in highly traveled areas throughout the City's main district corridors and inner city reinvestment areas.

*In some cases, the responding entity did not have complete cost data. An asterisk indicates the entity has a program in place but that the direct cost data was not available for this Study.

[1] http://media.visitsanantonio.com/News/English/Study-Reveals-River-Walk%E2%80%99s-Importance-to-San-Anton

PREVENTION

In an effort to reduce litter and pollutants in runoff, SARA offers project reimbursements of $15,000 to $100,000 to incentivize property owners and developers to manage stormwater onsite using Best Management Practices (BMPs). The program is open to design professionals, government entities, neighborhood associations, and non-profits. In 2015, SARA distributed $13,000 in BMP funding for local projects. SARA also uses a helicopter to identify potential litter accumulation along the river at an annual cost of $3,500.

The City's SWMD operates four bulky waste collection centers across San Antonio that are free to City residents Tuesday through Saturday. Among the items the City will accept are home appliances, auto parts, tubs, barbecue grills, water heaters, tires without rims, furniture, mattresses, and a cubic yard or less of building materials. This service, which started in 2013, cost the City approximately $1,958,400 to staff and operate in 2015.

Fast Facts

Location: South Texas

Population: 1,469,800

Waterways:

- Alazan Creek
- Apache Creek
- Culebra Creek
- Huebner Creek
- Indian Creek
- Leon Creek
- Lorence Creek
- Martinez Creek
- Medina River Olmos Creek
- Mud Creek
- Panther Springs Rosillo Creek
- Salado Creek
- San Antonio River
- San Pedro Creek
- Sixmile Creek
- Slick Ranch Creek
- Zarzamora Creek
- Victor Braunig Lake
- Mitchell Lake
- Ballasetal Lake
- Elmendorf Lake
- Woodlawn Lake
- Canvasback Lake

Annual Precipitation: 32.3 inches

EDUCATION & OUTREACH

In a joint education and outreach campaign by Transportation and Capital Improvements (TCI), 311, Code of Ordinances, and the SWMD, the City runs a "Remember the River" campaign to inform the community about non-point source pollution. The campaign, includes a website, provides construction site stormwater BMPs and proper yard waste disposal instructions. Remember the River also funds an educator who offers free presentations on runoff pollution prevention to San Antonio homeowner and neighborhood associations, civic groups, classes, volunteers or other community groups. Remember the River cost the City $135,600 in 2015.

REMEMBER THE RIVER

WATERSHED WISE

City of San Antonio and SARA education and outreach campaign logos

SARA offers a comprehensive prevention, education, and outreach program for all watershed stakeholders called Watershed Wise. From 2010-2015, SARA spent an annual average of $116,700 on anti-litter education and awareness. The following table lists urban programs offered by Watershed Wise:

- **Business:** BMPs for commercial Low Impact Development (LID)
- **Citizen Scientist:** Instructions for crowd-sourcing research-grade watershed data
- **Education:** Curriculum for school-aged children (e.g., Creek Book)
- **Grant:** Funds stormwater runoff capture features on school grounds within Bexar and downstream counties. Three grants cost $22,000 per year
- **Professionals:** Provides a manual that outlines standard practice for design and implementation of BMPs for LID
- **Rebate:** Reimburses area projects for BMPs between $15,000 and $100,000
- **Resident:** BMPs for Residential LID
- **Warriors:** Community volunteers dedicated to protecting and preserving the watershed waterways who regularly participate in waterway cleanups and restoration

Bexar Regional Watershed Management (BRWM)

In response to $1 billion in flooding damages from two rain events in 1998 and 2002, Bexar County, the City, and SARA formed BRWM in a collaborative effort to provide improved flood control, stormwater management, and water quality in Bexar County. Leveraging the funding resources of the collective organization reduced duplication of effort and facilitated sharing of technical expertise. Representatives from the three member entities meet once a quarter to discuss strategies to combat illegal dumping.

Bexar Regional Watershed Management (BRWM) hosts a two-day training for law enforcement on illegal dumping. One area of focus is providing an understanding of state laws. These training sessions cost $3,000 per event. Typically, 60 to 70 officers attend the training.

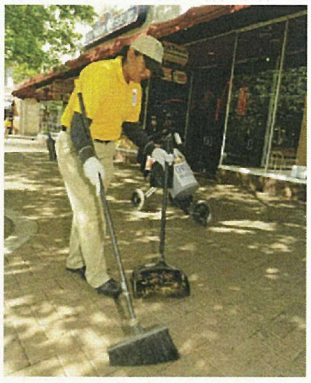
ABATEMENT: LITTER

The City removes litter from the community through the Transportation and Capital Improvements Department (TCI), SARA, and non-profits like Basura Bash.

ORGANIZATION	DESCRIPTION
City of San Antonio - Transportation and Capital Improvement (TCI)	In partnership with Keep San Antonio Beautiful (KSAB), offers "Adopt-a-Spot," where volunteers can clean City-owned rights-of-way, street medians, drainage channels, and green spaces to keep them clear from debris.*
San Antonio River Authority (SARA)	Cleans up 100 tons of litter per year from San Antonio area waterways costing $400,000 annually in contractors and staff.
Basura Bash	This non-profit arm of the San Antonio River Foundation hosts one of the largest single-day waterway clean-ups in Texas. In 2015, over 2,000 volunteers removed 45 tons of litter from San Antonio waterways. Additionally, 159 tires were collected and almost 2,000 pounds of metal were salvaged for recycling from the event. This annual event cost $400,000 in direct costs funded through SARA in 2015. While excluded from the cost totals in this Study, volunteers created $105,500 in volunteer value and Basura Bash received $26,000 in in-kind donations.

Centro San Antonio

Centro San Antonio is a Public Improvement District (PID), which covers a 0.8-acre area within San Antonio's downtown urban core and watershed. Among other downtown services, the PID provides daily year round maintenance, such as litter pick up, as the City works towards increasing downtown's residential density. In 2015, the PID spent $1,300,000 on litter abatement.



ABATEMENT: ILLEGAL DUMPING

Landowners along the San Antonio River and its tributaries may contact SARA for a debris removal assessment through the Regional Flood Debris Removal. SARA reports that their debris removal operations, including illegal dumping within San Antonio, result in an annual cost of $32,000.

The City's Stormwater Utility within TCI responds to customer work orders for debris removal in natural waterways. Through a contractor, TCI spends approximately $1,500,000 per year on debris removal.

The City's SWMD has a crew of one grapple truck and two 18-wheeler haul trucks dedicated to illegal dumping abatement. In 2015, the crew cleaned up 2,000 tons of illegally dumped material. SWMD estimates that this service cost the City $639,000 in 2015.

ENFORCEMENT

With dramatic increases in illegal dumping work orders and recovered illegally dumped tires, the City's Code Enforcement Services (Code) created the Neighborhood Enhancement Team (NET). NET is a team of proactive code enforcement officers dedicated to coordinated code investigations and special projects with an emphasis on highly traveled areas throughout the City's main district corridors and inner city reinvestment areas. Code also deploys over 100 officers daily to enforce the code.*

Key Organizations

- City of San Antonio
  - Solid Waste Management Department (SWMD)
  - Transportation and Capital Improvement Projects (TCI)
  - Office of Sustainability
- San Antonio River Authority (SARA)
- Keep San Antonio Beautiful (KSAB)
- Basura Bash

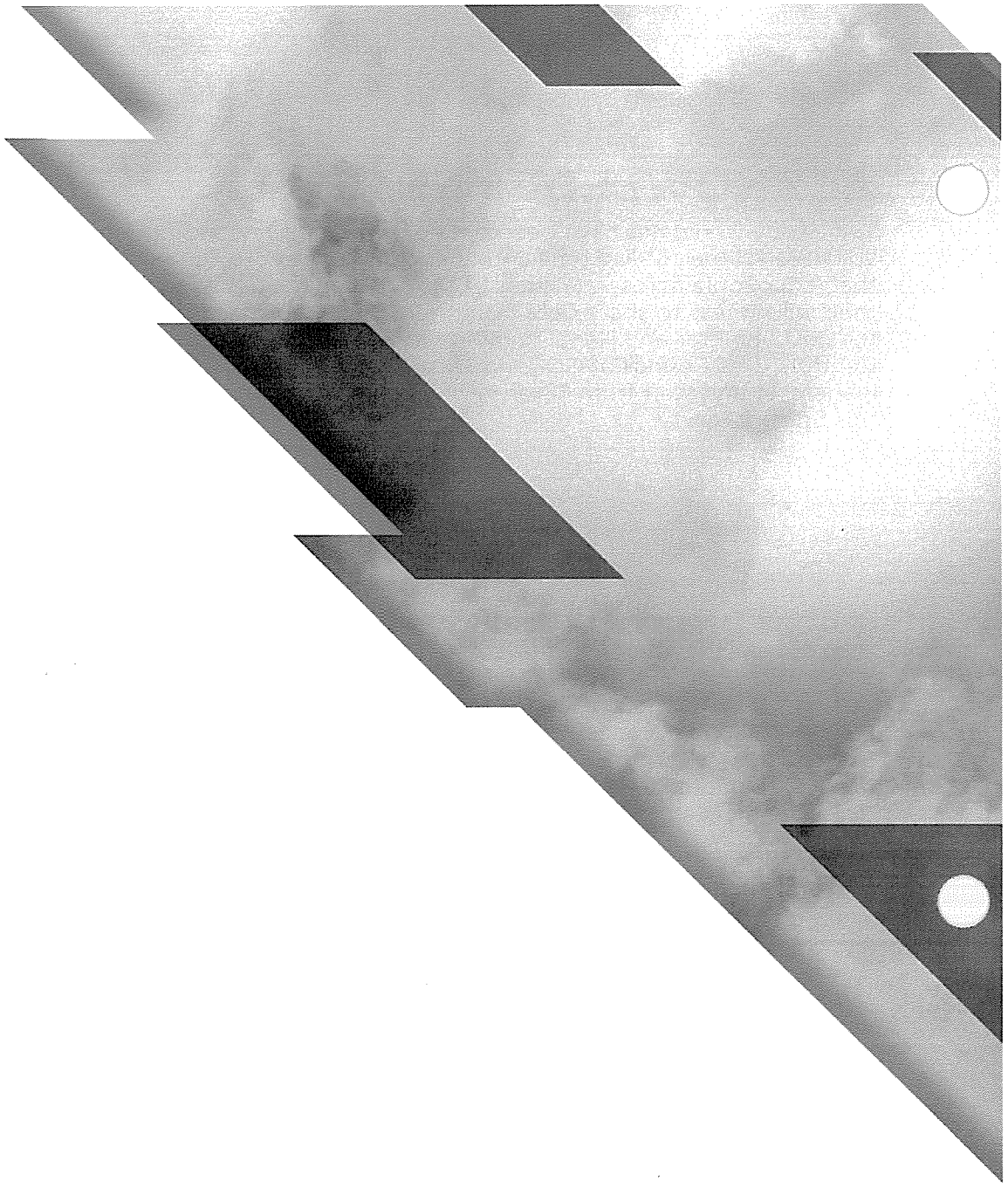
SARA's two environmental investigators work with governmental agencies to help resolve environmental and noncompliance issues within the San Antonio River Basin. In addition to enforcement, the investigators educate the public about how abuse to waterways can cause habitat destruction, degrade aquatic ecology, and alter the beauty of a stream. SARA estimates the environmental investigator program within San Antonio's city limits costs SARA $13,200 per year. In 2015, SARA was the recipient of a $7,000 grant to fund installation of surveillance cameras in areas of known illegal dumping.

ACKNOWLEDGMENTS

This Study would not have been possible without the contributions from the nine cities that volunteered their staff's time and financial information. This included contributions from more than 175 people across the cities. A special thank you is extended to Keep Texas Beautiful for their willingness to share data from their 2016 Return on Investment Study. Prior studies on the costs of litter and illegal dumping for the National Resources Defense Council and North Central Texas Council of Governments provided insight for the methodology. Most importantly, leadership and staff from Texans For Clean Water provided the innovation and interest to make this Study a reality.

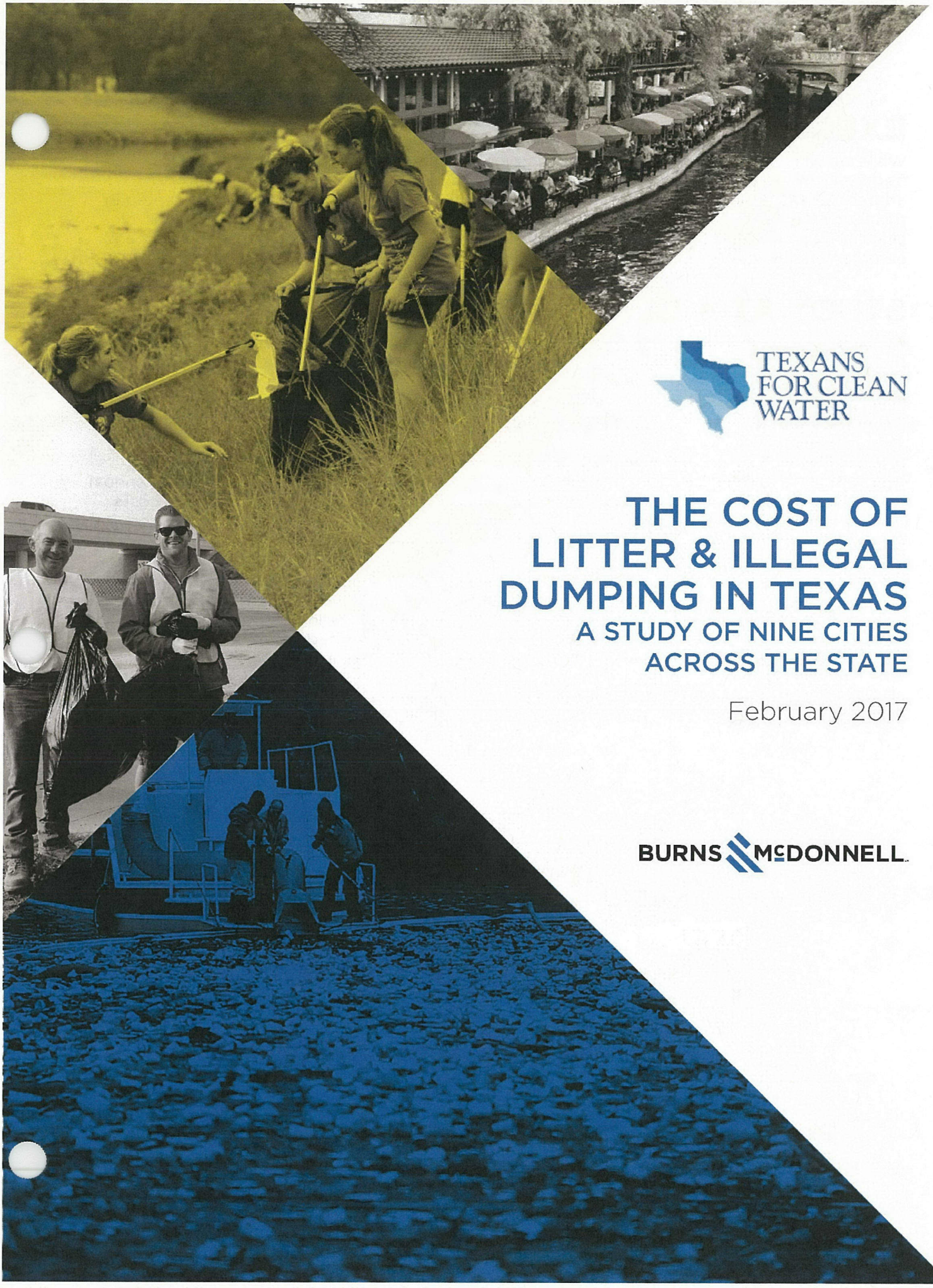
About Texans For Clean Water

Texans For Clean Water was formally organized in 2013 when Mike Garver of Houston and Trammell Crow of Dallas joined forces to bring the problem of floatable debris in our waterways to state and local officials. The goal of Texans For Clean Water is to organize a statewide group of business leaders through the common initiative of revitalizing our waterways to improve neighborhoods, provide recreational opportunities to our communities, and encourage economic growth. Education and collaboration between the business community and the government are key to developing and adopting best practices to prevent stormwater debris and litter from entering our waterways. Through collaboration we can reach this goal.



BURNS McDONNELL

CREATE AMAZING.



TEXANS FOR CLEAN WATER

THE COST OF LITTER & ILLEGAL DUMPING IN TEXAS

A STUDY OF NINE CITIES ACROSS THE STATE

February 2017

BURNS McDONNELL

EXECUTIVE SUMMARY

While we often describe litter and illegal dumping as being ugly or a health concern, less frequently do we think about their cost. Every day, Texas cities expend significant effort to address litter and illegal dumping across their communities and waterways. As documented in this Study commissioned by Texans For Clean Water and prepared by Burns & McDonnell, nine cities in Texas spend more than $50 million annually on prevention, education, abatement, and enforcement efforts.

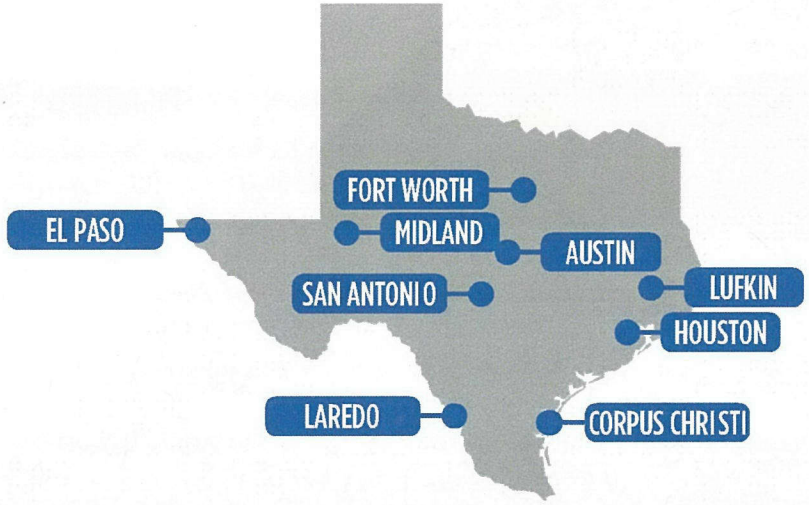
STUDY AT A GLANCE

Purpose: Document the costs incurred by nine cities in Texas to manage litter and illegal dumping. Together, these cities represent more than 25 percent of the state's population.

Participating Communities: Nine cities representing a wide range of population and geographies participated as case studies, as shown on the map.

Research Approach: Through a combination of interviews, extensive data provided by the participating communities, and other available data, Burns & McDonnell documented the annual costs for addressing litter and illegal dumping. The Study only includes actual provided costs and does not make data extrapolations. By erring on the side of caution, the actual average costs and per capita expenses are probably greater than the amounts indicated.

Costs Included: The Study documents program expenditures from local governments, non-governmental organizations, and non-profits for costs associated with prevention, education and outreach, abatement, and enforcement of litter and illegal dumping activities. While the value of volunteer time is excluded from the total costs in the Study, many cities rely on volunteers to help with litter abatement. Where cities provided volunteer information, either hours worked or an estimated value of volunteer time, it is referenced to provide a better understanding of the effort required to abate litter. Expenditures by private businesses are not included in this Study but they are likely significantly more than the costs cited.



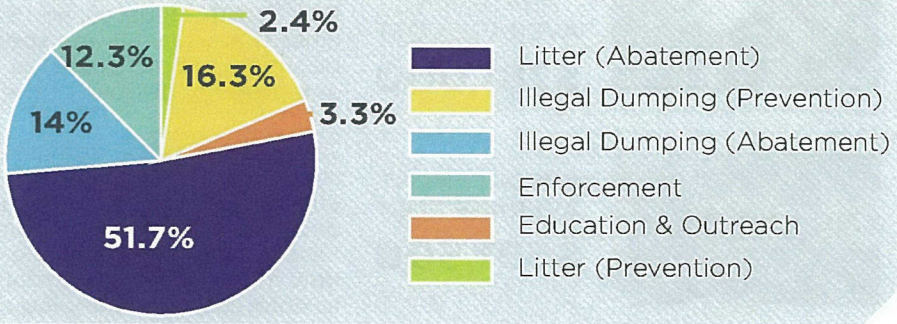
KEY RESULTS

Regardless of size and geography, each of the nine case study cities, which together represented more than 25 percent of the population of Texas, spend significant sums annually to prevent, combat and clean up litter and illegal dumping, and to keep it from ending up in the state's rivers, lakes, bayous, and the Gulf of Mexico. **Together, these nine cities spend more than $50 million annually.**

CITY	PREVENTION		EDUCATION & OUTREACH	ABATEMENT		ENFORCEMENT	TOTAL	POPULATION
	LITTER	ILLEGAL DUMPING		LITTER	ILLEGAL DUMPING			
Austin	$ - *	$14,000*	$68,000*	$930,500*	$1,316,100	$ - *	$2,328,600	932,000
Corpus Christi	$20,000	$639,600	$96,100	$734,200*	$23,700*	$177,600*	$1,691,200	324,000
El Paso	$ - *	$2,110,000	$26,500*	$1,102,400*	$1,625,000	$86,000*	$4,949,900	681,000
Fort Worth	$822,200*	$1,118,200	$897,100	$3,392,000*	$1,257,500	$1,059,200	$8,546,200	833,319
Houston	$250,000*	$2,200,000	$200,000	$13,390,600*	$617,400*	$4,462,900*	$21,120,900	2,296,000
Laredo	$88,800*	$ - *	$134,300	$4,090,000*	$5,000*	$140,000	$4,458,100	255,000
Lufkin	$ - *	$16,600*	$2,000*	$149,900*	$13,700	$50,600	$232,800	36,000
Midland	$ - *	$139,500	$10,900	$122,800*	$ - *	$227,000	$500,200	133,000
San Antonio	$16,500*	$1,958,400	$255,300	$2,100,000*	$2,171,000	$20,200*	$6,521,400	1,469,800
Total	$1,197,500	$8,196,300	$1,690,200	$26,012,400	$7,029,400	$6,223,500	$50,349,300	6,960,119

*In some cases, the responding entity did not have complete cost data. An asterisk indicates the entity has a program in place but that the direct cost data was not available for this Study.

Direct Costs of Managing Litter and Illegal Dumping



DIRECT COSTS OF MANAGING LITTER AND ILLEGAL DUMPING

Here are average costs per city and examples of key activities from the nine case studies.



LITTER PREVENTION, AVERAGE COST

$133,100

To prevent littering, several cities implement a variety of best management practices. Houston provides litter receptacles in its city parks. Cities such as Austin and Laredo have attempted to reduce the number of plastic bags littering the environment by implementing ordinances that limit the use of single-use plastic bags. Fort Worth has multiple programs, including a program working with homeless people to minimize littering.



ILLEGAL DUMPING PREVENTION, AVERAGE COST

$910,700

Illegal dumping prevention focuses on stopping large items or refuse from being discarded. Several cities – such as Corpus Christi, El Paso, Fort Worth, Houston, Midland, and San Antonio - operate collection facilities where residents can drop off items that may otherwise be illegally dumped.



EDUCATION & OUTREACH, AVERAGE COST

$187,800

Education and outreach programs are intended to promote awareness and provide information about legal options for proper disposal or recycling. Many cities and non-governmental organizations provide education programs and curriculum materials to local schools to teach children about the negative effects of litter. Several cities have public outreach campaigns, often managed by stormwater or solid waste management departments. Education and outreach campaigns include traditional materials like brochures, storm drain stenciling, and water or roadway adoption programs, as well as the use of social media and online applications.



LITTER ABATEMENT, AVERAGE COST

$2,890,300

As the highest cost category, substantial sums are expended by all of the case study cities to clean up litter. Many of the cities have programs for street sweeping, litter clean-up events, and city-staffed cleanup programs. As a city with many waterways, Houston incurs extensive costs cleaning up bayous and other waterways.



ILLEGAL DUMPING ABATEMENT, AVERAGE COST

$781,000

Cleaning up dump sites is important from an environmental perspective, as well as to minimize the potential for more illegal dumping. Austin, El Paso, Fort Worth, Houston, and San Antonio are examples of cities that use staff and specialized equipment (such as boom or grapple trucks) to clean up illegal dump sites and properly dispose of the refuse.



ENFORCEMENT, AVERAGE COST

$691,500

Taking legal action against the people responsible for littering and illegally dumping is an important step in changing behavior and minimizing illegal activity. For decades, collaborative efforts in the Houston region have served as an example of a model approach for how multiple governmental entities can work together to enforce illegal dumping crimes.

CASE STUDY

This Study highlights the efforts being undertaken by each of the nine case study cities. Each case study is organized in the same order, based on the categories described in this Executive Summary. Each case study reflects the information provided by a number of city departments, as well as a range of organizations working within the cities on litter and illegal dumping issues, such as counties, river authorities, councils of governments, and Keep Texas Beautiful affiliates. The intent was to develop case studies that capture the key activities being undertaken within a community, and there was a recognition that all of the costs may not fall within the exact boundaries of each city. Costs used in this Study are based on the most recently available data from 2015 or 2016. With regard to allocating costs to the various categories, in some cases, the cities provided varying levels of detail regarding how they divided costs. For example, Fort Worth provided the most detailed understanding of its costs across the categories. Recognizing the varying levels of detail provided by each city or organization, all costs are rounded to the nearest $100.

Alternative Revenues

Many of the case study cities identified alternative sources of revenue that help to offset the cost of litter and illegal dumping prevention and abatement activities. Alternative revenues are highlighted in the case study for each of the following cities:

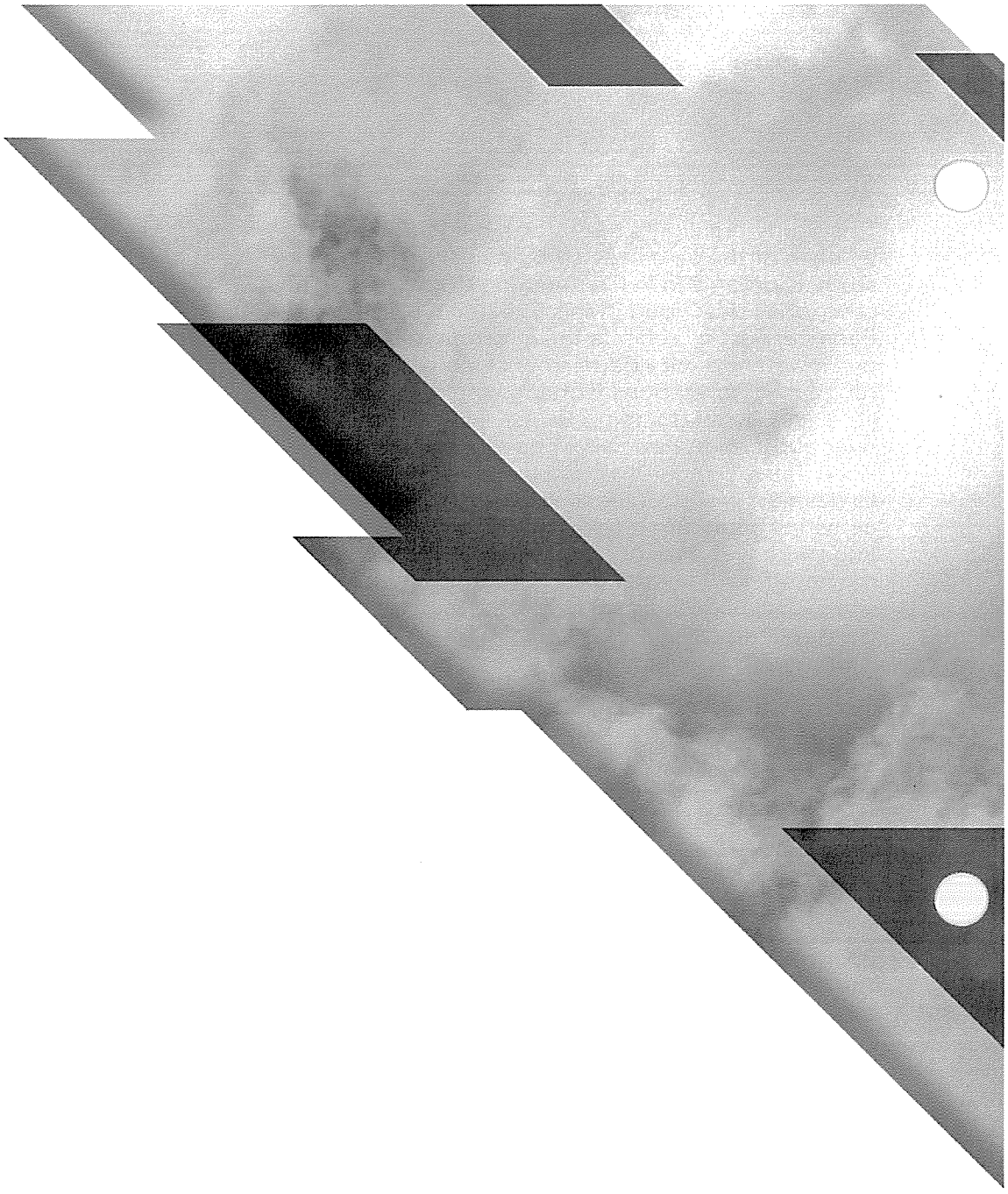
- Austin
- Corpus Christi
- El Paso
- Fort Worth
- Houston
- Laredo
- Midland
- San Antonio

Prior to conducting the case studies, each city was invited to participate in the project. During the project, multiple representatives from each city participated in interviews, provided data, and reviewed the draft case studies. In some cases, Burns & McDonnell used existing data from prior financial studies completed on behalf of some of the cities. **Several cities also identified programs focused on addressing litter and illegal dumping, but did not have cost data. For these cities, descriptions have been included without cost data and are noted in the tables and text with an asterisk.**

CONCLUSION

A diverse set of governmental agencies and non-profit organizations are very focused on litter and illegal dumping abatement and enforcement, yet given the extensive efforts to provide convenient alternatives to illegal dumping, communities continue to search for solutions to better prevent litter and illegal dumping. While critical to appreciate the amounts that are being expended by these nine cities to address litter and illegal dumping, it is additionally important to understand how these funds are spent. **Nearly 80 percent of costs are incurred on abatement and enforcement efforts, which places cities in a reactionary mode.** Development of more effective prevention programs and management practices may necessitate additional state coordination.

This Study focused on nine cities that represent diverse geography, populations, and local engagement on the issues of litter and illegal dumping. Consequently, the findings are likely applicable to many other communities in the state. Although economic data is mostly available at the municipal level, it is important to understand that this is a costly issue for other local, regional, and state governmental entities as well as non-profit organizations and private businesses, which all share the costs, consequences, and impacts of litter and illegal dumping.



BURNS McDONNELL

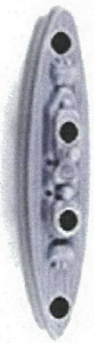
CREATE AMAZING.

BATTLESHIP

S.S. ECONOMIC AND REGULATORY IMPACTS OF WATERBORNE LITTER

Texas Environmental Superconference
August 3, 2017

MISSION:

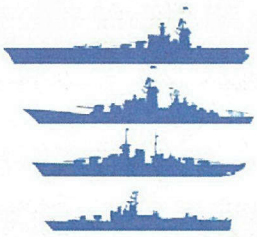


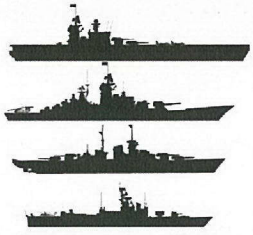
- 'DIRTY PICTURES'
- ECONOMICS (BRACE FOR) IMPACTS
- WATER (IN COMING!) INFRASTRUCTURE
- REGULATORY (TAKE AIM) IMPLICATIONS

WHY PLAY?

OUR SHIPS

- Municipal, agricultural, and industrial water users
- Recreation and tourism
- Economic development
- Environmental health and safety

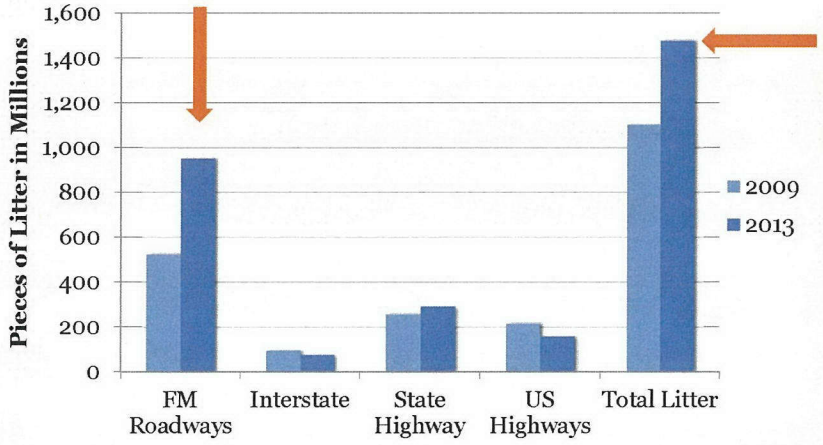




ENEMY SHIPS

- Increasing volume and cost of litter/marine management
- Potential for civil litigation
- Potential state v. municipal involvement
- Future regulatory landscape

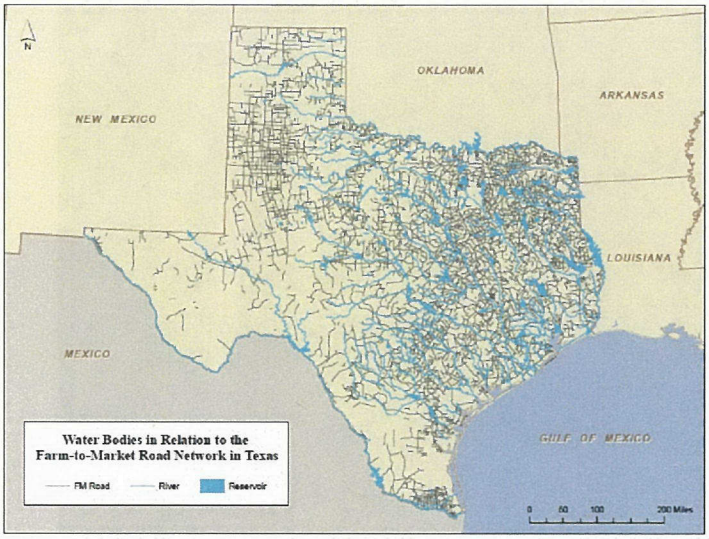
THE ENEMY INCREASES…



TXDOT Roadside Litter Survey (2013)

Roadway Type	Centerline Miles	Number of Littered Items			% Change 2009-2013
		2005	2009	2013	
FM Roads	40,965	430,709,842	528,823,879	954,821,303	81%
Interstates	3,233	72,971,697	94,121,255	77,614,712	-18%
State Highways	16,331	170,488,104	260,656,708	291,159,745	12%
U.S. Highways	12,104	153,035,881	218,168,944	157,019,311	-28%
TOTAL:	**72,633**	**827,205,524**	**1,101,770,786**	**1,480,615,070**	**34%**

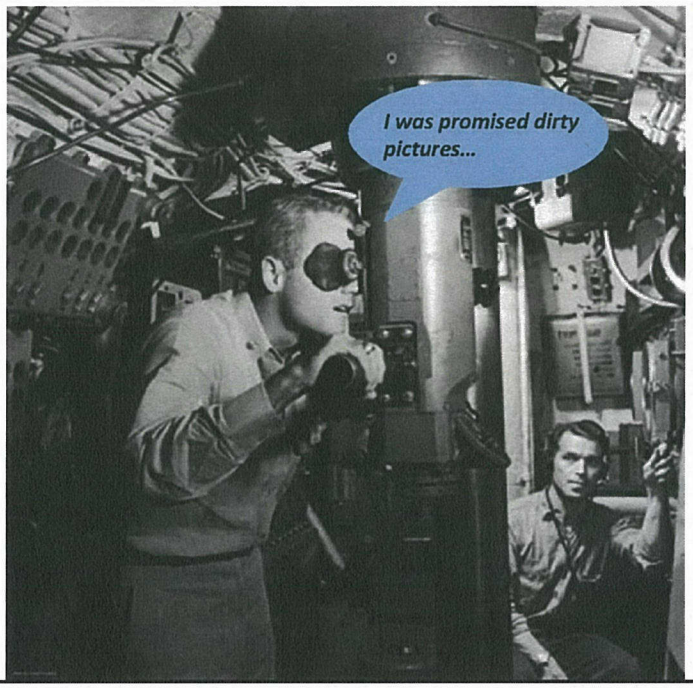
TXDOT Roadside Litter Survey (2013)



NOTE:
LEVEL OF RECONNAISSANCE DETAIL

2005	2009	2013
MARLBORO LIGHT (18%)	MARLBORO (7%)	BUD LIGHT (10%)
MARLBORO (13%)	MARLBORO LIGHT (5%)	MARLBORO (7%)
TEXAS LOTTERY (3%)	MARLBORO 100'S (3%)	COCA-COLA (4%)
DORAL (3%)	DORAL (2%)	DR. PEPPER (4%)
MCDONALD'S (3%)	CAMEL (2%)	COORS (2%)
BUD LIGHT (2%)	BUD LIGHT (2%)	MCDONALDS (2%)
MARLBORO MENTHOL (2%)	VIRGINIA SLIMS (2%)	BUDWEISER (2%)
COCA-COLA (2%)	SALEM (2%)	GATORADE (2%)
BURGER KING (2%)	NEWPORT (1%)	RED BULL (2%)
DR.PEPPER (2%)	WINSTON (1%)	BUSCH (2%)

TXDOT Roadside Litter Surveys



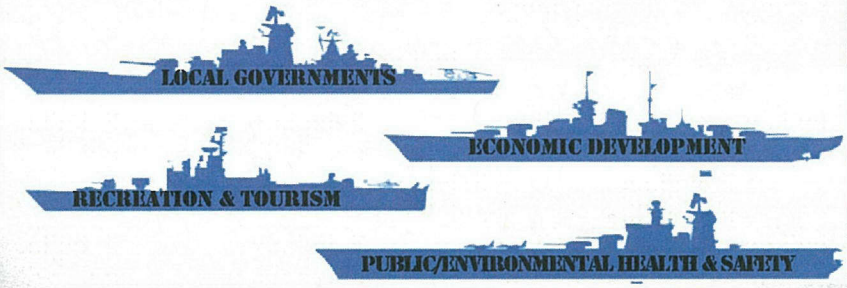

WINDBLOWN


STORMWATER

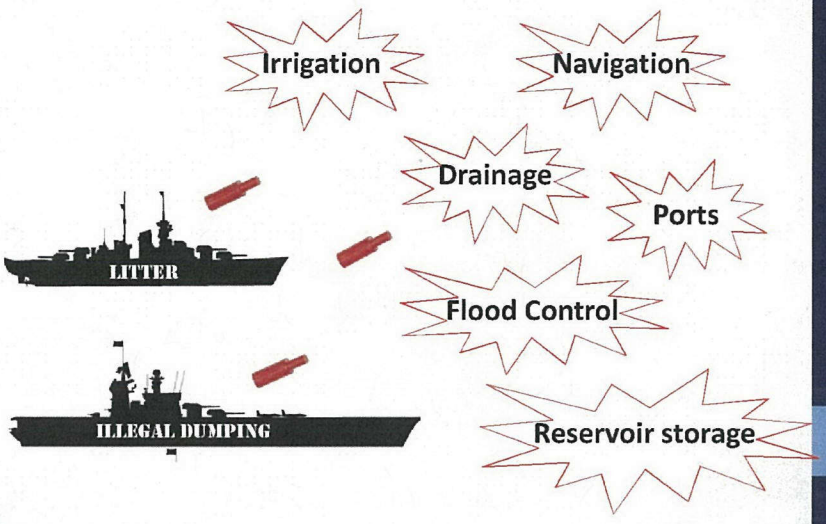
DIRECT DEPOSIT

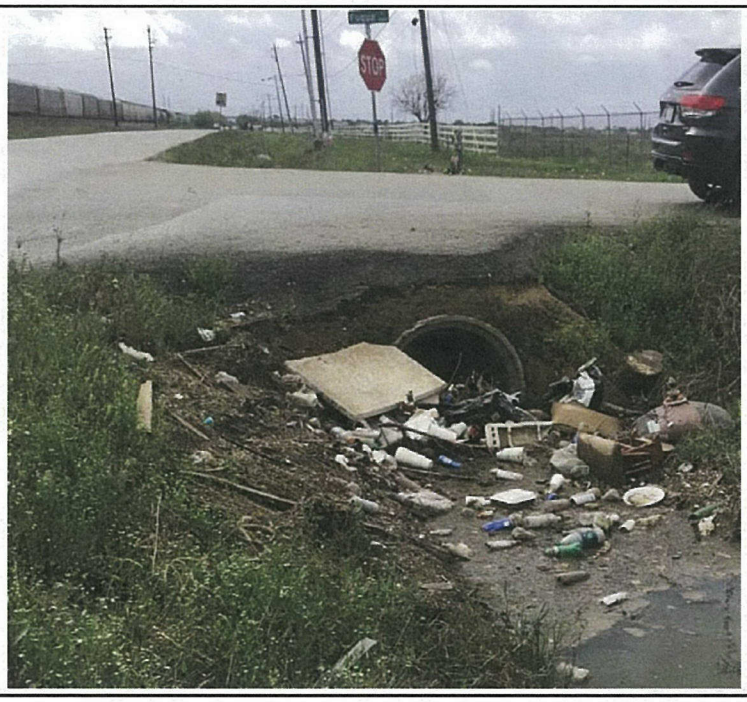


ECONOMICS (BRACE FOR) IMPACTS!



WATER (IN COMING!) INFRASTRUCTURE



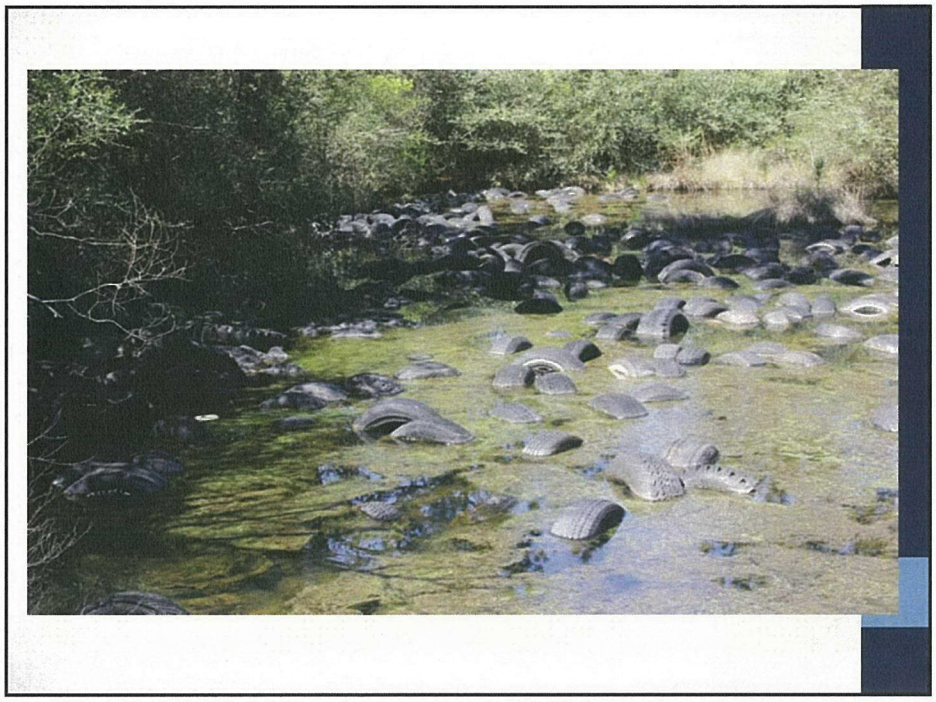












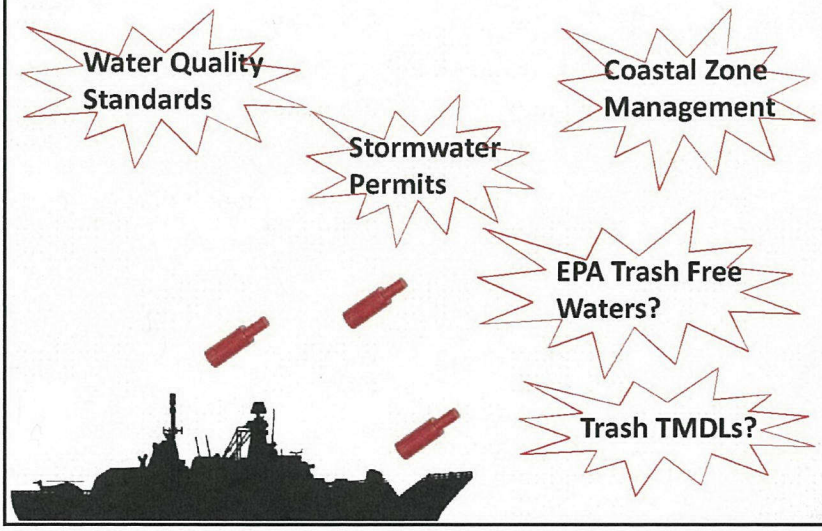


WATER SYSTEMS UNDER SIEGE

Increase funding, public education, and adopt additional controls as "windblown and waterborne litter, illegal dumping, and discarded tires pose a significant threat to water quality, and to watercourses, canals, an drainage systems in this state."

TWCA
TEXAS WATER CONSERVATION ASSOCIATION

REGULATORY IMPLICATIONS



TEXAS SURFACE WATER QUALITY STANDARDS

"Surface waters must be essentially free of floating debris..." [30 TAC Chapter 307, Rule 307.4 (b)(2)]

"Surface waters must be maintained in an aesthetically attractive condition." [30 TAC Chapter 307, Rule 307.4(b)(4)]



MUNICIPAL SEPARATE STORM SEWER SYSTEM DISCHARGE PERMIT (MS4)

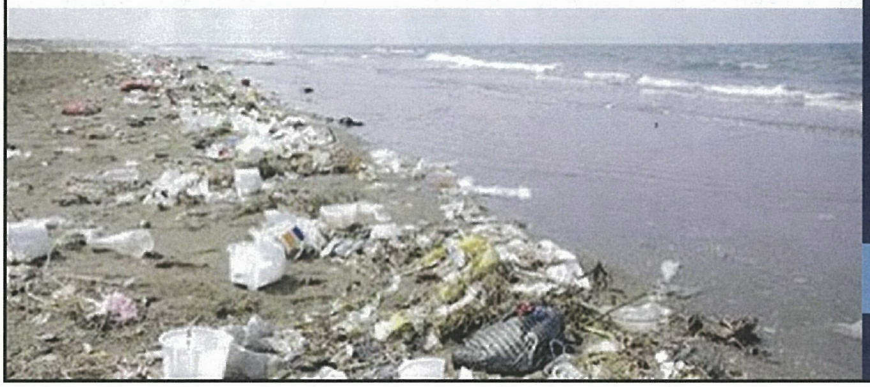
MS4 discharge permits require controls to reduce the discharge of pollutants—including floatables, such as plastic and paper products, yard refuse, metal and glass containers—to the "maximum extent practicable."



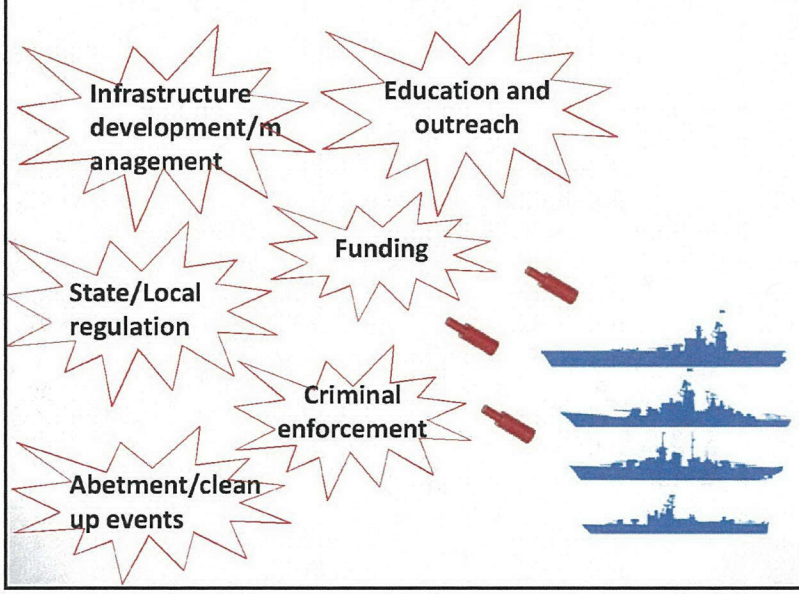
TEXAS COASTAL MANAGEMENT PROGRAM

Section 309 Assessment and Strategies

Marine Debris Enhancement Objective: Reducing marine debris entering the Nation's coastal and ocean environment by managing uses and activities that contribute to the entry of such debris. §309(a)(4)



FLEET STRIKES BACK!



JOIN THE CREW!



THANK YOU!

Contact information:
Maia Corbitt, Governmental Consultant
mcorbitt@baw.com
Office: 512.472.3263

BAW | BOOTH AHRENS WERKENTHIN

Short:

Dr. Robert E. Mace is a Deputy Executive Administrator at the Texas Water Development Board and leads the agency's Water Science & Conservation office, a department of 79 scientists, engineers, and specialists dedicated to better understanding groundwater and surface water resources; advancing water conservation and innovative water technologies such as desalination, aquifer storage and recovery, reuse, and rainwater harvesting; and better preparing Texas for floods.

Prior to joining the Texas Water Development Board in 1999, Robert worked for almost nine years at the Bureau of Economic Geology at The University of Texas at Austin as a hydrologist and research scientist. Robert has a B.S. in Geophysics and an M.S. in Hydrology from the New Mexico Institute of Mining and Technology and a Ph.D. in Hydrogeology from The University of Texas at Austin. His residential consumption of water is less than 30 gallons per person per day (and would be lower if his wife was more cooperative).

Shorter:

Robert Mace is a Deputy Executive Administrator at the Texas Water Development Board and leads the agency's Water Science & Conservation office. He has a Ph.D. in water from UT-Austin and has over 25 years of water experience in Texas.

Shortest:

Heeeeeeeere's Bob[1]!

[1] I don't actually go by Bob.

The Future of Texas Water:

"Drought is a Battleship"

Robert E. Mace, Ph.D., P.G.
Texas Water Development Board

presented at

The 29th Annual Texas Environmental Superconference

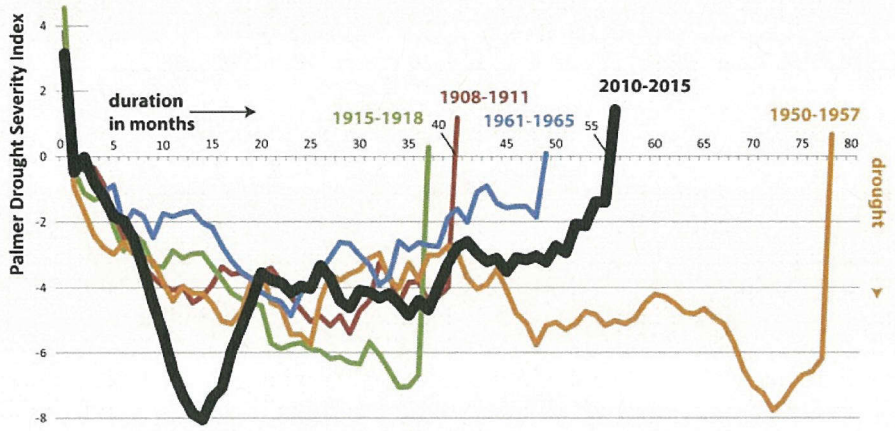
August 3, 2017; Austin, Texas



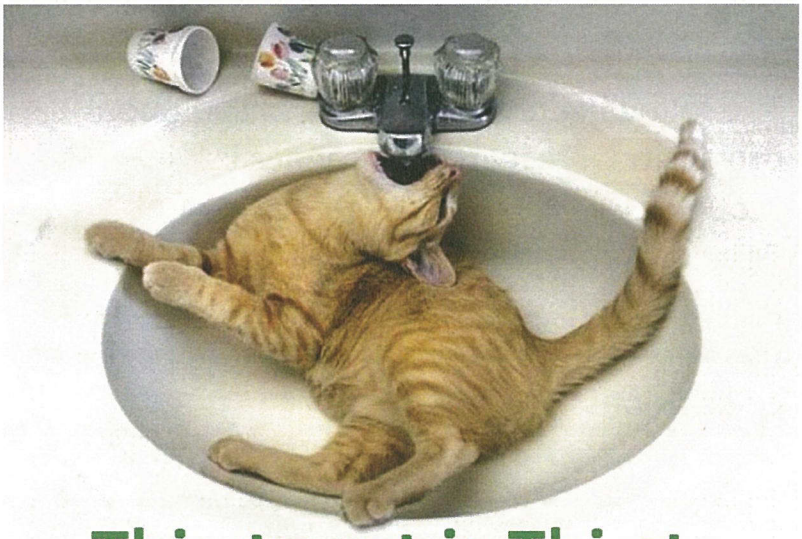
The following presentation is based upon professional research and analysis within the scope of the Texas Water Development Board's statutory responsibilities and priorities but, unless specifically noted, does not necessarily reflect official Board positions or decisions.

Texas Water Development Board

Five Worst State-Wide Droughts in Texas



based on information from John Nielsen-Gammon



Thirsty cat is Thirsty

We need to plan!



"It pays to plan ahead. It wasn't raining when Noah built the ark"

– unknown

"A man who does not plan long ahead will find trouble at his door."

– Confucius

"It pays to plan ahead. It wasn't raining when Noah built the ark"

– unknown

"You got to be careful if you don't know where you're going, because you might not get there."

– Yogi Berra

"A man who does not plan long ahead will find trouble at his door."

– Confucius

"It pays to plan ahead. It wasn't raining when Noah built the ark"

– unknown

"Expect the best, plan for the worst, and prepare to be surprised."

– Denis Waitley

"You got to be careful if you don't know where you're going, because you might not get there."

– Yogi Berra

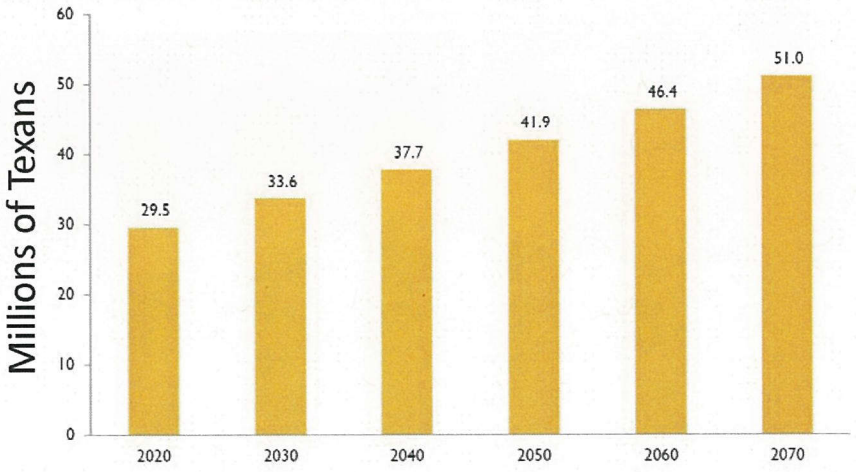
"A man who does not plan long ahead will find trouble at his door."

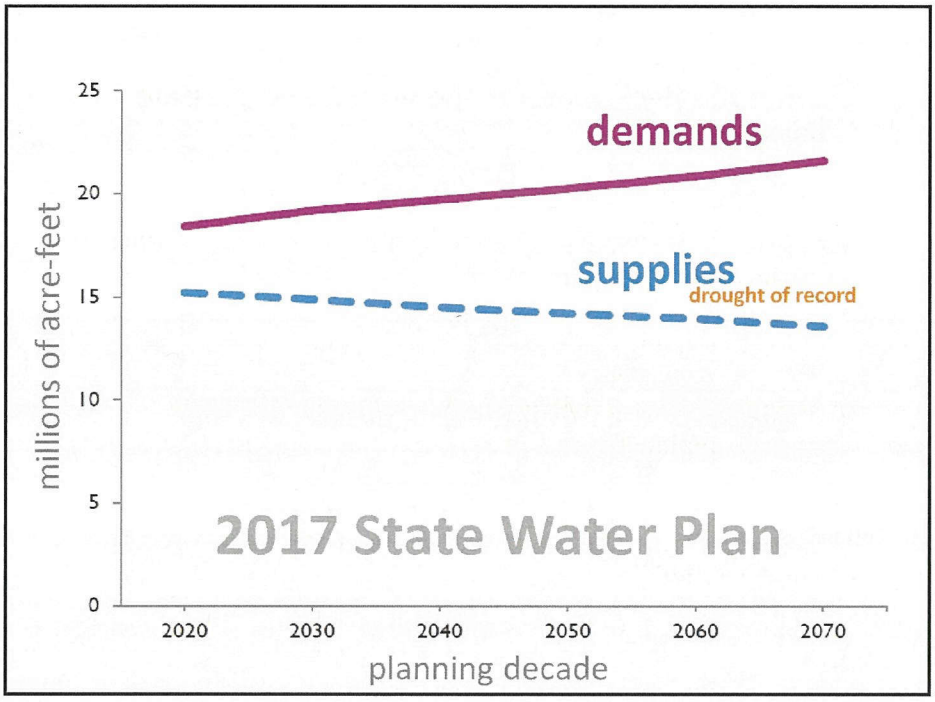
– Confucius

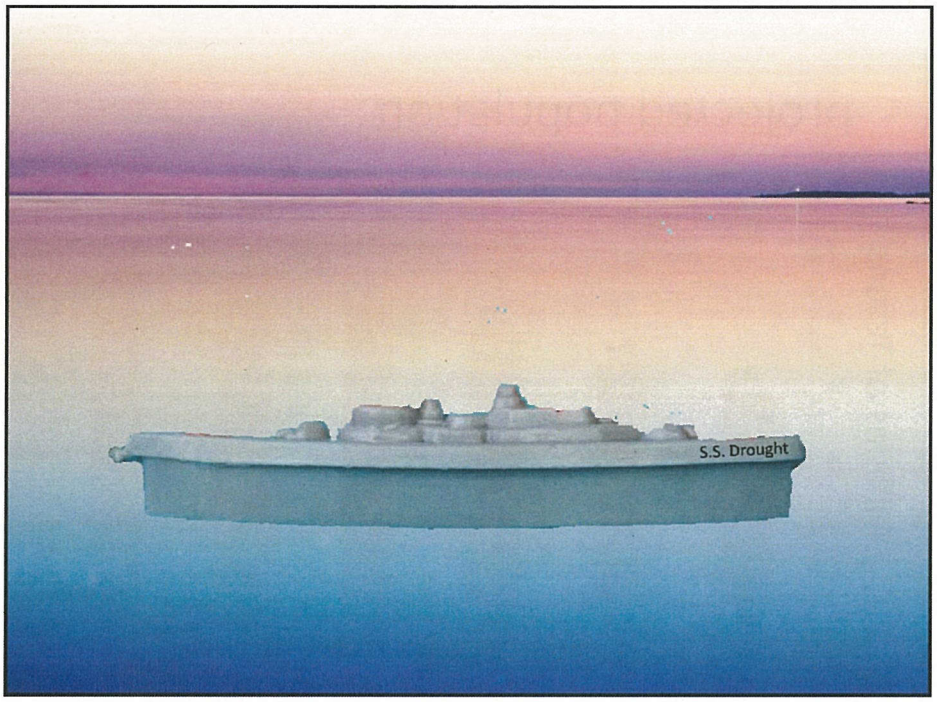
"It pays to plan ahead. It wasn't raining when Noah built the ark"

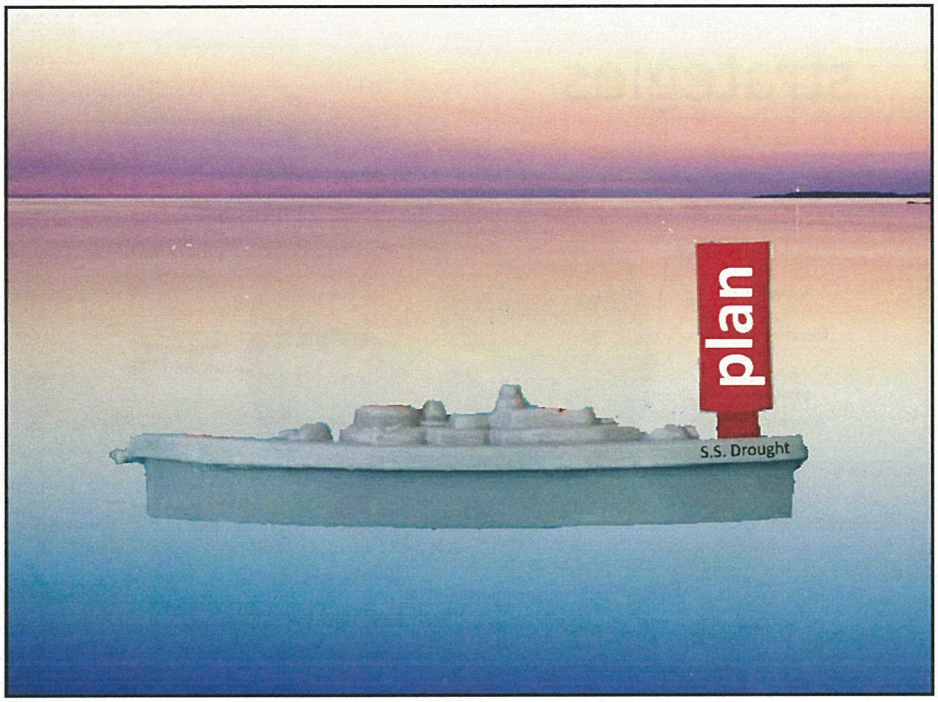
– unknown

projected population



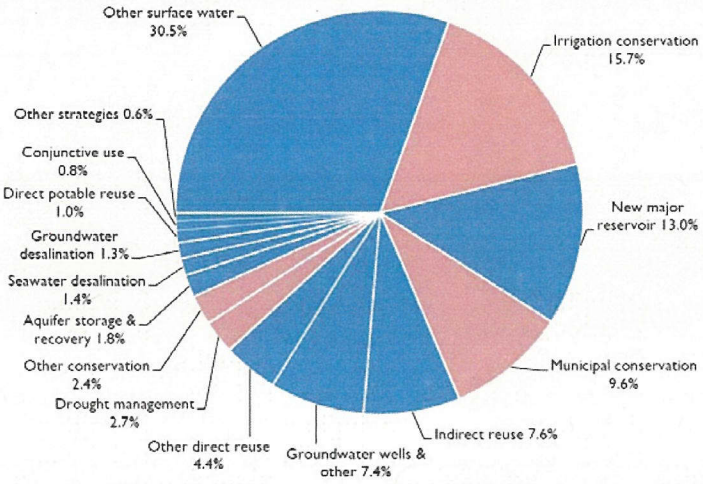

25
20
15
10
5
0
millions of acre-feet
demands
supplies
drought of record
2017 State Water Plan
2020
2030
2040
2050
2060
2070
planning decade

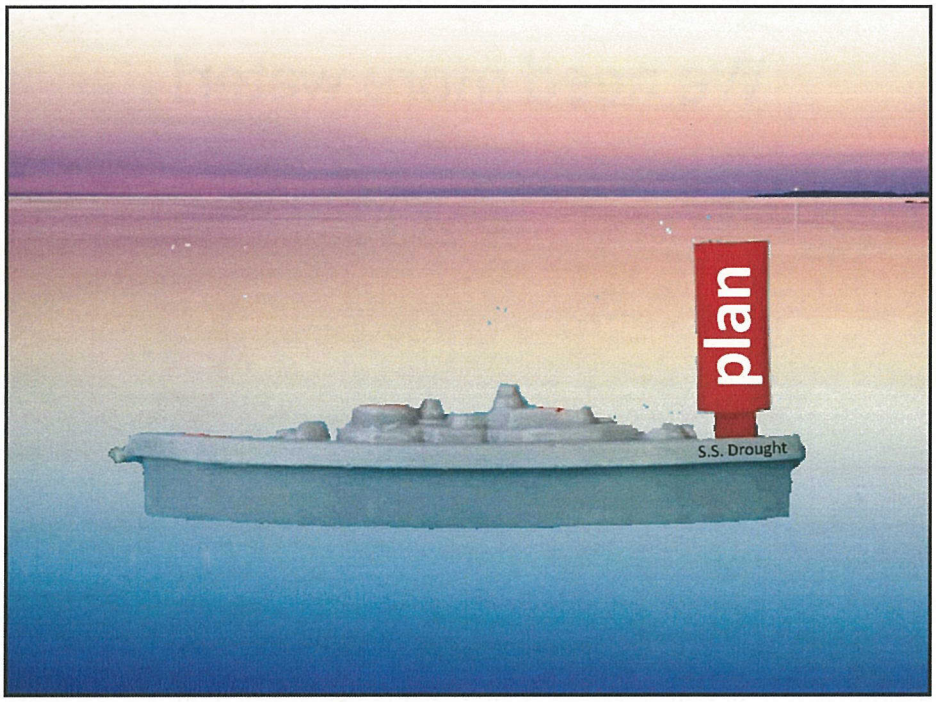

S.S. Drought

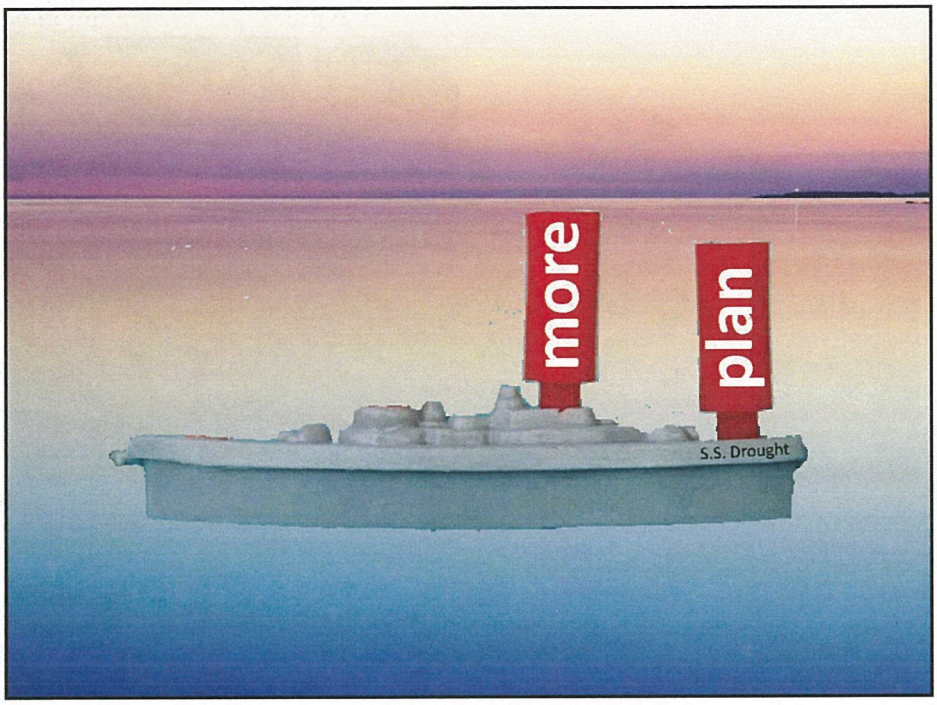

plan
S.S. Drought

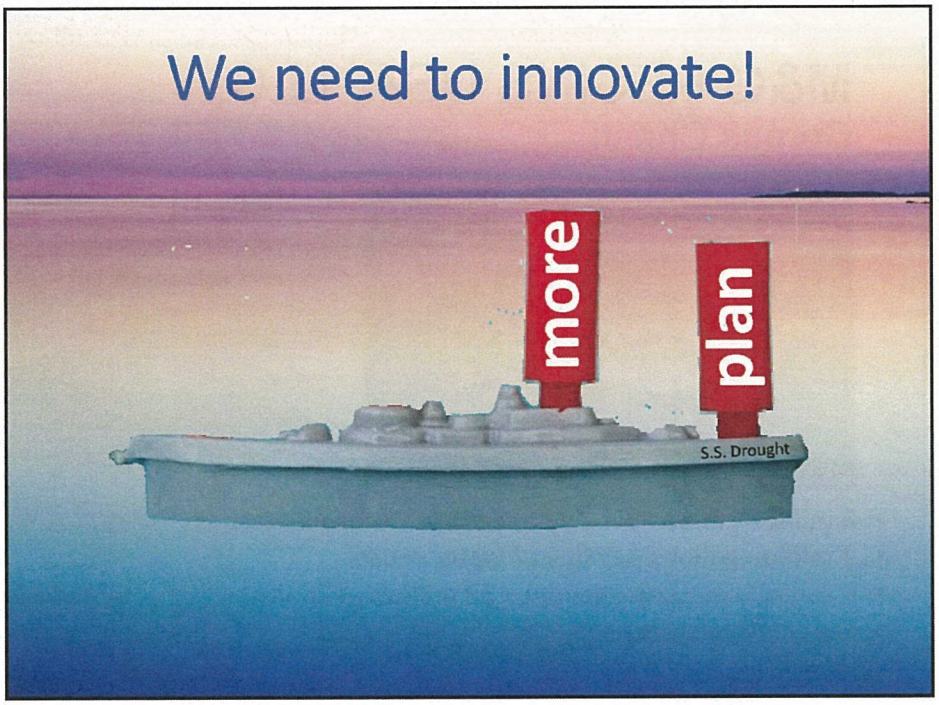

We need more water!
plan
S.S. Drought

strategies


Other surface water 30.5%
Irrigation conservation 15.7%
Other strategies 0.6%
Conjunctive use 0.8%
Direct potable reuse 1.0%
New major reservoir 13.0%
Groundwater desalination 1.3%
Seawater desalination 1.4%
Aquifer storage & recovery 1.8%
Other conservation 2.4%
Municipal conservation 9.6%
Drought management 2.7%
Indirect reuse 7.6%
Other direct reuse 4.4%
Groundwater wells & other 7.4%
Demand management
Water supply


plan
S.S. Drought


more
plan
S.S. Drought


We need to innovate!
more
plan
S.S. Drought



M&G RESINS USA, LLC,

Corpus Christi



- **6 million gallons per day of seawater desalination**
- **2 million gallons per day of water reuse**
- **Sized to eventually produce 22 million gallons per day**
- **Expected to start production by early 2017**

20

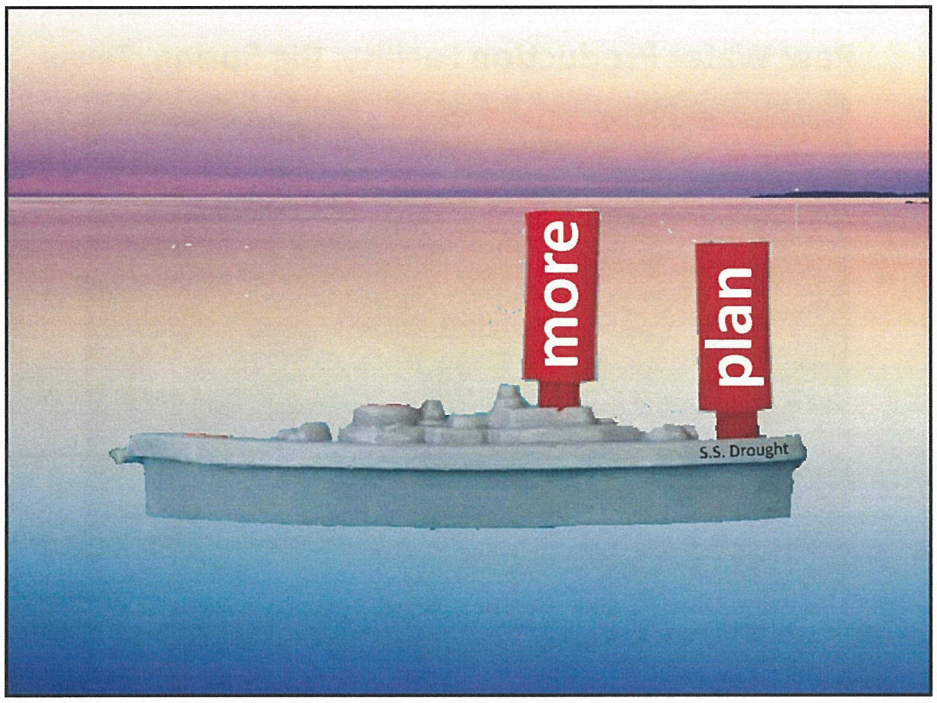
Raw Water Production Facility, Big Spring, Texas

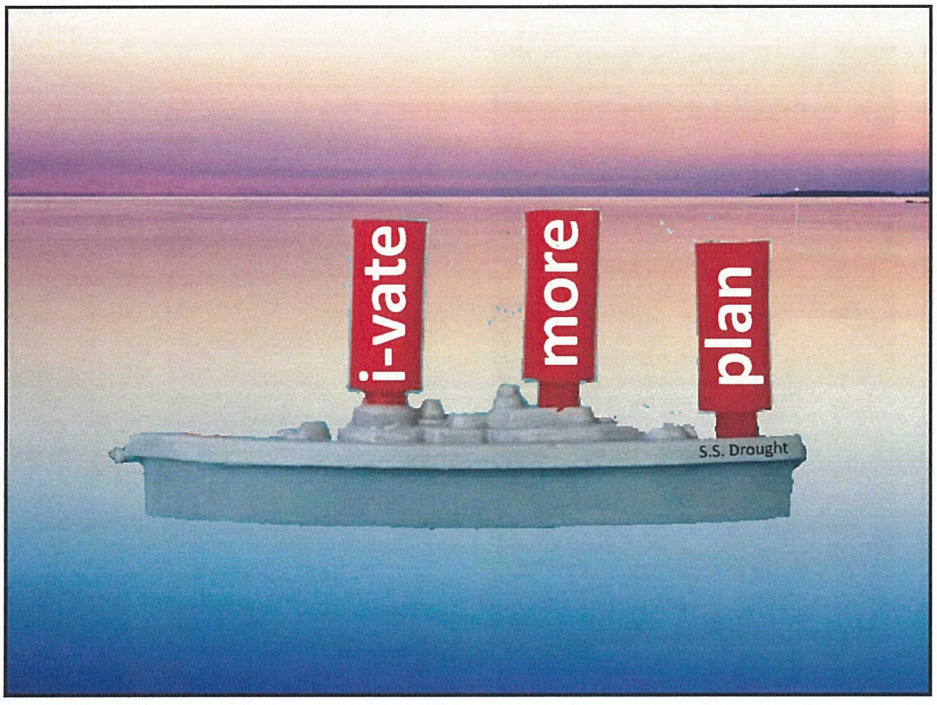


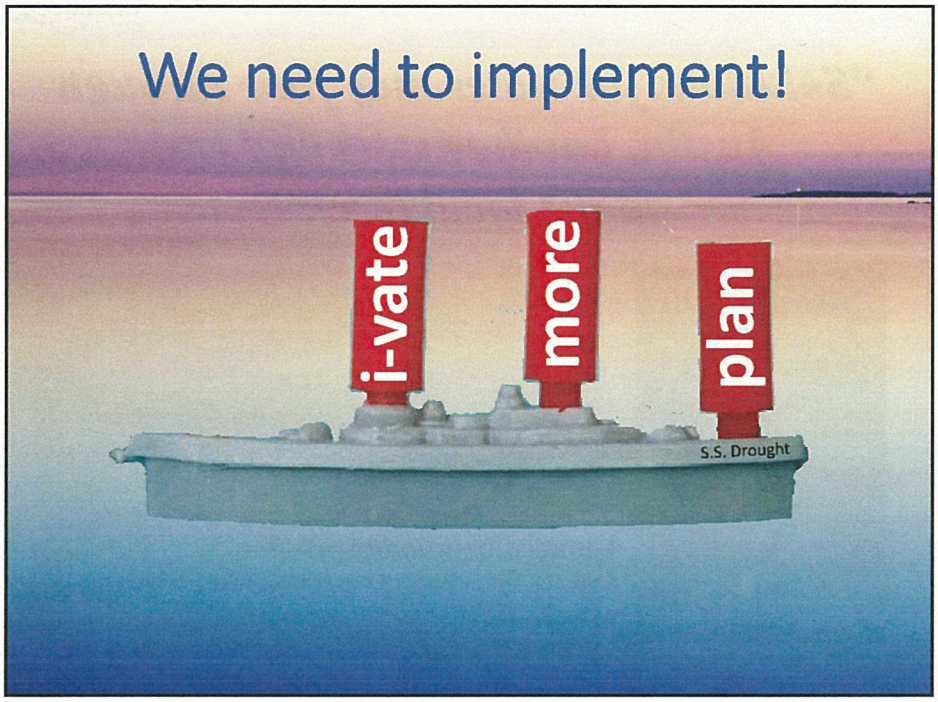
John Grant, Colorado River Municipal Water District

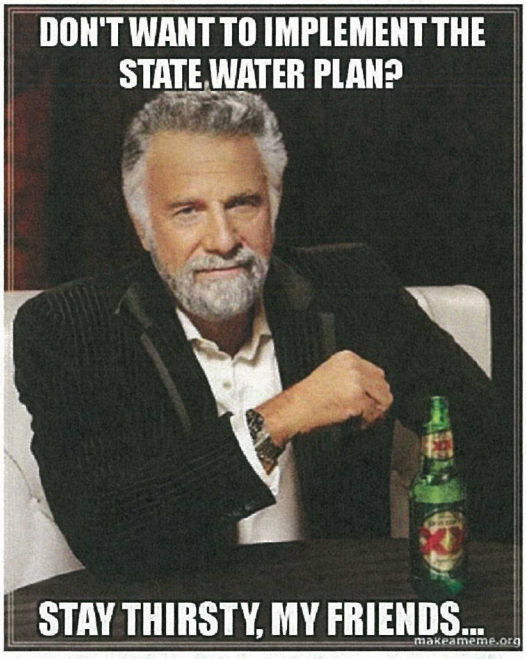
photo by Torin Halsey, Time Record News




more
plan
S.S. Drought


i-vate
more
plan
S.S. Drought

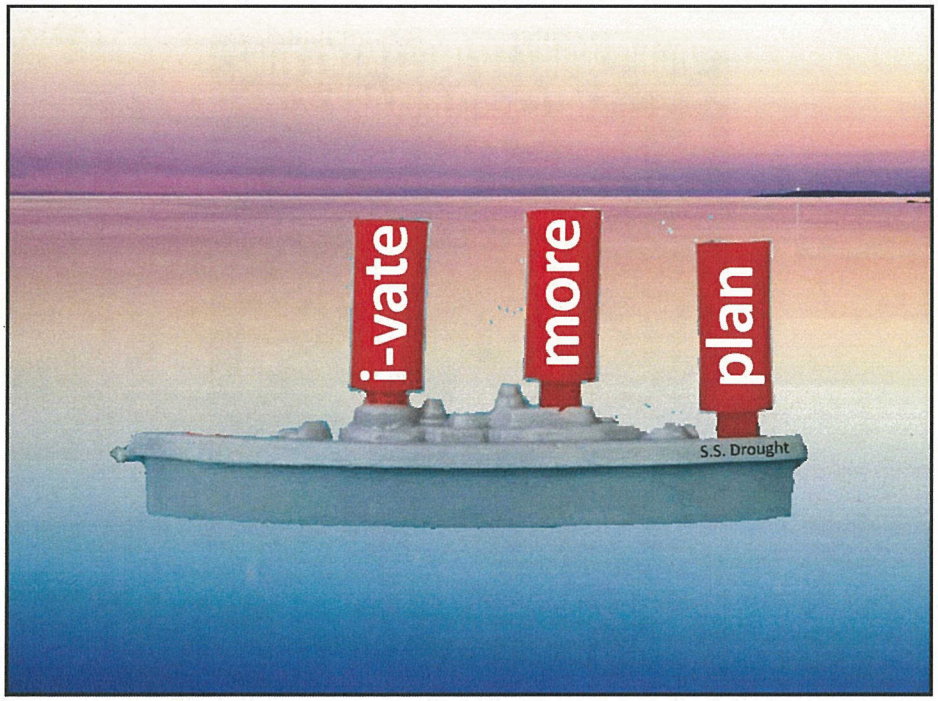

We need to implement!
i-vate
more
plan
S.S. Drought

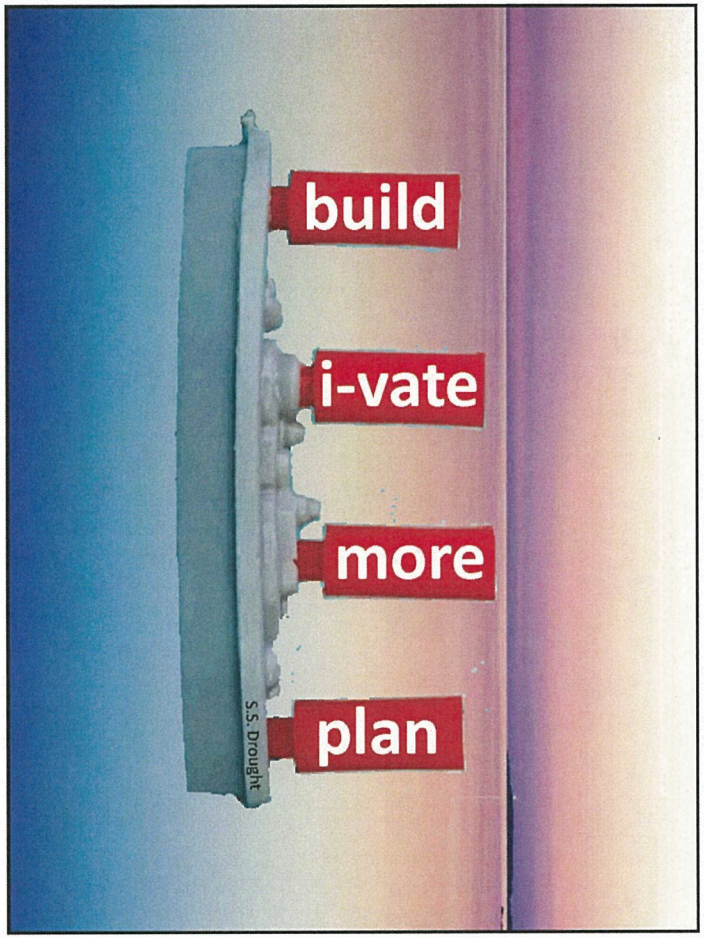

DON'T WANT TO IMPLEMENT THE STATE WATER PLAN?
STAY THIRSTY, MY FRIENDS...
makeameme.org

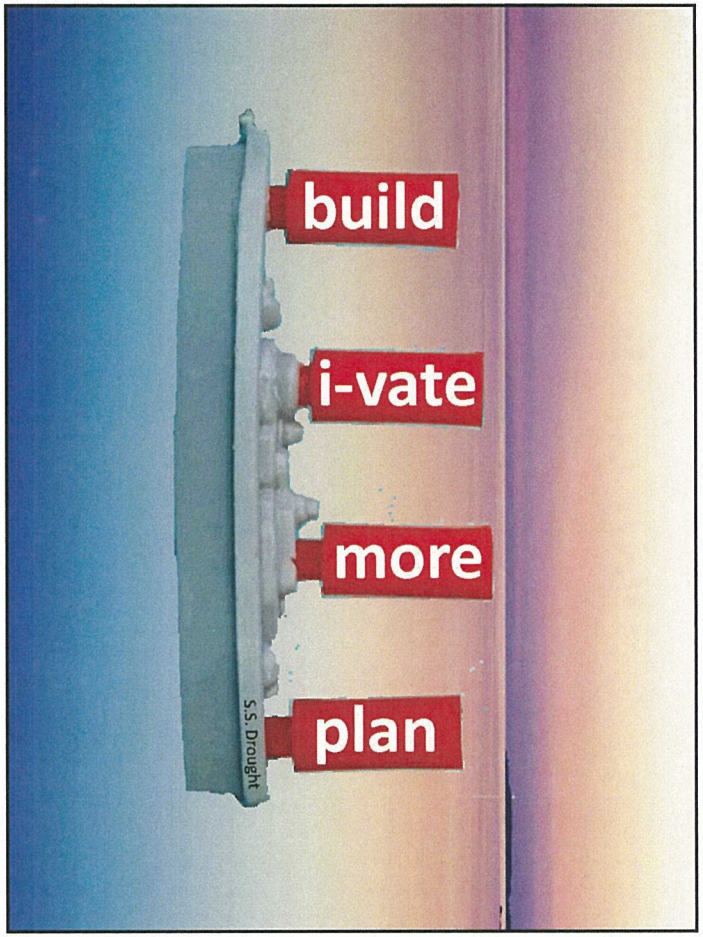
"Solutions for water may flow through Austin, but they start and end at the local level."

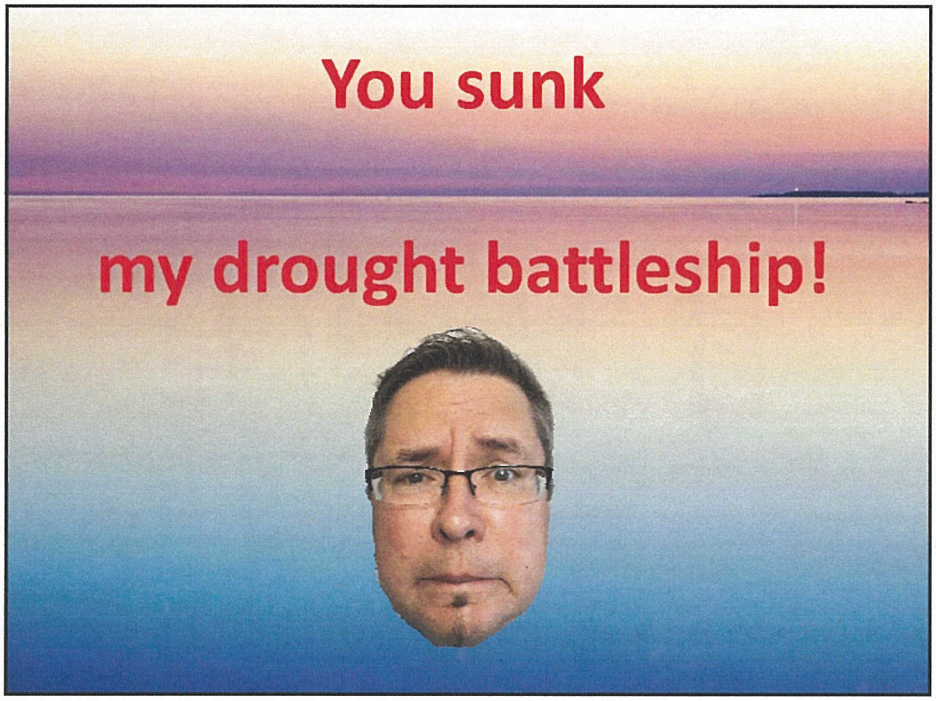


Commissioner Todd Staples
Said at a Texas Water Conservation Association meeting
March 2013

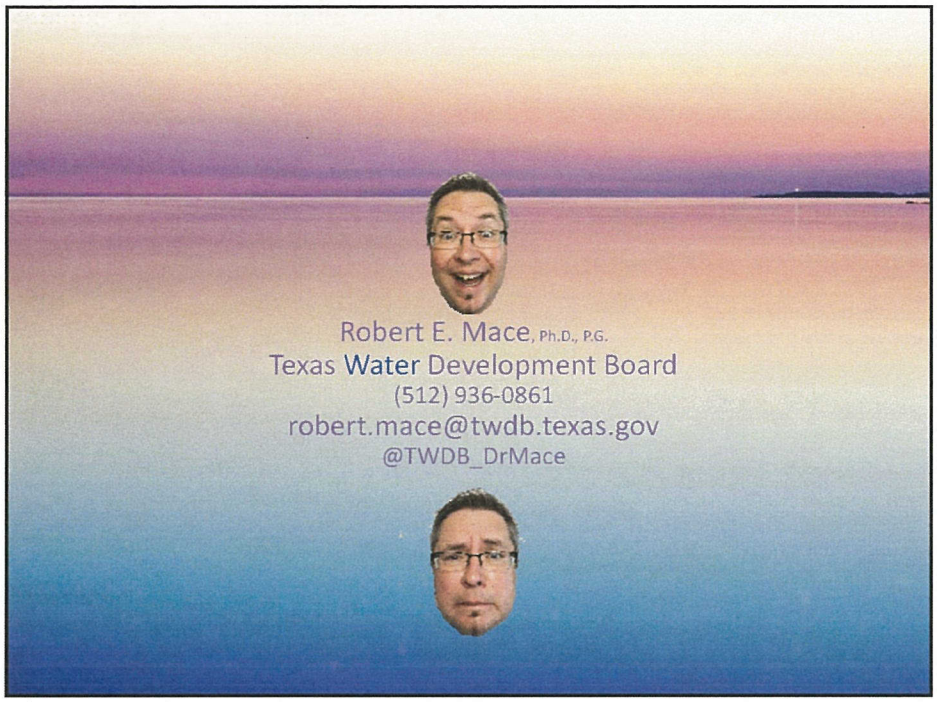



build
i-vate
more
plan
S.S. Drought


build
i-vate
more
plan
S.S. Drought


You sunk
my drought battleship!


You sunk
my drought battleship!


Robert E. Mace, Ph.D., P.G.
Texas Water Development Board
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robert.mace@twdb.texas.gov
@TWDB_DrMace

Lloyd Gosselink
ATTORNEYS AT LAW

SARA R. THORNTON PRINCIPAL

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"Dammed" If You Do and Damned If You Don't: Complying with Section 404 of the Clean Water Act in the Development of Critical Water Supplies

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Sara R. Thornton

Introduction

Most Texans, particularly those in the western part of the state, have long appreciated and understood the limited availability of water supplies. But even with that appreciation, a majority of Texans did not fully grasp how crippling severe drought conditions could actually be—even knowing the drought of the 1950s. This reality hit hard in 2011 when drought conditions reached an extreme state, being the worst one-year drought in Texas history,[1] requiring the Governor of Texas to declare an ongoing state of emergency due to extreme drought conditions.[2] The 2011 drought further underscored how crucial water supply planning is in Texas.

Although Texas has long understood the importance of water supply planning, planning is just the first step. And the next step, permitting for water supplies, particularly Clean Water Act Section 404 permitting, can effectively create a dam of laws and regulations that significantly delay and potentially block water supply projects completely. This paper will focus on the requirements for complying with Section 404 of the Clean Water Act[3] in the development of large water supply projects, provide a look at some projects that ultimately were not permitted because of provisions of the Clean Water Act, and discuss recent actions to try to expedite permitting under the Clean Water Act to ensure needed water supplies are available to support a growing population, and a thirst for water that cannot be quenched by conservation alone.

Putting Water First for Growing Populations

Water is an invaluable resource that, at least in the U.S., is often taken for granted and believed to exist in unlimited quantities. As populations grow, however, this belief is confronting the harsh reality that existing water supplies are limited, and additional water supplies must be developed. In 2011, 23 public water systems in Texas claimed to have less than six months' water supply with the town of Spicewood Beach near Austin, Texas completely running out of water and requiring that water be trucked in for a continual water supply.[4] It seems an unfathomable situation—but it's not entirely surprising when you understand how population has grown in Texas, whereas Texas' water supply storage has not.[5] In fact, since 1980, the per capita water storage in Texas has decreased by 30 percent.[6]

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[1] Texas Water Development Board, *Water for Texas 2017 State Water Plan*, 32 (2016), http://www.twdb.texas.gov/waterplanning/swp/2017/doc/SWP17-Water-for-Texas.pdf.

[2] Office of the Governor of Texas, Proclamation by the Governor of the State of Texas (July 5, 2011), https://tpwd.texas.gov/newsmedia/releases/news_roundup/drought/media/20110705-disaster-proclamation-renewed[1].pdf.

[3] Note, there are several other federal laws that an applicant for a large water supply project must comply with that are not discussed within this paper, including but not limited to, the National Environmental Policy Act, the Endangered Species Act, and the National Historic Preservation Act.

[4] Marc Airhart, Five Key Lessons (and Challenges) from the Great Texas Drought (September 10, 2012), http://www.utexas.edu/know/2012/09/10/great-texas-drought/.

[5] *Id.*

[6] *Id.*

According to the *Water for Texas 2017 State Water Plan*, Texas has one of the fastest growing populations in the U.S. with the population expected to increase by 73 percent between 2020 and 2070—increasing from 29.5 million to 51 million.[7] Thankfully, this estimated growth does not have a corresponding percent increase in demand for water—instead, the water demand is only projected to increase by 17 percent, in part due to more efficient use of water, including conservation and reuse.[8] Provided below in **Figure 1** is a map depicting municipal water demands in Texas by county in 2070.

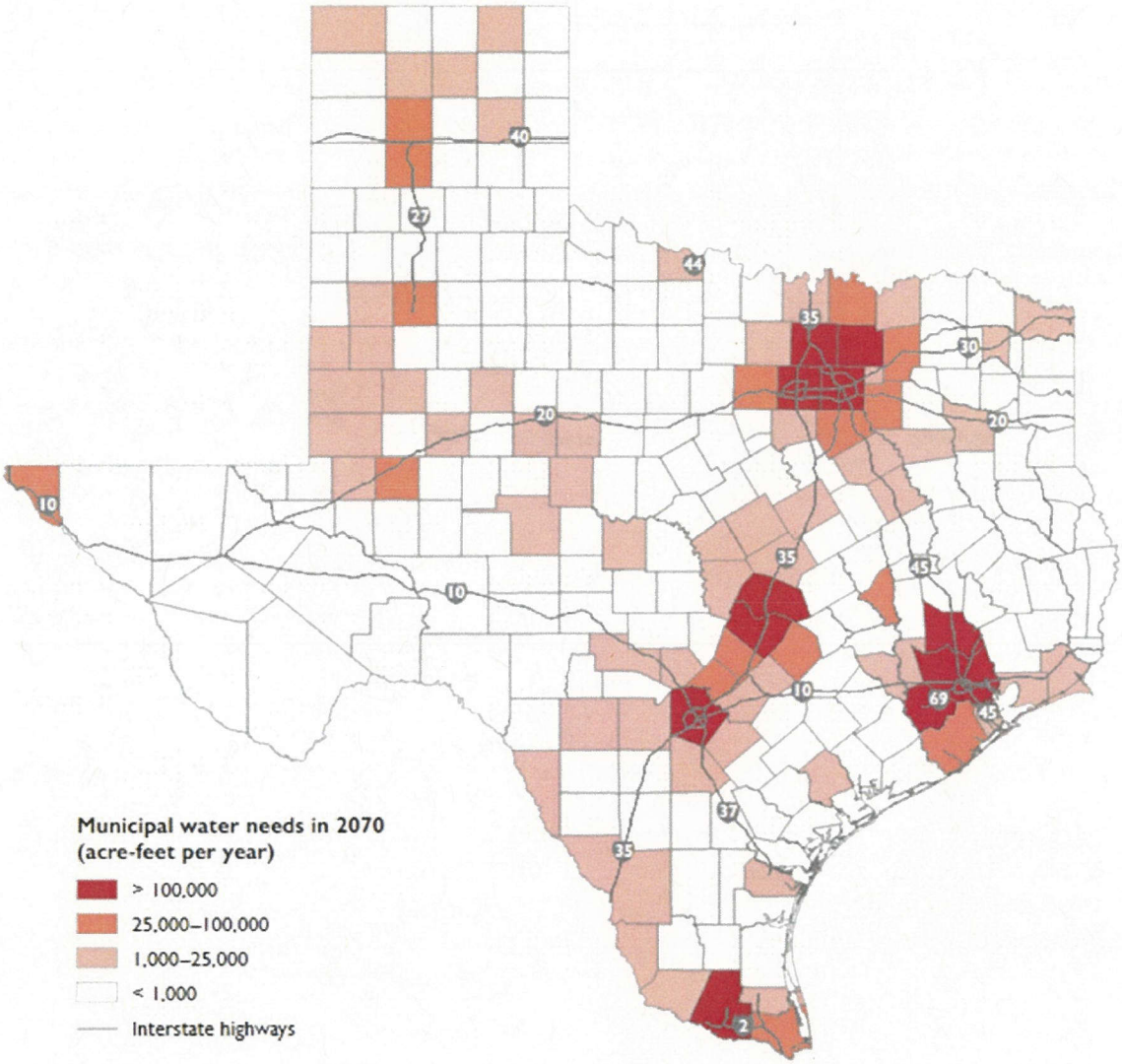


Figure 1. Projected municipal water needs by county in 2070.[9]

[7] Texas Water Development Board, *Water for Texas 2017 State Water Plan*, 5-6 (2016), http://www.twdb.texas.gov/waterplanning/swp/2017/doc/SWP17-Water-for-Texas.pdf.
[8] *Id.* at 6.
[9] *Id.* at 80 (Figure 7.2).

Even though water demands are not increasing at the same rate as the state population, based on the current inability to meet existing water demands under recently experienced drought conditions, additional water supplies must be developed to meet this increased demand. As reflected in the figure below, the 2017 State Water Plan currently includes 26 proposed new reservoirs, some of which are off-channel, to address increasing demands for water.[10]

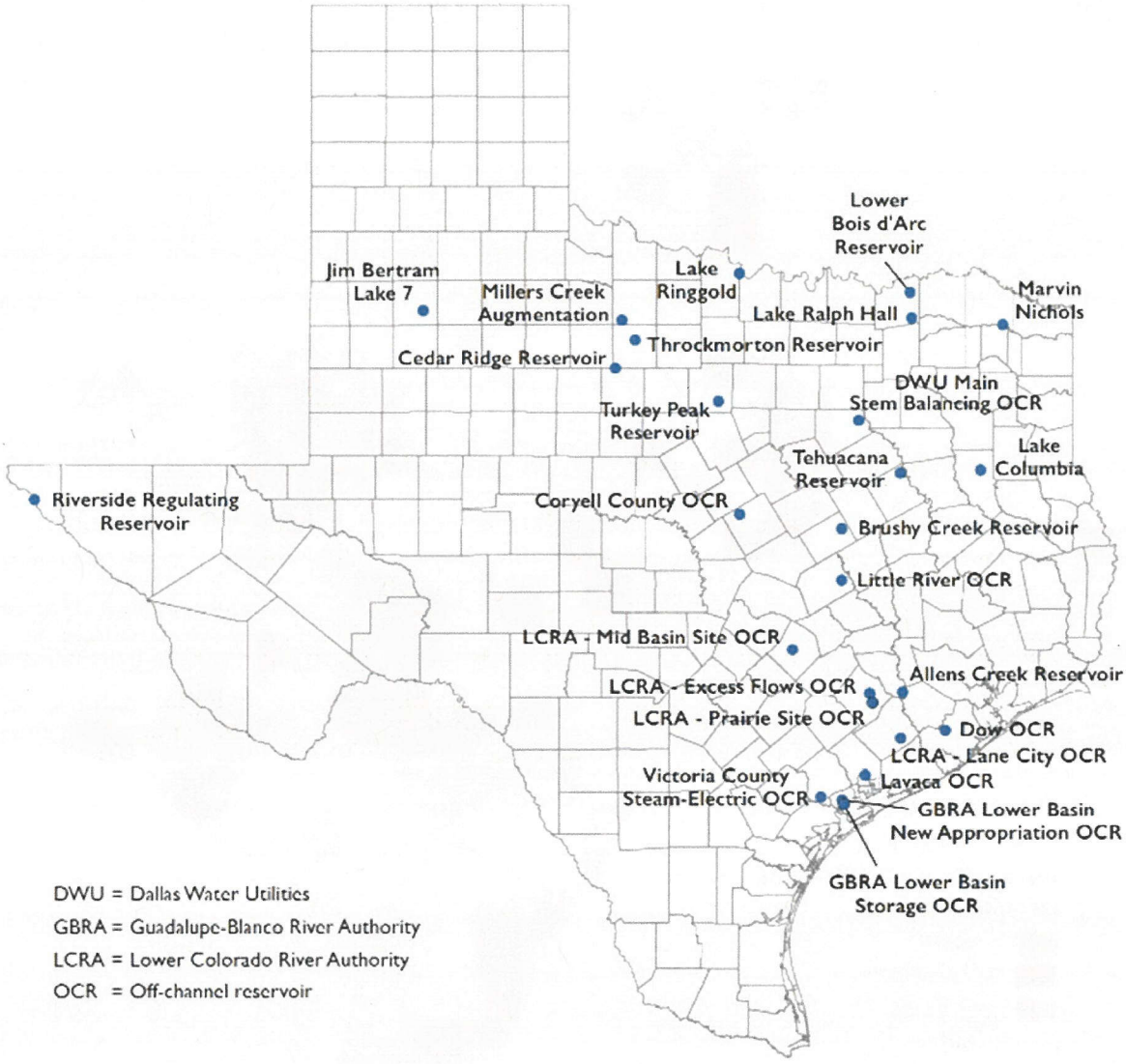


Figure 2. Proposed new reservoirs in the 2017 State Water Plan.[11]

[10] Texas Water Development Board, *Water for Texas 2017 State Water Plan*, 94-95 (2016), http://www.twdb.texas.gov/waterplanning/swp/2017/doc/SWP17-Water-for-Texas.pdf.
[11] *Id.* at 95. (Figure 8.4)

But to develop these reservoirs, or other water supply projects impacting waters of the United States, project proponents will have to find a way to overcome the "dam" of laws and regulations created by the Clean Water Act, which can potentially block development of these critically needed water supplies.

Section 404 of the Clean Water Act

The development of additional water resources, including new water supply reservoirs, must comply with a number of federal laws, including Section 404 of the Clean Water Act (CWA). Pursuant to Section 404 of the CWA, the U.S. Army Corps of Engineers (USACE) may issue a permit (404 permit) for the discharge of dredged or fill material into the navigable waters at specified disposal sites after notice and opportunity for a public hearing.[12] Importantly, without a 404 permit, a new water supply reservoir typically cannot be constructed given the necessity of the actions involved in construction. Beyond complying with the numerous requirements for a 404 permit to be issued, a permittee is also faced with the possibility that permit issuance by USACE may be vetoed by the Environmental Protection Agency (EPA)—effectively killing the water supply reservoir.

Brief History

Congress originally granted USACE the authority to approve obstructions to navigable rivers through the enactment of the Rivers and Harbors Act of 1890.[13] USACE's authority was subsequently codified in Section 10 of the River and Harbors Act of 1899 and was originally interpreted to regulate the effect that a project would have on only navigation.[14, 15] More than 50 years later, with growing concerns over environmental degradation, courts held that USACE must consider other factors beyond navigation, including impacts on the natural environment.[16]

In 1972, Congress enacted the modern CWA, originally entitled the Federal Water Pollution Control Act.[17] Under the newly-enacted CWA, Section 404 authorized the USACE to issue permits for discharges of dredged or fill material into navigable waters.[18] The navigable waters were defined as "waters of the United States"—meaning all waters subject to federal regulation under the Constitution's commerce clause power.[19] Although USACE had the power to issue permits under Section 404, EPA was also given substantial responsibility for permitting oversight.[20] EPA did not agree with the authority granted to USACE to issue permits, claiming that such authority should be

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[12] 33 U.S.C. § 1344(a).

[13] River and Harbors Act of 1890, ch. 907, 26 Stat. 426, 453-54.

[14] *See* 33 U.S.C. § 403 ("The creation of any obstruction not affirmatively authorized by Congress, to the navigable capacity of any of the waters of the United States is prohibited; and it shall not be lawful to build or commence the building of any wharf, pier, dolphin, boom, weir, breakwater, bulkhead, jetty, or other structures in any port, roadstead, haven, harbor, canal, navigable river, or other water of the United States, outside established harbor lines, or where no harbor lines have been established").

[15] *See* Miami Beach Jockey Club, Inc. v. Dern, 86 F.2d 135 (D.C. Cir. 1936) (stating that a section 10 permit decision must exclusively be based on whether the project would obstruct navigability of a waterway).

[16] *See* Zabel v. Tabb, 430 F.2d 199 (5th Cir. 1970) (stating that USACE may deny a permit based on "substantial ecological reasons," even if the project would not interfere with navigation).

[17] *See* 33 U.S.C. § § 1251-1287.

[18] *See id.* § 1344.

[19] *Id.* § 1362(7).

[20] *See id.*. § 1344.

granted to EPA or require EPA review and concurrence.[21] Congress responded by giving EPA a role in establishing 404 permit criteria under Section 404(b)(1) and authorizing EPA to veto USACE permits under Section 404(c).[22]

But, EPA conflict with USACE over the Section 404 permit program continued for several years. EPA interpreted the CWA as creating broad federal jurisdiction over waters subject to its permit program for point source discharges of pollutants under CWA Section 402.[23] EPA's interpretation was clearly in conflict with USACE's, with USACE limiting its jurisdiction to exclude most wetlands until 1975 when environmentalists challenged that interpretation in court. This challenge resulted in the court requiring USACE to revise its regulations to reflect the statutory definition of "waters of the United States" consistent with EPA's interpretation.[24]

Controversy over the scope of the Section 404 permitting program continued, and in response, Congress enacted the CWA Amendments of 1977.[25] The amendments affirmed the program's broad jurisdictional scope, but made three major changes:

1. Congress exempted activities presumed to have minor adverse effects from permit requirements, including but not limited to, normal farming, forestry, and ranching;[26]
2. Congress ratified USACE's authority to issue general (as opposed to individual) permits if the activities were "similar in nature, caus[ing] only minimal adverse environmental effects," independently or cumulatively, and complying with Section 404(b)(1) guidelines;[27] and
3. Congress authorized state Section 404 programs.[28]

Significantly, the 1977 amendments explicitly granted jurisdiction beyond the traditionally navigable waters scope in the Rivers and Harbors Act and expressly included wetlands in the jurisdictional definition.[29] After the enactment of the 1977 amendments, EPA promulgated the 404(b)(1) guidelines in 1980.[30] The focus of the guidelines was protecting wetlands and expanding the regulations to protect ecological functions.[31] The guidelines are regulatory in nature, and therefore binding on USACE. But USACE's application of these guidelines since their enactment have varied dependent upon the priorities of different presidential administrations.[32]

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[21] *See* H.R. Rep. No. 92-911, at 168 (1972).
[22] *See* 33 U.S.C. § 1344.
[23] Michael C. Bloom and Elisabeth Mering, *Vetoing Wetland Permits Under Section 404(c) of the Clean Water Act: A History of Inter-Federal Agency Controversy and Reform*, 33 UCLA J. ENVTL. L. & POL'Y 215, 229 (2015).
[24] *Id.* at 229-30.
[25] *Id.* at 231-32.
[26] 33 U.S.C. § 1344(f)(1)(A).
[27] *Id.* § 1344(e).
[28] *Id.* § 1344(g)(1).
[29] *See* 33 U.S.C. § 1344(g) (defining "navigable waters" as "including all waters which are subject to the ebb and flow of the tide shoreward to their mean high water mark, or mean higher high water mark on the west coast, including wetlands adjacent thereto").
[30] *See* 40 C.F.R. Part 230.
[31] *Id.*
[32] *See* Alyson C. Flournoy, *Section 404 at Thirty-Something: A Program in Search of a Policy*, 55 ALA. L. REV. 607, 611-13 (2004).

Waters of the United States (WOTUS)

The application of the CWA definition of "waters of the United States" (WOTUS) is particularly important in the context of development of large water supply projects, especially reservoirs. To authorize issuance of a Section 404 permit, a jurisdictional determination is often needed to fully quantify impacts to waters of the U.S. A more expansive definition of WOTUS is likely to identify a greater amount of impacts to streams, open waters, and wetlands for a water supply project. With greater impacts identified, the potential to permit a water supply project becomes much more difficult under Section 404 when compared to other alternatives with less environmental impacts pursuant to the Section 404(b)(1) guidelines and would require more compensatory mitigation to offset such impacts, which may or may not be available or successful, especially for aquatic resources that are much more difficult to replace, like streams.

Following the enactment of the CWA Amendments of 1977, the broad interpretation of "waters of the United States" applied by EPA and USACE continued for several years, and was often litigated. In 2001, the United States Supreme Court narrowed this interpretation in *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* (*SWANCC*).[33] The Supreme Court held that use of isolated, non-navigable intrastate ponds by migratory birds was not by itself sufficient to exert federal jurisdiction under the CWA.[34] This decision created uncertainty with regard to jurisdiction over other isolated non-navigable waters and wetlands. In January 2003, USACE and EPA issued joint guidance interpreting the decision in *SWANCC* (2003 Guidance). This guidance provided that *SWANCC* addressed isolated, intrastate, non-navigable waters, and called for field staff to coordinate with their respective USACE or EPA Headquarters on jurisdictional determinations that asserted jurisdiction for waters under 33 C.F.R. § 328.3(a)(3).[35] Further, waters deemed jurisdictional pursuant to 33 C.F.R. § 328.3(a)(3) could no longer be jurisdictional based solely on their use by migratory birds.[36] The United States Supreme Court again evaluated the scope of "waters of the United States" in 2006 in *Rapanos v. United States*.[37]

The decision in *Rapanos* resulted in two different tests to determine whether wetlands constitute "waters of the United States." First, the Scalia plurality test granted jurisdiction over a wetland only if: (a) it is adjacent to a "relatively permanent body of water connected to traditional interstate navigable waters" or other "waters of the United States"; and (b) "the wetland has a continuous surface connection with that water, making it difficult to determine where the 'water' ends and the 'wetland' begins."[38] Justice Kennedy, who concurred with plurality judgment, concluded that the appropriate test for jurisdiction over wetlands is whether a water or wetland possesses a "'significant nexus' to waters that are or were navigable in fact or that could reasonably

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[33] Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers, 531 U.S. 159 (2001).
[34] *Id.* at 171-174.
[35] EPA, *Pre-Publication Version of Proposed Rule: Definition of "Waters of the United States" – Recodification of Pre-existing Rules* 6, available at https://www.epa.gov/sites/production/files/2017-06/documents/wotus_prepublication_version.pdf (last visited July 11, 2017). 33 C.F.R. § 328.3(a)(3) defines waters of the United States as including "all waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters: (i) which are or could be used by interstate or foreign travelers for recreational or other purposes; or (ii) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (iii) which are used or could be used for industrial purpose by industries in interstate commerce."
[36] *Id.*
[37] Rapanos v. U.S., 547 U.S. 715 (2006).
[38] *Id.* at 742.

be so made."[39] Because of these two tests, confusion regarding jurisdiction over certain waterbodies has persisted among the appellate courts and continues to be subject to litigation.[40] Because of this confusion, EPA and USACE issued joint guidance in 2007 to address waters at issue in the *Rapanos* decision, but did not change the codified definition.[41] This guidance provided that WOTUS included traditional navigable waters and their adjacent wetlands, relatively permanent waters and wetlands that abut them, and waters with a significant nexus to traditional navigable water.[42] EPA and USACE reissued this guidance in 2008 with minor revisions (2008 Guidance).[43] But even with this additional guidance, further regulatory certainty and clarity on the scope of waters protected by the CWA continued to be requested nationwide from interested stakeholders, state and local government, businesses, and others in the regulated community.

On June 29, 2015, the EPA and USACE jointly released a final rule to clarify federal jurisdiction afforded by the CWA (the Rule).[44] This Rule was the EPA's and USACE's effort to further define the scope of protection over U.S. waters under the CWA and the corresponding regulatory jurisdiction over such waters following significant stakeholder input on the originally proposed rule.[45] To address the ongoing uncertainty after *Rapanos*, the Rule sought to make the process of identifying covered waters "easier to understand, more predictable, and consistent with the law and peer-reviewed science" by including three categories of waters: (1) waters that are jurisdictional *per se*; (2) waters outside of federal jurisdiction; and (3) waters subject to a case-by-case "significant nexus" analysis as applied in *Rapanos*.[46]

The breadth and far-reaching jurisdiction established by the Rule resulted in 31 States and numerous other parties seeking judicial review in multiple actions in Federal district courts and Circuit Courts of Appeal with allegations that both EPA and USACE have exceeded their statutory authority by promulgating the Rule.[47] Plaintiffs also argue the Rule directly violates of the CWA, the Administrative Procedures Act, and the U.S. Constitution's Commerce Clause.[48] Supporters of the Rule believed that it would help to carry out the objectives of the CWA by affording more protection to U.S. waters and providing further clarity as to what waters are jurisdictional. Opponents of the Rule, on the other hand, believe the Rule is much too broad and essentially eliminates all limitations on federal CWA jurisdiction. In response to this critique, the Obama Administration agreed to a nationwide stay issued by the U.S. Court of Appeals for the Sixth Circuit of the 2015 Clean Water Rule, meaning that federal agencies would continue to apply the prior

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[39] *Id.* at 759.

[40] *See* U.S. v. Gerke Excavating, Inc., 464 F.3d 723 (7th Cir. 2006) (applying Justice Kennedy's test); U.S. v. Johnson, 467 F.3d 56 (1st Cir. 2006) (applying either Justice Kennedy's test or the plurality test); San Francisco Baykeeper v. Cargill Salt Div., 481 F.3d 700 (9th Cir. 2007) (limiting the *Rapanos* decision to wetlands and holding that the Corps does not have jurisdiction over ponds adjacent to jurisdictional waters).

[41] EPA, *Pre-Publication Version of Proposed Rule: Definition of "Waters of the United States" – Recodification of Pre-existing Rules* 7, https://www.epa.gov/sites/production/files/2017-06/documents/wotus_prepublication_version.pdf (last visited July 11, 2017).

[42] *Id.* at 7-8.

[43] *Id.* at 8.

[44] Definition of "Waters of the United States" Under the Clean Water Act, 80 Fed. Reg. 37054 (June 29, 2015).

[45] Definition of "Waters of the United States" Under the Clean Water Act, 79 Fed. Reg. 22188 (proposed Apr. 21, 2014).

[46] Definition of "Waters of the United States" Under the Clean Water Act, 80 Fed. Reg. 37054, 37055 (June 29, 2015).

[47] EPA, *Pre-Publication Version of Proposed Rule: Definition of "Waters of the United States" – Recodification of Pre-existing Rules* 8, https://www.epa.gov/sites/production/files/2017-06/documents/wotus_prepublication_version.pdf (last visited July 11, 2017).

[48] *Id.*

regulatory definition of "waters of United States" until the court reached a final decision.[49]

Regardless of whether the 2015 Clean Water Rule is ultimately upheld, the Trump Administration initiated measures to withdraw the Rule and replace it with a new version that uses Justice Scalia's test in *Rapanos* for defining "waters of the United States." On February 28, 2017, President Trump issued Executive Order 13778 that required the EPA and USACE to jointly review and publish a proposal for rescinding or revising the 2015 Clean Water Rule.[50] The order provides that the agencies should consider interpreting the term "navigable waters" consistently with the definition given in Justice Scalia's plurality opinion in *Rapanos*.[51]

EPA and USACE announced on June 27, 2017 that a two-step process would be undertaken to implement the President's Executive Order.[52] The first step of the process, which is included in the pre-publication proposed rule issued jointly by EPA and USACE, will rescind the 2015 Clean Water Rule and reinstate the WOTUS definition in place before the 2015 Rule was issued.[53] The second step of the process that is expected to occur at a future date will involve EPA and USACE pursuing notice and comment rulemaking in which the agencies will conduct a substantive re-evaluation of the WOTUS definition.[54]

The pre-publication proposed rule provides assurances that EPA and USACE will continue to apply pre-2015 Clean Water Rule guidance from 2003 and 2008 interpreting *SWANCC* and *Rapanos*.[55] One of the bases for rescinding the Clean Water Rule included in the pre-publication proposed rule is the role of states in regulating water pollution. This role is sourced from Section 101(b) of the Clean Water Act that recognizes "the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution…"[56] The pre-publication proposed rule asserts that this policy received inadequate consideration in the development of the Clean Water Rule and would be given more consideration in the development and justification of any future rule.[57]

Depending on when the proposed rule is published in the *Federal Register*, comments may be due as early as August 2017. As with the 2015 Clean Water Rule, there is a high likelihood that multiple lawsuits could be filed challenging the rescission of the 2015 Clean Water Rule and any replacement of the Rule that may be promulgated. Assuming a narrower definition of what constitutes WOTUS is ultimately adopted and upheld (if litigated), then proponents of future water supply projects may face less difficulties in avoiding, minimizing, and mitigating impacts to aquatic resources because less of these resources would be deemed jurisdictional waters.

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[49] *Id.*
[50] Exec. Order No. 13778, 82 Fed. Reg.12497 (Feb. 28, 2017).
[51] *Id.*
[52] EPA, *Pre-Publication Version of Proposed Rule: Definition of "Waters of the United States" – Recodification of Pre-existing Rules*, https://www.epa.gov/wotus-rule/pre-publication-version-proposed-rule-definition-waters-united-states-recodification-pre (last visited July 11, 2017).
[53] *Id.* at 1-2.
[54] *Id.* at 2.
[55] *Id.* at 11.
[56] *Id.* at 12-14.
[57] *Id.*

Section 404(b)(1) Guidelines

The Section 404(b)(1) guidelines include substantive requirements that a project must comply with to obtain a Section 404 permit.[58] The purpose of the guidelines is to "restore and maintain the chemical, physical, and biological integrity of waters of the United States through the control of discharges of dredged or fill material."[59] The guidelines set forth four basic requirements to determine if a proposed discharge complies with the Section 404(b)(1) guidelines. First, a "practicable alternative to the proposed discharge" may not exist that would have less negative effects on the aquatic system without having other adverse environmental consequences.[60] A practicable alternative may be an activity with no discharge of dredged or fill material or discharge at a different location.[61] Another consideration by USACE for determining practicability of an alternative is the goals of the proposed project as well as the costs, existing technologies, and logistics of achieving those goals using the alternative.[62] Second, the guidelines prohibit discharges that violate either state water quality standards or toxic effluent standards, jeopardize endangered or threatened species, or threaten marine sanctuaries.[63] Third, the Section 404(b)(1) guidelines do not allow Section 404 permits that authorize discharges that would "cause or contribute to significant degradation of the waters of the United States."[64] Significant adverse effects are defined as including impacts on human health, aquatic sites, wildlife, aquatic life, fish and wildlife habitat, and the capability of wetlands to assimilate nutrients, and provide recreational, aesthetic, and economic benefits.[65] Finally, the guidelines mandate that a permitted discharge require that all "appropriate and practicable steps have been taken to minimize potential adverse impacts," thereby establishing a mitigation sequence, under which compensatory mitigation is required to offset unavoidable impacts to aquatic resources.[66]

The greatest obstacle applicants often face in complying with the Section 404(b)(1) guidelines is the requirement that a project be the least environmentally damaging practicable alternative, or "LEDPA," and certain projects must endure an even more rigorous alternatives analysis than LEDPA.[67] When a proposed project involves discharge into a "special aquatic site"[68] and that project is not "water dependent," two presumptions apply that the applicant must rebut in addition to establishing that the proposed project is the LEDPA. The first presumption is that practicable alternatives exist that do not involve special aquatic sites, unless clearly demonstrated otherwise.[69] Second, where a discharge is proposed for a special aquatic site, all practicable

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[58] *See* 40 C.F.R. Part 230.
[59] 40 C.F.R. § 230.1(a).
[60] *Id.* § 230.10(a).
[61] *Id.* § 230.10(a)(1).
[62] *Id.* § 230.10(a)(2).
[63] *Id.* § 230.10(b).
[64] *Id.* § 230.10(c).
[65] *Id.* § 230.10(c)(1)-(4).
[66] *Id.* § 230.10(d).
[67] *See* Jon Schutz, *The Steepest Hurdle in Obtaining a Clean Water Act Section 404 Permit: Complying with EPA's 404(b)(1) Guidelines' Least Environmentally Damaging Practicable Alternative Requirement*, 24 UCLA J. ENVT'L L. & POLY. 235, 235 (2006).
[68] "Special aquatic sites" are "geographic areas . . . possessing special ecological characteristics of productivity, habitat, wildlife protection, or other important and easily disrupted ecological values. These areas are generally recognized as significantly influencing or positively contributing to the general overall environmental health or vitality of the entire ecosystem of a region." § 230.3(q-1). Such sites include sanctuaries and refuges, wetlands, mud flats, vegetated shallows, coral reefs, and riffle and pool complexes. 40 C.F.R. §§ 230.40-.45.
[69] *Id.* § 230.10(a)(3).

alternatives to the proposed discharge that do not involve a discharge into the special aquatic site are presumed to have a less adverse impact, unless clearly demonstrated otherwise.[70] Whether this heightened burden applies thus depends, in part, on whether USACE determines a project to be "water dependent."

Water dependency means that the project requires access or proximity to or siting within a special aquatic site to fulfill its basic purpose.[71] Beyond these parameters, however, very little law exists on how the determination of water dependence is made by USACE. Agency guidance explains that the water dependency analysis is derived from the basic project purpose. USACE defines the basic project purpose as "[t]he fundamental, essential, or irreducible purpose of the proposed project and is used to determine whether the project is 'water dependent' or not."[72] The basic project purpose is a conceptual idea that broadly describes the thrust of the proposed project. In the case of a large water supply project, particularly a reservoir, the determination that a water supply project is ***not*** water dependent is consistent with USACE guidance and the law.[73] Conceptually, a long-term water supply project could be located outside of a special aquatic site. Even if a reservoir is the selected alternative, it could be located off-channel such that no special aquatic sites–namely wetlands–are impacted.

Pursuant to the Section 404(b)(1) guidelines, USACE is required to make factual determinations of the short-term and long-term effects a proposed project will have on the "physical, chemical, and biological components of the aquatic environment"[74] and must make specific findings of compliance with the guidelines so it can issue a Section 404 permit.[75] USACE ultimately has sole authority to apply the Section 404(b)(1) guidelines to determine if a proposed project satisfies the Section 404(b)(1) criteria.[76] But, EPA and other federal agencies participate in the evaluation of whether a project complies with the Section 404(b)(1) guidelines and may raise issues for USACE consideration. Even though USACE does have sole authority with respect to a determination regarding compliance with the guidelines, EPA can ask USACE to reconsider or elevate a permit decision under Section 404(q) of the CWA appeal procedures or, as a last resort, veto the 404 permit issuance pursuant to Section 404(c) of the CWA.[77]

EPA's authority to request a 404 permit decision be elevated to USACE and EPA Headquarters derives from Section 404(q) of the CWA[78] and a Memorandum of Agreement (MOA) between EPA and USACE.[79] The MOA provides that the EPA Regional Administrators may request reviews of individual permit decisions by USACE District Engineers when a decision results

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[70] *Id.*

[71] *Id.*

[72] U.S. Army Corps of Engineers, *Alternative Analysis Guidance* (October 23, 2003). In contrast, the overall project purpose is the "purpose of the applicant's specific project: the 404 alternatives analysis based on the overall project purpose." *Id.*

[73] *See* U.S. Army Corps of Engineers, *Standard Operating Procedures for the Regulatory Program*, at 6 (1999); U.S. Army Corps of Engineers, *Regulatory Guidance Letter 92-02: Water Dependency and Cranberry Production* (June 26, 1992); U.S. Army Corps of Engineers, *Updated Standard Operating Procedures for the U.S. Army Corps of Engineers Regulatory Program*, at 15 (July 1, 2009).

[74] 40 C.F.R. § 230.11.

[75] *Id.* § 230.12.

[76] *See* Memorandum of Agreement between the EPA and the Dep't of the Army 1-3 (Aug. 11, 1992).

[77] *See* 33 U.S.C. § 1344(q); Memorandum of Agreement between the EPA and the Dep't of the Army 1-3 (Aug. 11, 1992).

[78] 33 U.S.C. § 1344(q).

[79] MOA between the EPA and the Dep't of the Army (Aug. 11, 1992).

in net loss from the project which will result in unacceptable adverse effects to aquatic resources of national importance, or "ARNIs".[80] If the Regional Administrator and District Engineer cannot reach resolution, the Regional Administrator can "elevate" the review to EPA and USACE Headquarters.[81] USACE has the authority to proceed with issuance of the permit if the USACE determines that project will not result in unacceptable adverse effects to ARNIs.[82] Assuming EPA continues to disagree with USACE's decision to issue a 404 permit, EPA can proceed with vetoing such permit.

Section 404(c) – EPA Veto Authority

Under Section 404(c) of the CWA, EPA is expressly given the right to veto a 404 permit application either before or after the USACE's approval of such application.[83] Section 404(c) provides that the Administrator of the EPA may prohibit the issuance of a 404 permit outright or overrule the USACE determination to issue a permit by "withdrawal of specification."[84] The Administrator may veto a 404 permit after notice and opportunity for public hearing and when he or she determines that issuing the 404 permit will have an unacceptable adverse effect on (1) municipal water supplies, (2) fish and wildlife, or (3) recreational areas.[85] The Administrator may only make this determination after consulting with the Secretary of the Army, acting through the Chief of Engineers, and then the Administrator must set forth in writing and make public the reasons for prohibiting the 404 permit.[86]

As of 2017, EPA has vetoed thirteen 404 permits pursuant to Section 404(c) of the CWA.[87] The types of projects vetoed vary, but most were vetoed due to unacceptable adverse impacts to a variety of aquatic resources and wildlife habitats. Four of the projects vetoed were reservoir projects—(1) Two Forks Reservoir, final determination in 1990; (2) Big River, final determination in 1990; (3) Ware Creek, final determination in 1989; and (4) Lake Alma, final determination in 1988.[88] Although EPA has not vetoed a water supply reservoir since 1990, EPA's veto authority under Section 404(c) is alive and well. Of course, under the Trump Administration, it is unlikely that we will see EPA make use of its veto authority, and in fact, EPA has recently taken steps to withdraw a proposed determination to veto a 404 permit for Pebble Mine in Alaska.[89]

The breadth of EPA's veto authority was most recently tested in the courts in 2016 in *Mingo Logan Coal Company v. EPA*.[90] On January 13, 2011, the EPA issued a Final Determination to withdraw specification of certain streams as disposal sites for dredged or fill material in connection

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[80] *Id.* at 5.
[81] *Id.* at 9.
[82] MOA between the EPA and the Dep't of the Army, at 1-3 (Aug. 11, 1992).
[83] 33. U.S.C. § 1344(c); *see* 40 C.F.R. § 231(a).
[84] *Id.*; "Withdraw specification means to remove from designation any area already specified as a disposal site by the U.S. Army USACE of Engineers or by a state which has assumed the section 404 program, or any portion of such area." 40 C.F.R. § 231.2(a).
[85] 33 U.S.C. § 1344(c).
[86] *Id.* § 1344(c)-(d).
[87] EPA, Chronology of 404(c) Actions, http://water.epa.gov/lawsregs/guidance/wetlands/404c.cfm, (last visited July 11, 2017).
[88] *Id.*
[89] EPA, *EPA proposes to withdraw Clean Water Act restrictions for Pebble Mine in Alaska's Bristol Bay watershed,* https://www.epa.gov/newsreleases/epa-proposes-withdraw-clean-water-act-restrictions-pebble-mine-alaskas-bristol-bay (last visited July 14, 2017).
[90] Mingo Logan Coal Co. v. EPA, 829 F.3d 710 (D.C. Cir. 2016).

with the construction of a surface mine—essentially vetoing certain portions of an existing 404 permit authorizing such disposal sites that was issued by the USACE almost three years ***before*** EPA's veto.[91] The basis of EPA's veto was that the discharge of dredged or fill material associated with the construction and operation of the coal mine would result in unacceptable adverse effects on wildlife, particularly through significant loss of wildlife habitat and significant degradation of downstream aquatic ecosystems.[92] The coal mine operator filed suit against EPA seeking a declaration that EPA lacked the authority to modify or revoke the 404 permit following the USACE's issuance of the permit.[93] The district court agreed with the coal mine operator, holding that EPA lacked the authority under Section 404(c) to utilize its veto authority for an indefinite period of time after the permit has been issued.[94] EPA appealed the decision to the U.S. Court of Appeals for the D.C. Circuit and the court disagreed with the district court, concluding that the language of the CWA unambiguously granted EPA the authority to withdraw permits that were in effect.[95] However, since Mingo Logan Coal Company had originally challenged EPA's action on additional grounds that the district court had not considered, the D.C. Circuit remanded the case to allow the lower court to consider those additional claims.[96] In particular, Mingo argued that EPA's 404(c) determination that the permit would have unacceptable adverse effects was arbitrary and capricious.[97] Nevertheless, the district court subsequently upheld EPA's conclusion concerning unacceptable adverse effects and determined that EPA's decision warranted deference because the language of Section 404 does not require the agency to have substantial new information to veto an existing permit.[98] In December 2014, Mingo Logan again appealed the district court's ruling to the D.C. Circuit and the court upheld the district court's ruling, providing that "EPA's *ex post* withdrawal is a product of its broad veto authority under the CWA."[99]

The most recent EPA 404(c) action was initiated in July 2014 for the site of a proposed copper and gold mine, known as Pebble Mine, that would eliminate at least 1,100 acres of wetlands, lakes, and ponds, as well as five miles of streams in the Bristol Bay watershed of southwest Alaska.[100] According to EPA, the Bristol Bay watershed is a "largely pristine, intact ecosystem with outstanding ecological resources," providing habitat for at least 29 species of fish, 40 species of mammals, and 190 species of birds and the watershed provides numerous recreational opportunities, including commercial, sport, and subsistence fishing; sport and subsistence hunting; wildlife viewing; and tourism.[101]

EPA initiated a 404(c) action to veto the 404 permit, even though Pebble Limited Partnership (Pebble LP) had yet to even submit a 404 permit application.[102] EPA's assessment of the

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[91] Mingo Logan Coal Co. v. EPA, 850 F.Supp.2d 133, 136-37 (D.D.C. 2012).
[92] 76 Fed. Reg. 3126 (January 19, 2011).
[93] *Mingo*, 850 F.Supp. at 134.
[94] *Id.* at 153.
[95] Mingo Logan Coal Co. v. EPA, 714 F.3d 608, 616 (D.C. Cir. 2013), *cert. denied*, 134 S. Ct. 1540 (2014).
[96] *Id.* at 609.
[97] Mingo Logan Coal Co. v. EPA, 70 F.Supp.3d 151, 161 (D.D.C. 2014).
[98] *Id.* at 168.
[99] *Mingo*, 829 F.3d at 713.
[100] EPA, *Proposed Determination of the U.S. Environmental Protection Agency Region 10 Pursuant to Section 404(c) of the Clean Water Act: Pebble Deposit Area, Southwest Alaska* ES-6 (July 2014) (referred to hereafter as "Pebble Mine Proposed Determination").
[101] *Id.* at 3-1.
[102] Juliet Eilperin and Brady Dennis, *Obama blocked this controversial Alaskan gold mine. Trump just gave it new life.*, THE WASHINGTON POST (July 19, 2017), https://www.washingtonpost.com/news/energy-

mining project concluded that it would "pose significant risks to the unparalleled ecosystem that produces one of the greatest wild salmon fisheries in the world"[103] and that the proposed compensatory mitigation would be inadequate to offset such degradation.[104] As a result, EPA proposed invoking its 404(c) authority to "restrict discharge of dredged or fill material related to mining the Pebble deposit into waters of the United States."[105] Pebble LP filed three lawsuits challenging EPA's proposed 404(c) determination in 2014.[106] In November 2014, Pebble LP obtained a preliminary injunction in one of the lawsuits from the federal district court of Alaska prohibiting EPA from taking further 404(c) action until other claims in the pending lawsuits were resolved.[107] Following lengthy settlement discussions, and a presidential administration change, in May 2017, EPA entered into a settlement agreement with Pebble LP to resolve this 2014 litigation.[108] The agreement provides Pebble LP additional time to apply for a 404 permit before EPA takes further action in its 404(c) review.[109] On July 19, 2017, EPA published notice and requested public comments on its proposal to withdraw its July 2014 Clean Water Act Proposed Determination that would, if finalized, have imposed restrictions on the discharge of dredged or fill material associated with the potential Pebble Mine in Alaska's Bristol Bay watershed.

EPA's veto of a 404 permit for a reservoir is not outside the realm of possibility if it determines that a reservoir would have unacceptable adverse impacts to aquatic resources and wildlife habitat. In the most recent veto of a 404 permit for a water supply reservoir, the Two Forks Reservoir in 1990, EPA based its veto on a number of factors. EPA determined that the project would have significant impacts to fisheries by eliminating trout habitat that would in turn reduce trout standing crop.[110] EPA also noted impacts to endangered species, including the bald eagle and peregrine falcon, along with impacts to other wildlife.[111] Another basis for EPA's veto was the insufficient need for the water supply project, particularly that there was no need within the next 25 years for the water supply. Further, the population the project would serve was actually decreasing, which was in turn expected to result in a decrease in demand for water supplies.[112]

The lack of a recent veto action of a large reservoir project may be due in part to a lull in the construction of dams and reservoirs across the United States.[113] But, with the increasing need for additional water supplies, new water supply reservoirs must be developed. In fact, as noted, the 2017 State Water Plan identifies 26 new reservoirs to meet water demands throughout the state that will likely require 404 permits and must survive EPA scrutiny and its veto. EPA's prior veto actions, and the bases for each, should be used by those developing water supplies as a precautionary tale for securing a 404 permit.

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environment/wp/2017/05/12/obama-blocked-this-controversial-alaskan-gold-mine-trump-just-gave-it-new-life/?utm_term=.c3ade107ee24.

[103] 79 Fed. Reg. 42314, 42316 (July 21, 2014).

[104] *Id.* at 42318.

[105] *Id.* at 42317.

[106] 83 Fed. Reg. 33123 (July 19, 2017).

[107] *Id.*

[108] *Id.*

[109] *Id.* at 33123-33124.

[110] 54 Fed. Reg. 36866 (September 5, 1989).

[111] *Id.*

[112] *Id.*

[113] *See* Daniel F. Lueke, *Two Forks: The Rise and Fall of a Dam*, 14 Natural Res. & Env't A.B.A. J. 24, 24-28, 69 (Summer 1999).

Overcoming "Damming" Effects: 404 Permitting Reform for Development of Critical Water Supplies

With the "damming" effect that compliance with Section 404 of the CWA can create, the development of needed water supplies must be undertaken with careful planning and preparation, particularly in establishing the need for the water supply project and selecting (1) the source of supply; (2) the type of water supply project; and (3) the location of such water supply project. It is imperative to understand the interplay between federal laws and water supply project development even if there are no federal resources to be expended in constructing or operating the project. The Section 404 permitting process alone can significantly delay a water supply project—often taking up to 10 years or more to complete the process—and then at the end of the 10+ year process, the project can be completely killed if EPA chooses to veto permit issuance. As Texas continues to grapple with its growing populations, water supply projects must be planned with a full understanding of the ability to timely develop such projects in compliance with Section 404 of the CWA.

Recognizing the impacts federal laws and regulations have on the development of infrastructure projects, efforts have been undertaken by both the Obama Administration and the Trump Administration to recognize the importance of certain infrastructure projects and attempt to streamline the permitting for these projects. On December 4, 2015, President Obama signed into law the Fixing America's Surface Transportation Act, or "FAST Act."[114] The FAST Act is primarily a funding measure for highways and transit projects,[115] but Title XLI of the Act (Federal Permitting Improvement) mandates National Environmental Policy Act (NEPA) reforms applicable to certain infrastructure projects.[116] In particular, this title of the FAST Act increases interagency cooperation for authorizations and environmental reviews, promotes clarity and transparency, and expedites infrastructure project approvals.[117] A number of these reforms were required to be implemented within one (1) year of the enactment of the statute, but still serve as models of agency best practices and represent a recent directive on how agencies should streamline NEPA and CWA Section 404 permitting reviews.[118]

The FAST Act reforms apply squarely to large water supply projects, including reservoirs.[119] Large, complex water supply projects make enhanced oversight and coordination especially beneficial, and the statute's definition of "covered projects" includes "water resource projects."[120] Streamlining under the FAST Act also includes limitations on claims seeking judicial review of authorizations for covered infrastructure projects, including barring actions filed later than two (2) years after the date of publication in the Federal Register of the final record of decision or approval or denial of a permit.[121] The FAST Act also provides that an action pertaining to an environmental review conducted under NEPA is barred if the party filing the action did not submit a comment during the environmental review or the comments submitted by the party were not sufficiently

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[114] U.S. Dep't of Transp. Fed. Highway Admin., *Fixing America's Surface Transportation Act or "FAST Act,"* https://www.fhwa.dot.gov/fastact/ (last visited July 19, 2017).
[115] *Id.*
[116] 42 U.S.C. § 41001-41014.
[117] *Id.*
[118] *Id.* § 41002(c)(1)(C)(i).
[119] *Id.* § 41001(6)(A).
[120] *Id.*
[121] *Id.* § 41007(a)(1)(A).

detailed "so as to put the lead agency on notice of the issue on which the party seeks judicial review."[122]

Along similar lines, President Trump issued an Executive Order on January 24, 2017, that seeks to streamline environmental reviews and permitting for certain infrastructure projects.[123] The order specifically provides that the Chairman of the Council on Environmental Quality (CEQ) shall determine whether a project is a "high priority" infrastructure project upon his own initiative or upon request of a state governor, or the head of any executive department or agency.[124] This determination is based on the consideration of several factors, including "the project's importance to the general welfare, value to the Nation, environmental benefits, and such other factors as the Chairman deems relevant."[125] If a project is deemed high priority, the Chairman of the CEQ is to coordinate "expedited procedures and deadlines for completion of environmental reviews and approvals" with the heads of relevant agencies overseeing such project.[126] The order also requires the head of a relevant agency to provide a written explanation to the Chairman explaining any cause for delays in environmental reviews and project permitting, including "providing concrete actions taken by the agency to complete such reviews and approvals as expeditiously as possible."[127] It is not yet clear as to how exactly this Executive Order will be implemented and whether it will be effective in expediting permitting of infrastructure projects, but following the release of this Executive Order, the Governor of Texas did work with various state agencies, including the Texas Water Development Board (TWDB), to identify infrastructure projects, particularly water supply projects, that should be deemed high priority for expedited permitting.

At the state level, USACE Southwestern Division, EPA Region 6, and the TWDB have also recently recognized the need for streamlining the state and federal permitting process for large water supply projects typically requiring the development of an environmental impact statement.[128] In July 2016, these agencies entered into a partnering agreement with the goal of making the Section 404 permit evaluation process for future water supply projects in Texas "clearer and more predictable for permit applicants and stakeholders."[129] The partnering agreement sets out action items that are generally considered a compilation of existing information and processes that when evaluated during the permitting process can delay that process because there is no recognized standard for how these items are evaluated.[130] The list of action items includes the evaluation of: (1) population growth estimates for estimating water demand and need; (2) water use rate in gallons per capita per day as an indicator of prior conservation efforts; (3) future conservation as a water supply need reducer rather than project alternative; (4) water reuse as a water supply need reducer or project alternative; (5) water supply need and demand for industrial water use; (6) safety factor or reserve in water supply

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[122] *Id.* § 41007(a)(1)(B).

[123] The White House Office of the Press Secretary, *Executive Order Expediting Environmental Reviews and Approvals For High Priority Infrastructure Projects* (January 24, 2017), https://www.whitehouse.gov/the-press-office/2017/01/24/executive-order-expediting-environmental-reviews-and-approvals-high.

[124] *Id.*

[125] *Id.*

[126] *Id.*

[127] *Id.*

[128] EPA, *Partnering Agreement Improves Coordination for Large Texas Water Supply Projects* (July 27, 2016), https://www.epa.gov/newsreleases/partnering-agreement-improves-coordination-large-texas-water-supply-projects.

[129] USACE and EPA, *Partnering Agreement Between U.S. Army Corps of Engineers Southwestern Division and U.S. Environmental Protection Agency Region 6* 1 (July 27, 2016).

[130] *Id.*

need and demand; and (7) impact assessment models and data needed for permit evaluations.[131] The partnering agreement is for a term of three (3) years, but can be extended or modified though mutual written agreement of the parties.[132]

Even with these recent streamlining efforts at the federal and state level, further reform is still required to ensure that critical water supply projects may be permitted and developed within the timeframe in which they are needed. A priority for development of municipal water supplies in particular should be recognized in Section 404 permitting, particularly as it relates to evaluation of a project's compliance with the Section 404(b)(1) guidelines and EPA's use of its veto authority. Adjustments to compensatory mitigation requirements, which can be near impossible to comply with when developing municipal water supplies in arid regions, should recognize the environmental benefits of the water supply project itself, such as the aquatic habitat created by a reservoir, including fringe wetlands along reservoir shorelines. Additional reform, as recognized in the FAST Act, is needed to shorten the statute of limitations for actions filed concerning compliance with CWA and NEPA. Currently, the statute of limitations for these types of actions can significantly delay and kill a project, being five and six years, respectively, for CWA and NEPA actions.[133] Moreover, legislation is needed to limit and restrict EPA's broad sweeping authority to veto Section 404 permits. Given the growth being experienced in Texas along with the changing climatic conditions, particularly more severe drought conditions, Texas water suppliers should collaborate on pursuing federal regulatory reform to avoid the damming effects of these regulations and to ensure timely development of critical new water supplies.

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[131] *Id.* at 2-4.

[132] *Id.* at 4.

[133] In Section 404 permitting actions, courts generally apply the federal five-year statute of limitations in 28 U.S.C. § 2462. *Public Interest Research Group of New Jersey v. Powell Duffryn Terminals, Inc.*, 913 F.2d 64, 74-75 (3d Cir. 1990). For NEPA actions, courts apply the six-year statute of limitations under the Administrative Procedure Act, 28 U.S.C. § 2401(a). *See, e.g., Sierra Club v. Slater*, 120 F.3d 623 (6th Cir. 1997).

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OVERVIEW

Cliff Rothenstein has more than 30 years of congressional and federal executive experience. Prior to joining K&L Gates, he served as Director of Legislative Affairs for the Federal Highway Administration (FHWA). In this capacity, Mr. Rothenstein worked on a daily basis with the FHWA Administrator, Deputy Administrator, and Deputy Secretary of the U.S. Department of Transportation (DOT). During Mr. Rothenstein's tenure at FHWA, he led the development and advocacy efforts on legislation to reauthorize the nation's surface transportation law where he played a significant role in developing and recommending to the FHWA Administrator and to other DOT executives proposed changes to the law to streamline project delivery and expand investments in highways, bridges, and multimodal transportation projects. Mr. Rothenstein also coordinated FHWA's discretionary grant programs that fund highway and bridge improvement projects and managed FHWA's relationships with Congress on highway-specific projects and issues. In addition to his tenure at FHWA, Mr. Rothenstein served as a senior advisor on the Senate Environment and Public Works Committee which has jurisdiction over environment and surface transportation issues. He led the Committees efforts on the reauthorization of Superfund, the Resource Conservation and Recovery Act, and the Clean Water and Safe Drinking Water Acts. Mr. Rothenstein also served for 20 years at the Environmental Protection Agency (EPA), including as the Deputy Assistant Administrator and Director of the Office of Underground Storage Tanks. He has represented clients at the intersection of environmental, energy, transportation, and infrastructure policy and regulation, including advising clients on Superfund, the Clean and Safe Drinking Water Acts, the Water Resources Development Act, and the Clean Air and Resource Conservation and Recovery Acts; National Environmental Policy Act strategies for major transportation and energy infrastructure projects; funding opportunities including TIGER grant funding; and issues related to tolling of interstates.

PROFESSIONAL BACKGROUND

Before joining K&L Gates, Mr. Rothenstein served most recently as the director of the Office of Legislative Affairs and Policy Communications at the Federal Highway Administration where he served as the primary point of contact with Congress on the surface transportation reauthorization and other legislative and policy matters. In this capacity Mr. Rothenstein advised the Federal Highway Administrator and senior DOT executives on legislation to reauthorize the surface transportation laws, discretionary grant, including TIGER grant issues and on project specific congressional inquiries.

Prior to his work at FHWA, Mr. Rothenstein worked at the Environmental Protection Agency (EPA) as the Deputy Assistant Administrator for Solid Waste and Hazardous Response, the top administration official for Superfund, waste management, brownfields and recycling efforts. Mr. Rothenstein also served as EPA's director of the Office of Underground Tanks. While with the EPA, he led the agency's Superfund reauthorization efforts which resulted in the enactment of the Small Business Liability Relief and Brownfields Revitalization Act and the Superfund Recycling Act. He also successfully implemented key provisions of the Energy Policy Act of 2005 regulating gas stations and underground storage tanks.

Mr. Rothenstein also served as a professional staff member for almost a decade on the Senate Environment and Public Works Committee under Senator Max Baucus (D-MT). While with the committee, he advised members on virtually all environmental matters including Superfund reauthorization, brownfields, and the Clean Air Act as well as on transportation issues before the committee.

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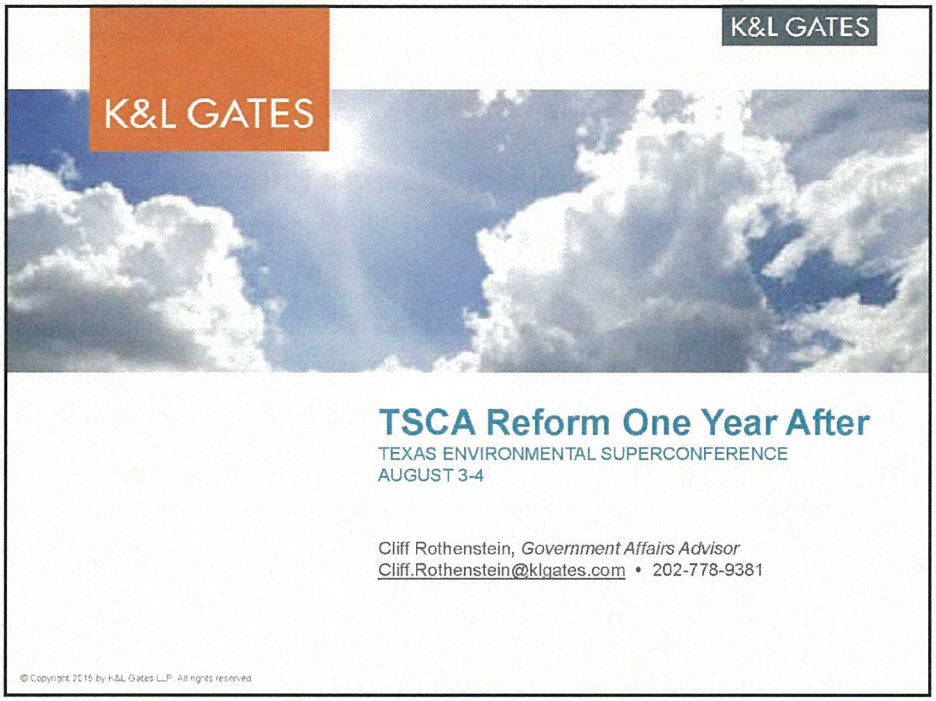
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TSCA Reform One Year After

TEXAS ENVIRONMENTAL SUPERCONFERENCE
AUGUST 3-4

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A Bit of TSCA History – A Few Questions to Ponder

- Is TSCA a priority for EPA Administrator Pruitt?
- How did TSCA reform happen in a gridlocked Congress?
- What changed in the new law?
- What does the new law mean to you?
- When should you expect to see change?

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Inside EPA – Is TSCA Implementation a Priority?

- Key Players
  - 50 political appointees in place "drinking from a fire hose"
    - Dr. Nancy Beck the Deputy Assistant Administrator for Chemical Safety & Pollution Prevention
    - Dr. Michael Dourson nominated as Assistant Administrator for Chemical Safety & Pollution Prevention
  - No Assistant Administrators or Regional Administrators are in place
- Budget
  - Proposed 31% budget cut
- Priorities
  - Emphasis on federalism and transition enforcement to states
  - Repeal of Clean Power Plan and Waters of the US rules
  - Superfund reform
  - TSCA Implementation

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TSCA Reform - "It was 40 years ago today"

In 1976 President Ford signed TSCA into law

What else happened in 1976?

A. First National Broadcast of Austin City Limits
B. Ronald Reagan was Time Man of the Year
C. Apple Computer was launched
D. Queen Elizabeth became the first state leader to send an email

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One Hundred Fourteenth Congress
of the
United States of America

AT THE SECOND SESSION
Begun and held at the City of Washington on Monday, the fourth day of January, two thousand and sixteen

An Act

In the 40 years since TSCA was enacted…

- EPA ordered testing of roughly 250 of 84,000 chemicals in use and restricted or banned 9
- EPA's asbestos ban was struck down
- A patchwork of state laws filled the void with 34 states adopting chemical policies
- Most everyone agreed that TSCA was broken and needed a rewrite

On June 22 2016 President Obama signed The Frank R. Lautenberg Chemical Safety for the 21st Century Act – PUBLIC LAW 114–182

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Politics Makes Strange Bedfellows

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

AMERICANS for TAX REFORM

American Chemistry Council

march of dimes
A FIGHTING CHANCE FOR EVERY BABY

AUTO ALLIANCE
DRIVING INNOVATION

THE HUMANE SOCIETY OF THE UNITED STATES

Consumer Technology Association

INTERNATIONAL ASSOCIATION OF MACHINISTS AND AEROSPACE WORKERS

SOT Society of Toxicology

EDF ENVIRONMENTAL DEFENSE FUND
Finding the ways that work



MOMS clean air FORCE
FIGHTING FOR OUR KIDS' HEALTH

NRDC
THE EARTH'S BEST DEFENSE

IPC

NORTH AMERICA'S BUILDING TRADES UNIONS
Value on Display. Every Day.

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In Their Own Words

- *"I applaud the Senate for taking another crucial step towards a goal that both I and my friend the late Senator Frank R. Lautenberg shared: effectively removing toxic chemicals from the products millions of American families use every day,..."*
  Congressman Frank Pallone (D-NJ)
- *"This legislation is a vast improvement over current law and a careful compromise that's good for consumers, good for jobs and good for the environment."*
  Congressman John Shimkus (R-IL)
- *"The Lautenberg Act is long overdue, as it is the first major environmental reform to be enacted in over a quarter century…"*
  Senator Jim Inhofe (R-OK)
- *"The journey to this moment has been the most complicated journey I have ever had to take on any piece of legislation…"*
  Senator Barbara Boxer (D-CA)

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But Not Everyone likes It

- *"While the new version of the Toxic Substance Control Act, or TSCA, that is likely headed to President Obama's desk includes some important improvements, the bill falls short of adequately protecting Americans from exposure to hazardous chemicals. Is the bill better than current law? It's a low bar, because TSCA is widely considered the least effective environmental law on the books."*
  Environmental Working Group
- *"After all the glowing articles about the bipartisan revisions to the Toxic Substances Control Act (TSCA), what this means to average citizens is that they need to hustle to the nearest home center and purchase a lifetime supply of acetone, MEK, lacquer thinner, etc., as these products will start disappearing from store shelves due to our new enlightenment…"*
  Steve Helmreich *Colorado Springs, Colo.*

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Frank R. Lautenberg Chemical Safety for the 21st Century Act

How the Law Changed

- The Lautenberg Act is a compromise with a transformative impact
  - ✓ Requires an EPA affirmative safety determination that a new chemical or new use will not pose an unreasonable risk before it may enter the marketplace
  - ✓ Mandates EPA to prioritize all existing chemicals as high and low priority and conduct risk assessments of high priority chemicals pursuant to a statutory schedule
  - ✓ Mandates regulation of high priority chemicals pursuant to a statutory schedule
  - ✓ Preempts states from taking actions where EPA is acting on a chemical
  - ✓ Requires reaffirmation of past Confidential Business Information claims
  - ✓ Explicitly protects vulnerable populations in risk assessments and regulations
  - ✓ Eases testing restrictions and reduces and replaces animal testing with reliable alternatives

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Frank R. Lautenberg Chemical Safety for the 21st Century Act

What should you expect?

Greater Scrutiny, Transparency, Review and Regulation of Existing Chemicals

This means …

- A company's key ingredients, raw materials or products are about to get much greater scrutiny than in the past, including chemicals you have manufactured and used for decades.
- Companies should expect more testing and future regulation of those chemicals that EPA classifies as high priority chemicals (because of their unreasonable risk or the lack of information)

Before - TSCA 1976	***Now - Lautenberg Act***
▪ EPA Regulation of existing chemicals was limited ▪ The lack of data made regulation less likely	▪ *EPA must now systematically scrutinize, prioritize and assess existing chemicals, key ingredients, raw materials and products and* can order testing if information is needed to prioritize or classify a chemical as high priority ▪ EPA must: ○ "Reset" the inventory of active and inactive chemicals in commerce ○ Prioritize chemicals in commerce into high and low priorities ○ Evaluate, determine risk and regulate chemicals with an unreasonable risk pursuant to statutory timeframes

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Frank R. Lautenberg Chemical Safety for the 21st Century Act

What should you expect?

More Testing and Data Collection and Affirmative EPA Approval of New Chemicals

This means ...

- The burden of proof for getting a new chemical to market will be shifted to companies.
- The lack of data means more scrutiny of the chemicals
- Companies will need to demonstrate to EPA that the new chemical or new use does not pose an unreasonable risk
- If information is lacking EPA can order testing and prevent a chemical entry into the market place or impose restrictions

Before - TSCA 1976	***Now - Lautenberg Act***
▪ New chemicals were automatically approved if EPA did not demonstrate that the chemical would present an unreasonable risk within 90 days of a Pre-Manufacturing Notice ▪ The lack of data meant that that market restrictions were less likely	▪ EPA must affirmatively find that a new chemical or new use will meet the safety standard before it can enter the marketplace ▪ Within 90 day of a PMN EPA must make an affirmative finding that the chemical: o Is not likely to present an unreasonable risk and may enter the marketplace; o Presents an unreasonable risk in which case EPA must prohibit or impose restrictions; or o EPA lacks information to make a finding and must prohibit or impose restrictions pending additional information

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Frank R. Lautenberg Chemical Safety for the 21st Century Act

What should you expect?

Eases EPA's Burden for Determining and Regulating Chemicals with Unreasonable Risk

This means ...

- It will be easier for EPA to determine if a chemical presents an unreasonable risk
- Easier for EPA to require testing and ultimately regulate chemicals

Before - TSCA 1976	***Now - Lautenberg Act***
Required EPA to:	EPA is now:
▪ Consider cost and benefits to determine if a chemical poses an unreasonable risk	▪ Explicitly precluded from considering costs in determining if a chemical presents an unreasonable risk
▪ Conduct a formal analysis showing that benefits of any proposed restriction outweigh cost	▪ Explicitly required to consider susceptible populations in assessing and regulating chemicals
▪ Choose the least burdensome restriction	▪ Given expanded authority to order testing
▪ Require testing of chemicals in limited circumstances	▪ No longer required to select the least burdensome regulation

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Frank R. Lautenberg Chemical Safety for the 21st Century Act

What should you expect?

Preempts New State Chemical Regulations but Grandfathers Some Old State Laws

This means ...

- The patchwork of state chemical regulations may be eased
- Companies will still to be subject to some state laws like California's Prop 65 and Massachusetts Toxic Use Reduction Act

Before - TSCA 1976	*Now - Lautenberg Act*
States were generally preempted from taking action when EPA has imposed restrictions	EPA must still evaluate a chemical and take action to trigger preemption. But... ▪ Some state actions are grandfathered ▪ Some state actions may be temporarily preserved ▪ States may continue to impose reporting, monitoring or disclosure requirements.

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Frank R. Lautenberg Chemical Safety for the 21st Century Act

State Preemption – What is Preempted?

Key Provision	TSCA 1976	Lautenberg Act of 2016
General Rule	EPA actions are generally preempted but rarely triggered because EPA has imposed so few restrictions.	▪ States may not take actions on an existing chemical when EPA is acting on that chemical. ▪ States are preempted from taking actions on a final EPA action on a chemical that does not present an unreasonable and on a chemical presenting an unreasonable risk subject to a regulation imposing restrictions unless the state action is identical to the Federal requirement, is adopted under authority of federal law, or adopted under a state air, water quality, waste treatment or disposal law. ▪ States are not preempted from imposing reporting, monitoring, disclosure requirements

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Frank R. Lautenberg Chemical Safety for the 21st Century Act

State Preemption – When is Preemption Triggered?

Key Provision	TSCA 1976	Lautenberg Act of 2016
Timing	States are not bared from imposing a regulation or requirement until EPA takes final action	▪ Preemption is triggered when EPA defines the scope of a risk evaluation for that chemical and ends 30 months after that or when the risk assessment is complete ▪ States may continue to enforce a law enacted prior to the risk evaluation ▪ EPA may waive "preemption pause" within 18 months to preserve a state action already initiated but the state action would be preempted once EPA takes a final action on that chemical ▪ EPA has 180 days to grant or deny a waiver or it is automatically approved and subject to judicial challenge

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Frank R. Lautenberg Chemical Safety for the 21st Century Act

State Preemption – What is Grandfathered?

Key Provision	TSCA 1976	Lautenberg Act of 2016
Grandfathering	More than 30 states have adopted measures restricting the use of individual chemical substances in place of action from the Federal government. These chemicals include: BPA, formaldehyde, lead, mercury and flame retardants.	▪ All state actions taken before April 22 of 2016, and past and future actions in effect on August 31, 2013, are not preempted (e.g., preserving California Prop 65 and Massachusetts Toxics Use Reduction Act) ▪ States can enforce existing restrictions until EPA initiates a review of the same chemicals and takes final action on the same uses of that chemical

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Frank R. Lautenberg Chemical Safety for the 21st Century Act

What should you expect?

Tightens CBI claims, increases chemical testing fees and increases enforcement penalties

This means ...

- Anyone claiming CBI protection (before or after enactment) must reassert and re-substantiate their claims
- Pay a fee for chemical testing
- Face higher penalties for non-compliance

Before - TSCA 1976	***Now - Lautenberg Act***
CBI - Protects trade secrets until EPA determines that the claim no longer meets rules for protection Fees - Authorizes EPA to collect fees no higher than $2,500 Penalties – Authorities EPA to impose fines at $25,000/day	CBI - Requires anyone claiming CBI protection (before or after enactment) to reassert, substantiate or re-substantiate claims. EPA must determine if the information should continue to be protected from disclosure. Protects CBI for 10 years with a 10 year extension Fees - Establishes a TSCA Service Fee fund within Treasury to cover costs of testing, evaluation and regulating new and existing chemicals. Allows EPA to set a fee capped at 25% of the costs or $25 million, whichever is less Penalties – Increases civil fines for violations to $37,500 and penalties for violating "imminent danger" restrictions to $50,000/day, plus potential of one-year prison sentence



What's next on the horizon?

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Regulatory Future Inside the Beltway and Beyond

WHITE HOUSE
Will the Administration fund the Lautenberg Act?

EPA
EPA must issue dozens of rules over the next 2 years. Will they meet statutory deadlines?



CONGRESS
Congress will oversee EPA implementation of the Lautenberg Act but will they increase funding?

STATE & LOCAL
More than 30 states have TSCA rules on their books - will more states try to beat EPA regulatory clock?

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Frank R. Lautenberg Chemical Safety for the 21st Century Act

Key Regulations

- **New Chemical Review**: EPA review of new chemicals and SNUs must be completed within 90-180 days or fees must be returned
- **Existing Chemical Prioritization**: EPA must designate a chemical as high or low priority within 9-12 months; if EPA cannot support a low priority designation it must be designated high priority
- **High Priority Chemicals**: Risk evaluation must be initiated upon designation; the scope of the evaluation must be published in 6 months after initiation; evaluations must be completed no later than 3 years after initiation with a 6 month extension
- **Regulation of Chemicals with Unreasonable Risk**: Publish rule (e.g., ban, phase out, use restrictions) within one year following publication of risk evaluation and final rule the next year, with 2 year extension; compliance date no more than 5 years after rule promulgation
- **CBI Reviews**: Publish rule 1 year after compiling list of active chemicals establishing 5 year plan to complete CBI reviews

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Frank R. Lautenberg Chemical Safety for the 21st Century Act

Key Actions Underway

- ✓ EPA Proposes New TSCA Process For Establishing Chemical Risk Reviews
  - Risk review process rule defines steps for evaluating risk of high priority chemicals including: publishing scope of assessment; assessing hazard and exposures; characterizing and determining risk
- ✓ EPA Floats Four-Step Plan For Prioritizing Chemical Reviews Under TSCA
  - Pre prioritization
  - Initiation
  - Proposed designation
  - Final designation
- ✓ EPA proposes TSCA Inventory 'Reset'
  - Retrospective electronic notification of chemicals that were manufactured or imported during 10 year period ending on 6/21/16
- ✓ EPA initiates risk review of first 10 chemicals

1,4 Dioxane	Methylene Chloride
1-Bromopropane	N-Methylpyrolidone
Asbestos	Pigment Violet 29
Caron Tetrachloride	Trichloroethylene
Cyclic Aliphatic Bromide Cluster	Tetrachloroethylene

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What's Next?

The Regulatory Timeline



September 2016
- ✓ EPA publish list of mercury compounds export prohibitions

June 2018
- Develop strategic plan for alternative test methods
- Manufacturers must submit report to EPA on mercury
- Develop any policies, procedures and guidance to carry out Lautenberg Act
- Publish rule 1 year after compiling list of active chemicals establishing 5 year plan to complete CBI reviews

2016 | 2017 | 2018 | 2019 | 2020

June 2016
Enactment of Lautenberg Act

December 2016
- ✓ Initiate risk evaluations for first 10 chemicals
- ✓ Initial RTC on EPA capacity to perform risk evaluations
- ✓ Review adequacy of records management standards
- ✓ RTC on EPA capabilities to implement Lautenberg Act

June 2017
- ✓ Publish rule establishing prioritization and risk evaluation process
- ✓ Publish rule requiring manufacturers to notify EPA within 180 days of active chemicals manufactured or processed
- ✓ Issue guidance for preparing draft risk evaluations
- ✓ Establish Science Advisory Committee on Chemicals
- ✓ Publish an annual plan and report on risk evaluations

June 2019
- Propose rules for persistent, bioaccumulative & toxic (PB&T) chemicals
- Propose rule limiting reporting of manufacturers of inorganic byproducts when recycled, reused or reprocessed

2020 (and beyond)
- Finalize PB&T rule and inorganic chemicals reporting rule
- Adjust fees after consulting with parties and every 3 years thereafter
- Initiate risk evaluations for 20 high priority and designate 20 chemicals as low priority
- RTC every 5 years on strategic plan for alternate test methods and on mercury compounds exports
- Fee authority terminates in June 2016 if not reauthorized
- Review adequacy of policies, procedures and guidance

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For More Information

- **New Toxic Substances Law Will Have Far-Reaching Impacts on American Business**
  http://www.klgates.com/new-toxic-substances-law-will-have-far-reaching-impacts-on-american-business-06-28-2016/
- **Federal Government Rewrites the Rules on Getting and Using Chemicals in the Marketplace**
  http://www.klgates.com/federal-government-rewrites-the-rules-on-getting-and-using-chemicals-in-the-marketplace-07-13-2016/
- **The "Most Contentious Issue" — Federal Preemption in the Amended Toxic Substances Control Act**
  http://www.klgates.com/the-most-contentious-issue--federal-preemption-in-the-amended-toxic-substances-control-act-07-28-2016/
- **Changes to Confidential Business Information Disclosure Under the Reformed Toxic Substances Control Act**
  http://www.klgates.com/changes-to-confidential-business-information-disclosure-under-the-reformed-toxic-substances-control-act-08-29-2016/

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Ms. Baker is a founding partner of the Houston litigation and environmental regulatory law firm of Baker • Wotring LLP, where she serves as Managing Partner. Ms. Baker has practiced environmental law for more than 30 years and obtained her law degree from the Georgetown University Law Center, where she received the Magoichi Kato Scholarship Award for Academic Excellence for Japanese American students. She obtained a Bachelor of Science degree, Summa Cum Laude, from the University of Maryland.

Ms. Baker's practice encompasses the full spectrum of environmental issues, with an emphasis on the handling of difficult and complex multi-party environmental cases, Superfund, environmental regulatory counseling and representation in enforcement, permitting, catastrophic release response, compliance and environmental support in corporate/real estate due diligence and transactional matters. She is an author and editor of the First and Second Editions of the Texas Environmental Law Handbook, published in January 1989 and October 1990 and is a co-author of two other books on environmental law. Ms. Baker has also authored and published more than 50 articles on environmental law, has lectured extensively on environmental legal issues, and has testified in a variety of cases as an expert witness on environmental law in the United States and Canada.

She is active in bar, law school, community and civic activities, most recently having been appointed by Mayor Sylvester Turner as Co-Chair of his 2016 Transition Team, where she selected and supervised 13 mayoral transition committees to develop policy recommendations for the Mayor on comprehensive financial reform, infrastructure, public safety, traffic and transportation, quality of life issues, economic opportunity and economic development, among other topics. Ms Baker actively promotes issues concerning the environment, minority advancement and gender equality issues, among others. Ms. Baker was featured on the cover of Diversity & The Bar magazine, a publication of the Minority Corporate Counsel Association, in connection with her work in the area of diversity. She is the recipient of the Ma'at Justice Award, awarded annually by the State Bar of Texas Women and the Law Section to an individual who has actively addressed the needs and issues of women in the legal profession and the community. Ms. Baker was also awarded the Texas Bar Foundation's Dan Rugeley Price Award presented to an outstanding practitioner dedicated to the bar and public. She has served as an Adjunct Professor of Environmental Law at both the University of Houston Law Center and the South Texas College of Law, and was co-founder and past Chair of the Houston Bar Association's Environmental Law Section. She was also a founder and Chair of the American Bar Association's national Environmental Law Group, supervising 10 environmental committees integrating issues of environmental law with real estate, landlord and tenant issues, due diligence, and merger and acquisition transactions. Ms. Baker was the 2008 Chair of the Houston Bar Foundation, the HBA's 501(c)(3) charitable foundation, and

other bar appointments have included serving on the Board of Directors of the Asian American Bar Association, as Vice Chair of the State Bar of Texas Standing Committee on Women in the Profession, and Co-Chair of the Houston Bar Association's Gender Fairness Committee, among others. Prior to forming the Baker • Wotring LLP firm, Ms. Baker headed the Environmental Law Practice group for the 120-lawyer firm of Mayor, Day, Caldwell & Keeton, L.L.P. for over a decade and also practiced environmental law in the D.C. and Houston offices of Fulbright & Jaworski, L.L.P. She is admitted to practice in both the District of Columbia and Texas.



Lee Fuller, Executive Vice President, joined the IPAA staff in 1998.

Fuller has more than 25 years of experience in federal policy issues. Fuller served as staff on the U.S. Senate Committee on Environment and Public Works including as the Minority Staff Director, serving under Senator Lloyd Bentsen. During this time, Fuller was involved with all major legislation developed by the Committee.

Subsequent to his service in Congress, Fuller has served as a vice president of the Smith-Free Group (and its predecessor organizations, Walker-Free Associates and Charls E. Walker Associates) and of Jellinek, Schwartz and Connolly, Inc., and as a senior legislative associate with Van Scoyoc Associates. At these firms he concentrated on developing, implementing and advocating policy strategies for clients involved with environmental legislation including proposals to restructure the regulation of oil and gas production wastes, the application of Superfund to oil and gas production facilities, and the air toxic provisions of the Clean Air Act as they apply to oil and gas production facilities.

Before coming to Washington, Fuller worked for Exxon Company, USA, at its Baytown, Texas, refinery providing technical support for process operations and managing environmental compliance issues. He graduated from Lehigh University as a Chemical Engineer.

INDEPENDENT PETROLEUM ASSOCIATION OF AMERICA

Environmental Issues in the Oil Patch

Lee O. Fuller

Executive Vice President

The environmental regulatory framework for oil and natural gas production has changed dramatically over the past decade at both federal and state levels. Much of this change reflects the growth in American oil and natural gas production resulting from the broad application of hydraulic fracturing and horizontal drilling to open access to shale gas and shale oil reserves. In the late 1990's and early 2000's, while there were a core of environmentalists opposing hydraulic fracturing, there was a counterweight among a number of environmental advocates that wanted to oppose coal combustion. Those groups supported a transition to natural gas as a step toward an acceptable renewal fuels climate management policy – viewing natural gas as a bridge to the ultimate objective.

By the mid-2000's, hydraulically fractured shale gas could be recognized not as a bridge to the future but as a superhighway of sustainable natural gas reserves for both American consumption and exports throughout the world. This reality coalesced environmental advocates and produced a vendetta toward natural gas – and later toward crude oil – targeting suppression of future development and shutdown of existing production. The scope of what is now commonly called the Keep It in the Ground movement is broad and expanding.

With roots in efforts to attack hydraulic fracturing as an unsafe technology – allegations that have been extensively shown to be egregiously baseless – the Keep It in the Ground agenda expanded. It moved to characterize all oil and natural gas production activities – activities that are no different for conventional production than for fracturing production – as fracturing, to imply that "fractured" natural gas is somehow different, to target not only the production of oil and natural gas but its transportation and use, and – more pertinently for the discussion – to expand its opposition to other environmental management issues. This discussion will primarily address air emissions regulatory issues including methane management.

Framing the Issues

To place the current environmental issues in context, it is necessary to review the past. Air emissions from oil and natural gas operations have not historically been a significant regulatory target. Most of the attention prior to the actions by the Obama Administration were directed toward some specific issues – management of poisonous hydrogen sulfide in sour oil or gas production areas, benzene emissions from glycol dehydrators and a few others. Some production operations in urban ozone nonattainment areas are regulated for Volatile Organic Compounds (VOC). But, because historic oil and natural gas production was largely comprised of rural operations from widely dispersed individual wells, the industry emissions profile did not generate aggressive regulatory initiatives at either the state or federal level.

Unconventional shale oil and natural gas production operations changes the perception of the emissions profile. Unconventional production concentrates the emissions potential. First, the use of horizontal drilling means that a single well can be producing from a geographic distance

of a mile or more from the well bore. Second, numerous wells are developed from one site such that any emissions are more concentrated. The issue of emissions perception is important in the context of the regulatory deliberations that are in play because limited analysis exists on the extent of these emissions. Yet, significant regulatory determinations have been made.

These technology changes were taking place at the same time that an array of political and regulatory initiatives was developing.

Initial Actions and Reactions by the Obama Administration

The first of these related to litigation involving the Clean Air Act (CAA) New Source Performance Standards (NSPS) for oil and natural gas production facilities. In January 2009, environmental groups filed an action to compel EPA to act under its CAA mandatory duty to review the oil and natural gas production facilities NSPS. The use of litigation to capture and drive regulatory agendas has been a growing challenge for all federal regulatory agencies. Created in a time when the development of regulations was far less litigious, in the current adversarial climate, agencies cannot realistically complete their regulatory tasks in the time frame envisioned by Congresses of the 1970s. Consequently, they are far more vulnerable to challenges based on failures to meet mandatory deadlines – challenges that are virtually impossible to rebut. Environmental groups use this weak position to attempt to grab control of an agency's regulatory agenda and shift it to their priorities.

In this instance, the CAA requires EPA to consider NSPS revisions for each category of standards every 8 years. EPA has missed this deadline for oil and natural gas production facilities. Unable to defend its position, EPA finalized a consent decree in February 2010 to propose regulations or a decision not to propose regulations in 2011 and finalize action in 2012.

Second, as EPA began its process, the Obama Administration began to embrace the environmentalist opposition to American oil and natural gas production. By early 2012, the Obama Administration had initiated actions by ten different agencies to federalize regulation of American oil and natural gas production. Then, as the election approached, in April 2012, the Obama Administration announced the creation of its Interagency Working Group to Support Safe and Responsible Development of Unconventional Domestic Natural Gas Resources. This Working Group allowed the Obama Administration to manage the diverse agency efforts that had been initiated reflecting the growing importance of American natural gas development in the economy. By the end of 2012, the intensity of federalizing oil and natural gas production regulation had diminished with three regulatory initiatives still active – EPA guidance to restrict the use of diesel fuel in hydraulic fracturing under the Safe Drinking Water Act, Bureau of Land Management (BLM) drilling regulations affecting hydraulically fractured wells, and the EPA CAA NSPS regulations under the consent decree.

Third, while the debate in the early years of the Obama Administration on climate change and greenhouse gases largely focused on carbon dioxide and on large utility coal-fired electric generators, there were elements that targeted oil and natural gas production. One was the ongoing Gas STAR voluntary reduction program that engaged producers to implement technologies to manage primarily methane emissions from their operations. Another was regulatory requirements to report emissions to the EPA Green House Gas Inventory (GHGI). This rulemaking (Subpart W for oil and natural gas systems) demonstrated EPA's limited understanding of the nature of oil and natural gas production operations and the limited analysis that had been applied to identify air emissions associated with the industry.

EPA finalized its oil and natural gas production facilities NSPS in 2012. They addressed oil and natural gas production, natural gas processing, production gathering and boosting stations, and natural gas compressor station. The oil and natural gas production regulations target the reduction of VOC from fractured natural gas wells, from oil wells, and from storage vessels. They specifically included reduced emissions completion (REC or Green Completion) limitations for fractured natural gas wells, pneumatic controllers from oil and natural gas wells, and oil and natural gas liquids storage vessels. In general, for the oil and natural gas production NSPS regulation – Subpart OOOO – EPA utilized the technologies that had been a part of the Gas STAR program to fulfill the Best System of Emissions Reduction (BSER) requirements of NSPS. However, the ever-present challenge of developing accurate definitions for the purposes of regulation led to conflicts related to the appropriateness of the BSER requirements to the full scope of facilities captured by the regulations. For example, the REC technology is utilized by hydraulically fractured wells where water can be separated from gas but the definitions captured nitrogen fractured wells that cannot use that technology. Not surprisingly, the regulations were challenged.

Subpart OOOO and Subpart W demonstrated EPA's limited understanding of the nature of oil and natural gas production facility emissions patterns. For NSPS development, failure to have a sound scope of knowledge on emissions and technologies creates a significant regulatory challenge. NSPS requires EPA to use "the best system of emission reduction which (taking into account the cost of achieving such reduction and any nonair quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated". It creates four components that must be assessed and balanced – cost, nonair quality health and environmental impact, energy requirements and adequate demonstration. However, EPA never developed robust information on the emissions from oil and natural gas production facilities, never developed robust information on technologies to manage emissions, and never developed robust information on the four factors needed to determine BSER. Instead, EPA relied on is Gas STAR experience and whatever literature was available to it.

In 2013, an analysis developed by the University of Texas generated a new understanding of the emissions dynamics of oil and natural gas production facilities. Most methane emissions studies involve acquiring data from methane plumes using offsite monitoring. Inherently, this approach cannot distinguish between fugitive emissions and permitted emissions from vents and other operations. The University of Texas study included onsite emissions monitoring. One of its most significant findings was that the emissions profile from production operations included a substantial "fat tail" component. That is, while most of the equipment was characterized by low emissions, a small segment would have higher releases due to some type of failure. It raised the challenge of developing fugitive emissions management programs that target correcting this small segment cost effectively. Several state regulatory programs began to develop fugitive emissions programs.

By the beginning of 2014, the political, technical, regulatory framework was characterized by the following components. The Obama Administration was pursuing a more limited regulatory agenda in the context of managing emissions from the expanding development of natural gas. Technically, the emerging understanding of oil and natural gas production emissions was identifying that completion emissions were well managed by REC technology for hydraulically fractured wells, that operating emissions were generally low but with some "fat tails" that needed to be managed, and that the extent of this understanding was based on a limited amount of

information and more was needed. Regulatorily, the primary federal regulations were embodied in the Subpart OOOO NSPS. And, states were beginning to assess methods to address operating emissions.

All of this was about to change.

The Obama Administration Prioritizes Climate Action

In June 2013, the Obama Administration announced its intent to develop a Climate Action Plan to address greenhouse gas (GHG) emissions. Among the target emissions was methane. Methane emissions account for roughly 9 percent of America's GHG emissions. Roughly, one-third of methane emissions come from oil and natural gas systems with roughly one-third of those from oil and natural gas production operations. Consequently, the share of America's GHG emissions from methane releases from oil and natural gas production is between one and two percent. Technically, methane and VOC are emitted simultaneously from oil and natural gas production operations and, therefore, controlling VOC – as Subpart OOOO had done – also controls methane. Significantly, oil and natural gas production emissions were declining.

The issue of managing methane emissions from oil and natural gas production facilities would become a pivotal one for the remainder of the Obama Administration. It was primarily a political issue played out in the regulatory arena. Methane has a higher GHG potential than carbon dioxide although it has a shorter lifetime. Environmentalists began a strategy to attack methane emissions using the climate agenda to address their renewable energy agenda that had been undermined by the shale gas revolution. Part of this agenda was challenging emissions estimates of methane; part of it was pressing the Obama Administration for regulation.

Taking the regulatory agenda first, as the Obama Administration began its second term, its interest in the economic benefits of American natural gas production diminished as the economy strengthened and natural gas supply was strong thereby assuring lower energy prices. As early as 2012, environmentalists had begun petitioning EPA for direct regulation of methane from oil and natural gas production. As the Obama Administration swung from building a strong American energy base to a new international climate role, its interest in aggressively federalizing oil and natural gas production regulation returned. Throughout 2014, environmentalists and industry were actively advocating regarding the need for additional regulation and its pathway.

At the heart of these deliberations was the argument over VOC versus methane regulation under the CAA. VOC is a criteria pollutant under the CAA. This means that the Act sets the regulatory options for both new and existing facilities. New and modified sources are regulated through NSPS, like Subpart OOOO. Existing VOC sources are regulated under the programs related to attainment of National Ambient Air Quality Standards (NAAQS) – in the case of VOC, the NAAQS for ozone. The CAA requires states with areas failing to attain a NAAQS to develop State Implementation Plans (SIPs) to reduce emissions. Ozone is particularly complex and Part D of the CAA sets out detailed requirements for areas to meet or to attempt to meet the ozone NAAQS.

Concurrent with the deliberations regarding its Climate Action Plan, the Obama Administration was considering revision of the ozone NAAQS. At issue was whether to lower the NAAQS and, if so, to what level. Lower levels of the ozone NAAQS would make more of the country nonattainment thereby requiring revised SIPs and bringing areas with existing oil and natural gas production under new regulation.

Methane is not a CAA criteria pollutant. However, EPA can develop NSPS for non-criteria pollutants – as it was doing for carbon dioxide. Environmentalists aggressively insisted on the Obama Administration regulating methane because of its desire to shut down existing oil and natural gas production operations. If EPA promulgates a NSPS for a non-criteria pollutant, the CAA creates a pathway to nationwide existing source regulations for those facilities (Section 111(d)). Consequently, if EPA regulated methane rather than VOC, existing sources could be subject to regulation on a national basis rather than an ozone nonattainment area basis.

Existing source oil and natural gas production regulation is particularly threatened because of the large number of low production oil and natural gas wells – marginal wells. Approximately 80 percent of American oil wells and two-thirds of American natural gas wells are marginal wells. The average marginal oil well produces about 2.2 barrels per day and the average marginal natural gas well produces about 22 mcf per day. Yet, collectively, these wells produce 10 to 20 percent of U.S. oil and 12 to 13 percent of U.S. natural gas. These wells are overwhelming small business operations and are the most economically vulnerable in the current price environment. Consequently, imposing costly regulations on these small sources will result in their shut down.

In January 2015, the Obama Administration announced the scope of its Climate Action Plan for methane emissions. At its heart was a new goal to cut methane emissions from the oil and gas sector by 40 – 45 percent from 2012 levels by 2025. For the oil and natural gas production industry, the announcement identified several key initiatives. First, EPA indicated that it would "...issue a proposed rule in the summer of 2015 and a final rule will follow in 2016." It would "...consider a range of common-sense approaches that can reduce emissions from the sources discussed in the agency's Oil and Gas White Papers, including oil well completions, pneumatic pumps, and leaks from well sites, gathering and boosting stations, and compressor stations." Second, EPA would "...develop new guidelines to assist states in reducing ozone-forming pollutants from existing oil and gas systems in areas that do not meet the ozone health standard and in states in the Ozone Transport Region." Third, EPA would "... explore potential regulatory opportunities for applying remote sensing technologies and other innovations in measurement and monitoring technology to further improve the identification and quantification of emissions and improve the overall accuracy and transparency of reported data cost-effectively." Fourth, BLM would "...update decades-old standards to reduce wasteful venting, flaring, and leaks of natural gas, which is primarily methane, from oil and gas wells."

These initiatives theoretically hinged on the need to meet a specific 40-45 percent reduction target. For the oil and natural gas production segment of the industry, the Gas STAR program and the 2012 Subpart OOOO regulations were producing the targeted reduction without additional regulation. Data showed that – throughout the extensive expansion of American natural gas production resulting from shale gas development – emissions were falling. Ignoring the clear history of falling emissions with increased production, the Obama Administration concluded that expanded production would increase future emissions. While such an argument might have bearing in other industry segments, for oil and natural gas production the inherent decline that occurs in all wells means that maintaining and growing production requires new wells to replace old ones. Therefore, in the time window of 2012 to 2025, the pool of American production wells would be dominated by wells drilled with the new technologies. Consequently, justifying the expanded regulatory agenda required the Obama Administration to change emissions projections.

EPA Proposes Methane Regulations

In late 2015, EPA proposed its package of regulations. For oil and natural gas production facilities it included an expansion of NSPS – Subpart OOOOa, a new Control Techniques Guidelines (CTG) for existing sources in ozone nonattainment areas, and a revised voluntary reduction program replacing Gas STAR. Importantly, the NSPS targeted methane reductions and included a REC program for associated gas from fractured crude oil wells, mandates for pneumatic pumps, and an extensive fugitive emissions program.

The proposal created several contentious issues. First, as noted above, was whether the additional regulations were justified. Second was the selection of methane as the targeted emission because of the potential for the creation of nationwide existing source regulations. Third was the specific requirements of the fugitive emissions program. The fourth related to the CTG proposal. And, fifth was the nature of the voluntary program named The Methane Challenge by EPA.

EPA's decision to choose methane regulation was a linchpin to obtain support from the Keep It in the Ground environmentalists. They primarily focused on developing regulations on existing sources and the methane choice opened that pathway through Section 111(d) of the CAA.

The fugitive emissions issue largely revolved around three factors. First, several states had implemented or were developing fugitive programs, but none of them paralleled the EPA proposal. Since BSER should be based on adequately demonstrated technologies, this inconsistency raised a fundamental question of whether the EPA proposal was BSER. Second, a key component of the EPA proposal was its Leak Detection and Repair (LDAR) requirements. EPA's LDAR program relied on highly costly optical gas imaging (OGI) that raised significant cost effectiveness issues depending on the size of the operation. Third, the proposed rule exempted low producing wells from these requirements, but the process was uncertain. And, its inclusion was strongly opposed by the environmental lobby.

The CTG proposal raised two significant questions. First, if EPA was regulating methane in the NSPS and thereby opening the path to nationwide existing source regulation, a VOC CTG created a second existing source federally generated requirement. EPA suggested that the CTG would be the existing source program, but this view was not endorsed elsewhere in the Obama Administration. And, environmentalists were insisting that once EPA acted on a methane NSPS, it must then regulate existing sources under Section 111(d) – a position that EPA disputed. Second, the CTG essentially based its regulations on the NSPS Subpart OOOO and proposed Subpart OOOOa technology. But, even if the NSPS regulations could be viewed as BSER, CTG are based on Reasonably Available Control Technology (RACT). BSER is not RACT and the technology test is particularly different in assessing its impact on old and small facilities.

While EPA was touting its Methane Challenge as comparable to Gas STAR, industry viewed it as very different, particularly in the context of a massive regulatory initiative. While industry sought to develop a voluntary program that it could embrace as it had Gas STAR, the Methane Challenge did not offer incentives encouraging participation. For example, participation in the Methane Challenge did not prevent EPA from imposing additional regulation that would overlay the voluntary technology placing industry in a position of essentially being regulated twice. Without such incentives, industry had little interest in embracing the Methane Challenge.

Responding to the proposed requirements, industry challenged the Obama Administration justification that these additional regulations were needed to counter increasing methane emissions. Part of the challenge related to the turnover in wells to those with the Subpart OOOO technology during the 2012 to 2025 period. Part of the challenge focused on the small contribution of oil and natural gas production to total GHG emissions. In late 2015-early 2016, EPA countered by changing its calculation of oil and natural gas production emissions estimates in the GHGI. To put this revision in context, a brief discussion of the GHGI is necessary. Not all oil and natural gas production facilities report under Subpart W. EPA set a threshold to limit the burden on small producers and to reflect that smaller wells emit less. Consequently, when it added oil and natural gas production to the GHGI, EPA announced that by obtaining data from about 30 percent of producers, it would capture 85 percent of the GHG emissions. This was logical because the 70 percent of producers not reporting would be the small production wells. Suddenly, in 2015, EPA announced its intent to change the estimating process because of information it had on pneumatic controllers showing higher than previously estimated emissions. However, rather than follow its prior approach, EPA announced that it would revise emissions estimates based on scaling up the reported emissions based on producers. It thereby attributed 70 percent of the emissions to the small wells. This outrageous redistribution of emissions clearly created a basis to imply that there was a need to impose greater regulations. Additionally, EPA gratuitously added emissions from gathering and boosting operations to the production sector.

EPA Regulations Finalized – Litigation Follows

In March 2016, EPA announced its NSPC regulatory package which became effective in June 2016. The package was largely unchanged from the proposal with one significant exception. EPA had deleted the exclusion for low production wells. Environmentalists characterized this deletion as the single, most important provision in the package. They then demanded that EPA act under Section 111(d) on existing sources. EPA declined to act immediately but announced that it would be initiating an Information Collection Request (ICR) to gather information on existing oil and natural gas production.

EPA's action to remove the low production well exclusion is instructive in understanding the issues associated with EPA's technical support for its actions. As described above, EPA has a responsibility under the CAA to determine BSER for NSPS regulations. From the time EPA entered into the consent decree that led to Subpart OOOO, EPA's technical information development consisted largely of the creation of five white papers – papers that were an amalgamation of studies undertaken by others. EPA sought comments and created some working groups. But, EPA did not develop its own data. This is a fundamental and unsettled issue regarding what responsibility EPA bears to assure that its regulatory judgments are sound.

Regarding the decision to eliminate its proposed NSPS low production well exclusion, EPA relied on a study developed by the Environmental Defense Fund (EDF) that was submitted to the record. Although EPA had proposed the exclusion and industry had supported it, EPA then removed the exclusion arguing that counter information had been submitted – the EDF study – and it had not been refuted. Yet, EPA did nothing to assess the validity of the EDF study.

The purpose of the EDF study was to contort available methane sampling data to create the illusion that low producing wells were "super-emitters". All of the underlying studies generated their data by driving vehicles with samplers downwind of production sites, hunting for methane plumes. None of them used samples taken on the production site. This creates two issues. First,

it measures everything emitted at the site – fugitive emissions and permitted vents. Second, the data are collected over minutes – maybe over an hour – but not over a day. The data in the study are presented as if they were daily emissions but the studies merely scale up hourly estimates. Consequently, an emission that might occur for several hours, but not the full day, would be overstated. The study shows emissions as a percentage of production rather than actual emissions. Thus, one mcf emitted out of ten mcf produced is 10 percent, but 50 mcf emitted out of 1000 mcf produced is 5 percent. As a result, it skews the perception of the data to imply that low producing wells are large emitters when they are not. The study's production volumes are really sales volumes, not the amount extracted from the wellhead. Consequently, a "proportional loss rate" of 50 percent would be the calculated loss divided by the volume sold. If the percentage of loss were calculated based on extracted volumes, the 50 percent "proportional loss rate" would drop to 33 percent because the loss would be added to the sales volume to obtain the extracted volume. It only shows data from the 70th percentile of information. This excludes all of the virtually zero emissions that dominate the data. It uses a logarithmic scale to present the data. One of the reasons to use logarithmic scales is to flatten curves to make them look more like straight lines.

These observations can be made without conducting an intense investigation of the study. The study is obviously intended to contort data to create a specific result. Yet, with all the investigative power at EPA, with all of the research work EPA has conducted, EPA took this contrived study at face value to make its determination to remove the low producing well exclusion in the Subpart OOOOa regulations.

In October 2016, EPA finalized the CTG for existing sources which also included a fugitive emissions program but EPA deferred action on how to treat low production wells. This deferral has less meaning than NSPS action because CTG are a framework for states to develop their own regulations and are not specific mandates. However, if a state fails to adopt a CTG based regulation, it must adopt other regulations to achieve the calculated reductions in emissions that the CTG would have provided.

In November 2016, EPA finalized its ICR and began transmitting them to oil and natural gas producers. The ICR required substantial information that would take months to complete. However, the Obama Administration wanted to complete the ICR prior to its end and thereby required completion of the ICR prior to January 20, 2017. EPA was unable to distribute the ICR consistent with this schedule and the ICR remained active when the Trump Administration began.

Multiple parties responded to the Subpart OOOOa regulations seeking judicial repeal and administrative reconsideration in July-August 2016. The Independent Petroleum Association of America (IPAA) and 18 other trade associations, the American Petroleum Institute, the Western Energy Alliance, the Texas Oil and Gas Association, the Interstate Natural Gas Association of America, North Dakota, Texas, West Virginia and 13 other states filed to challenge the Subpart OOOOa regulations in the D.C. Circuit Court; the litigation was consolidated as *North Dakota v. EPA*. Additionally, the IPAA group and others filed petitions for reconsideration on several issues with EPA.

The Trump Administration Acts to Revisit the Regulations – Litigation Follows

With the advent of the Trump Administration, the dynamics of these regulations have changed, but the future is by no means certain.

In March 2017, EPA terminated the ICR following a request by eleven states.

In April 2017, EPA acted to put the *North Dakota v EPA* case in abeyance until it could reconsider the Subpart OOOOa regulations. In May 2017, the D.C. Circuit Court agreed.

In late May 2017, EPA announced a 90-day stay of several components of the Subpart OOOOa regulations including the fugitive emissions program that was scheduled to begin in June. A coalition of environmental groups filed action to block the stay. In mid-June, EPA proposed a two-year suspension of these components of Subpart OOOOa. On July 3, 2017, the DC Circuit Court agreed with the environmental groups and vacated the 90-day stay while mandating immediate application of the regulations. On July 7, 2017, EPA appealed the mandate and sought additional time. The Court sought responses to the EPA appeal during the week of July 11 and delayed the mandate for an additional 14 days to allow EPA to decide its next course of action. Meanwhile, the two-year suspension is undergoing its comment period under the Administrative Procedure Act. This issue of reconsideration will continue to be a ripe forum for litigation for the foreseeable future whether it is related to initiating reconsideration or the regulations that might ultimately be proposed.

Meanwhile, a number of governors have notified EPA that they intend to sue EPA for failing to initiate existing source methane regulations under Section 111(d).

Separately, the CTG for existing sources is becoming an issue in state planning. Although EPA promulgated a revision to the ozone NAAQS in 2015, the revision is being litigated. The Trump Administration has indicated that it may reconsider the revised NAAQS. As a predicate to that action, EPA announced that it will delay requirements for states to submit SIPs; litigation has been initiated to challenge this delay. However, due to its action to revise the ozone NAAQS in 2015, EPA failed to have states submit SIPs to address the 2008 revisions to the ozone NAAQS. Subsequent litigation resulted in EPA being ordered to pursue those SIPs. States are now considering regulations and, since the existing source CTG was finalized in October 2016, it is now a CTG that must be included in state planning. Consequently, this CTG – based on NSPS regulations that are being reconsidered – is now in play for small business wells.

Additionally, in January 2016, BLM proposed its methane regulations that include specific requirements for existing sources on BLM managed resources. These regulations largely track the CTG requirements. The regulations were finalized in November 2015 and were challenged in the Wyoming District Court. Congress attempted to rescind the regulations using the Congressional Review Act (CRA) but it failed. BLM moved to pause the regulations while it reconsiders them. New Mexico and California are acting to challenge the BLM action.

A Future of Regulatory Litigation and Chaos

Clearly, the confrontations over federal methane regulation of oil and natural gas production will continue and escalate. These regulations were driven to final action during the waning days of the Obama Administration. They are built on a characterization of emissions that is false. They fly in the face of a history of methane reductions in the oil and natural gas production segment of the industry and continued expectations of declining emissions in future years. They have become the hyperbolic political fodder for the Keep It in the Ground environmental movement that twists information to pursue its specific agenda.

However, they will also be a part of a larger fabric of litigation that is going to test the nature of America's federal environmental laws and its administrative procedural process. Substantive

issues will be subordinated to procedural ones. The challenges of unwinding the current regulations from the judicial process, developing revisions and moving those proposals to completion will test the remaining years of the Trump Administration. EPA's last Obama Administrator once said about regulation of oil and natural gas production:

> EPA's learning this industry right now because it is not an industry we regulate. We've just gotten into regulation of this so there's a lot of hundreds of thousands of small sources and EPA does not generally have a relationship with this industry as we do other sectors that we've regulated for frankly decades. But we are learning.

Unfortunately, EPA began regulating before it learned. Unlike most industries, oil and natural gas production begins to decline soon after it starts. The industry is comprised of large and small businesses with most low producing wells operated by small businesses. Regulations that might be cost effective when a well is new will not be after it declines and certainly when it is a low producing well. Many of the technologies that these regulations require and use are cost effective for new, large, hydraulically fractured oil and natural gas wells, but others need to revisited. Then, at issue will be whether regulations are needed for America's marginal wells and, if so, whether regulations can be created to manage marginal well emissions rather than force them to be shutdown.

While the federal framework on methane regulations – and other Obama Administration initiated regulations and policies – is wrapped up in aggressive changes by the Trump Administration, Keep It in the Ground environmentalists are not only reacting in the federal court and regulatory agency arena but turning to other venues as well. State regulations will be one target. Using the same arguments – and same specious data – the environmental lobby will be pursuing its agenda by trying to get state legislators and regulators to adopt regulations comparable or more excessive than those promulgated by the Obama Administration. It will continue to litigate and petition for action on the federal level to try to drive or, at least, constrain the federal agenda. And, it will likely seek venues for citizen suits against individual companies.

On balance, the next several years will be challenging for all parties as the nature of the regulatory process – federal and state – and the dynamics of litigation will be tested – more on procedure than substance.

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Nuisance Cases Against Energy Companies in Texas, Pennsylvania, and Other Areas with Significant or Developing Oil and Gas Exploration

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For over a century, courts and commentators have openly expressed their frustration with the amorphous doctrine of nuisance. It has been ridiculed as a "'wilderness' of law,"[1] an "impenetrable jungle,"[2] and a "mongrel" doctrine.[3] Professor Seavey, reporter for the First Restatement of Torts, noted that nuisance doctrine sometimes appeared to be a "mystery, smothered in verbiage."[4] Dean Prosser, reporter for the Second Restatement of Torts, candidly called it "a sort of legal garbage can."[5] Half a century later, Justice Blackmun searched "in vain . . . for anything resembling a principle in the common law of nuisance."[6]

In Texas, Pennsylvania, and other jurisdictions with significant oil and gas development, things have fared no better. At the turn of the twentieth century, the Texas Supreme Court concluded that nuisance must turn on whether a defendant's use is "reasonable," but it could not "furnish a more definite rule."[7] In the 1970s, the Court frankly stated that "[t]here is a general agreement that

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[1] Horace Wood, The Law of Nuisances iii (3d ed. 1893).

[2] William L. Prosser, The Law of Torts 592 (3d ed. 1964).

[3] F.H. Newark, *The Boundaries of Nuisance*, 65 L.Q. REV. 480, 480 (1949).

[4] Warren A. Seavey, *Nuisance, Contributory Negligence and Other Mysteries*, 65 HARV. L. REV. 984, 984 (1952) (internal quotations and citation omitted); *see* Louise A. Halper, *Untangling the Nuisance Knot*, 26 B.C. ENVT'L AFF. L. REV. 89, 89 (1998) (summarizing Seavey's critiques).

[5] William L. Prosser, *Nuisance Without Fault*, 20 TEX. L. REV. 399, 410 (1942) [hereinafter *Nuisance Without Fault*]; *see* Halper, *supra* note 4, at 89 (summarizing Prosser's critiques).

[6] *Lucas v. S.C. Coastal Council*, 505 U.S. 1003, 1055 (1992) (Blackmun, J., dissenting).

[7] *Gulf, Colo. & Santa Fe Ry. Co. v. Oakes*, 58 S.W. 999, 1001 (Tex. 1900).

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[nuisance] is incapable of any exact or comprehensive definition, and we shall attempt none here."[8] In the early 2000s, the Court noted that numerous Texas nuisance cases were completely irreconcilable because they were decided without a standard of reference.[9] Likewise in Pennsylvania, the amalgam of conduct that juries have determined fall under nuisance law illustrate its breadth (or overbreadth) as a cause of action.[10]

Energy companies increasingly have been the target of nuisance suits alleging that drilling operations were a nuisance to nearby residents.[11] But saying something is a nuisance case, as the

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[8] *Wales Trucking Co. v. Stallcup*, 474 S.W.2d 184, 186 (Tex. 1971).

[9] *Schneider Nat'l Carriers, Inc. v. Bates*, 147 S.W.3d 264, 274-75 (Tex. 2004) [hereinafter *Schneider*], holding modified on other grounds, *Gilbert Wheeler Inc. v. Enbridge Pipelines (E. Tex.), L.P.*, 449 S.W.3d 474 (Tex. 2014).

[10] *See, e.g., Twp. of Bedminster v. Vargo Dragway, Inc.*, 253 A.2d 659, 663 (Pa. 1969) (excessive noise from racetrack in residential area); *Harford Penn-Cann Serv., Inc. v. Zymblosky*, 549 A.2d 208, 209-10 (Pa. Super Ct. 1988) (dust from truck stop was sufficient to constitute private nuisance where health problems to employees resulted); *Fairview Twp. v Schaefer*, 562 A.2d 989, 992 (Pa. Commw. Ct. 1989) (nuisance to keep a tiger in a residential area even though the owner had an exotic wildlife permit), app. den. 574 A.2d 73 (Pa. 1989).

[11] Some cases are pending in the trial court. *See Gardiner v. Crosstex N. Tex. Pipeline, L.P.* (Tex. Dist. Ct. Denton Cnty. May 8, 2008) (remanded for new trial on June 24, 2016); *Lipsky v. Range Res. Corp.*, No. CV-11-0798 (Tex. Dist. Ct. Parker Cnty. June 20, 2011) (remanded to trial court after appeal to the Texas Supreme Court, 460 S.W.3d 579); *Dueling v. Devon Energy Corp.*, No. 12-0843 (Tex. Dist. Ct. Parker Cnty. July 3, 2012) (removed to federal court and pending in the Northern District of Texas as No. 4:14-cv-325-Y); *Murray v. EOG Res., Inc.*, DC-15-008865 (Tex. Dist. Ct. Dallas Cnty. Aug. 5, 2015) (transferred to Tarrant Cnty. on Apr. 13, 2016 and pending as No. 342-284983-16).

Others are pending in various stages of appeal. *See Ely v. Cabot Oil & Gas Corp.*, No. 3:09-02284-JEJ-MCC (M.D. Pa. Nov. 9, 2011) (motion for judgment as a matter of law, motion for new trial, and motion for remittitur pending before trial court); *Dow v. Atmos Energy Corp.*, No. 2011-30097-211 (Tex. Dist. Ct., Denton Cnty., Feb. 28, 2011) (consolidated and pending in the Texas Supreme Court); *Town of DISH v. Atmos Energy Corp.*, No. 2011-40096-362 (Tex. Dist. Ct. Denton Cnty., Feb. 28, 2011) (same); *Sciscoe v. Atmos Energy Corp.*, No. 2011-70084-431 (Tex. Dist. Ct., Denton Cnty., Feb 28, 2011) (same); *Parr v. Aruba Petroleum, Inc.*, No. 2011-01650-E (Tex. Cnty. Ct. Dallas Cnty. Mar. 18, 2011) (pending in the Fifth Court of Appeals as No. 05-14-01285-CV); *Cerny v. Marathon Oil Corp.*, No. 13-05-00118-CVK (Tex. Dist. Ct. Karnes Cnty. May 21, 2013) (pending in the Texas Supreme Court).

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A great many others have been dismissed, often pursuant to a settlement agreement. *See Scoma v. Chesapeake Energy Corp.*, No. 2010-00292 (Tex. Dist. Ct. Johnson Cnty. June 1, 2010) (removed to federal court as No. 3:10-cv-01385-N before dismissal); *Ruggiero v. Aruba Petroleum, Inc.*, No. CV-10-10-801 (Tex. Dist. Ct. Wise Cnty. Oct. 18, 2010); *Knoll v. Gulftex Operating, Inc.*, No. 2010-10345-16 (Tex. Dist. Ct. Denton Cnty. Oct. 22, 2010); *Heinkel-Wolfe v. Williams Prod. Co., LLC*, No. 2010-40355-362 (Tex. Dist. Ct. Denton Cnty. Nov. 3, 2010); *Sizelove v. Williams Prod. Co.*, No. 2010-50355-367 (Tex. Dist. Ct. Denton Cnty. Nov. 3, 2010); *Mitchell v. EnCana Oil & Gas*, No. 3:10-cv-02555 (N.D. Tex. Dec. 15, 2010); *Smith v. Devon Energy Prod. Co., L.P.*, No. 3:11-cv-00196-B (N.D. Tex. Jan. 31, 2011) (transferred to the Eastern District of Texas as No. 4:11-cv-00104-RAS-DDB and dismissed on plaintiffs' motion); *Harris v. Devon Energy Prod., L.P.*, 4:10-CV-00708-MHS-AM (E.D. Tex. Apr. 8, 2011) (dismissed with prejudice by 500 F. App'x 267, 269 (5th Cir. 2012)); *Mann v. Chesapeake Operating, Inc.*, No 2011-008274-3 (Tex. Cnty. Ct. Tarrant Cnty. Nov. 8, 2011); *Gutierrez v. Chesapeake Operating, Inc.*, No 2011-008274-3 (Tex. Cnty. Ct. Tarrant Cnty. Nov. 10, 2011); *Beck v. ConocoPhillips Co.*, No. 2011-484 (Tex. Dist. Ct. Panola Cnty. Dec. 1, 2011); *Strong v. ConocoPhillips Co.*, No. 2011-487 (Tex. Dist. Ct. Panola Cnty. Dec. 2, 2011); *Finn v. EOG Res.*, No. C2013-00343 (Tex. Dist. Ct., Johnson Cnty., July 30, 2013); *Alexander v. Eagleridge Operating, LLC*, No. 14-01430-393 (Tex. Dist. Ct. Denton Cnty. Feb. 28, 2014) (nonsuited without prejudice); *Roth v. Cabot Oil & Gas Corp.*, No. 3:12-cv-00989-JEJ-MCC (M.D. Pa. May 14, 2012) (claims for inconvenience and discomfort dismissed on Jan. 30, 2013; final judgment signed Dec. 12, 2013); *Whiteman v. Chesapeake Appalachia, LLC*, No. 5:11-cv-00031-FPS (N.D. W. Va. Feb. 23, 2011) (originally filed in Circuit Court of Wetzel Cnty., W. Va., Dec. 23, 2010) (stipulation to dismissal of claims including nuisance); *Andre v. EXCO Res., Inc.*, No. 5:11-cv-00610-TS-MLH (W.D. La. Apr. 15, 2011) (class action settlement); *Ginardi v. Frontier Gas Servs., LLC*, No. 4:11-cv-0420-BRW (E.D. Ark. May 17, 2011) (dismissed pursuant to settlement following denial of class certification); *Tucker v. Sw. Energy Co.*, No. 1:11-cv-0044-DPM, consolidated with *Berry v. Sw. Energy Co.*, No. 1:11-cv-0045-DPM (E.D. Ark. May 17, 2011) (settled and dismissed with prejudice Aug. 29, 2012); *Scoggin v. Cudd Pumping Servs., Inc.*, No. 4:11-cv-00678-JMM (E.D. Ark. Sept. 12, 2011) (stipulation of voluntary dismissal without prejudice filed on June 10, 2013); *Smith v. Sw. Energy Co.*, No. 4:12-cv-00423 (E.D. Ark. July 11, 2012) (dismissed for lack of subject matter jurisdiction on May 13, 2013); *Pruitt v. Sw. Energy Co.*, No. 4:12-cv-00690 (E.D. Ark. Nov. 2, 2012) (same, on May 14, 2013); *Scoggin v. Sw. Energy Co.*, No. 4:12-cv-763 (E.D. Ark. Dec. 7, 2012) (dismissed without prejudice on May 23, 2013).

A few have reached final judgment. *See Marsden v. Titan Operating, LLC*, No. CV-11-0842 (Tex. Dist. Ct. Parker Cnty. July 27, 2011) ($18,000 judgment; reversed and take-nothing judgment rendered on appeal, 2015 WL 5727573); *Crowder v. Chesapeake Operating, Inc.*, No. 2011-008169-3 (Tex. Cnty. Ct. Tarrant Cnty. Nov. 9, 2011) ($20,000 award, vacated pursuant to settlement agreement after appeal); *Anglim v. Chesapeake Operating, Inc.*, No. 2011-008256-1 (Tex. Cnty. Ct. Tarrant Cnty. Nov. 9, 2011) (defense verdict, vacated pursuant to settlement agreement after appeal).

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Texas Supreme Court recently noted, "does not tell you much."[12] A variety of things have generated nuisance allegations against energy companies, such as bright lights on drilling rigs, vibrations from drilling, odor from condensate tanks, exhaust fumes from trucks, dust from construction, and noise from compressor stations.[13] Some cases allege personal injury; others allege only property damage.

[Disclosure: Mr. Mazzone and Mr. Stewart are counsel for Aruba Petroleum in the *Parr* case, Mr. Mazzone was counsel for Aruba in the *Ruggiero* case, and Haynes & Boone is counsel for Enbridge in the case consolidated from the *Dow*, *Town of DISH*, and *Sciscoe* cases. Mr. Dillard and Ms. Brogdon are counsel for EOG Resources in the *Murray* case and for Cabot Oil & Gas in the *Ely* case. Ms. Brogdon was also counsel for EOG Resources in the *Finn* case and for Cabot Oil & Gas in the *Roth* case.]

[12] *Crosstex N. Tex. Pipeline, L.P. v. Gardiner*, No. 15-0049, 2016 WL 3483165, at *1 (Tex. June 24, 2016) [hereinafter *Crosstex*].

[13] *See Gardiner*, *supra* note 11 (noise from compressor station); *Ruggiero*, *supra* note 11 ("[N]oxious fumes, vapors, odors, waste, and hazardous materials" from gas operations); *Dow*, *Town of DISH*, and *Sciscoe*, *supra* note 11 (noise, lights, odors, and chemical particulates emanating from compressor stations and dehydrators); *Parr*, *supra* note 11 (sounds, lights, and smells from the drilling of gas wells, the production of gas, and the storage of condensate); *Mann*, *Crowder*, *Anglim*, and *Gutierrez*, *supra* note 11 (noises from operations and vehicles and "substances" releases into the air from gas wells); *Dueling*, *supra* note 11 ("[E]xcessive noise, truck traffic, lights, and noise from the drilling and gas well operations and burn off"); *Marsden*, *supra* note 11 (noise, odor, and dust from compressor station, truck traffic, and truck pump); *Cerny*, *supra* note 11 (traffic, dust, noise, odors and chemical emissions from oilfield operations); *Alexander*, *supra* note 11 (air emissions and loud and constant noises from drilling and operation of wells); *Knoll*, *supra* note 11 (odors, contaminated water, headaches, and nosebleeds from well and compressor station); *Heinkel-Wolfe*, *supra* note 11 (water and air contamination from nearby drilling operations); *Sizelove*, *supra* note 11 (personal injuries from drilling operations and compressor stations); *Hallowich v. Range Res. Corp.*, No. 2010-3954 (Pa. Ct. Com. Pl. May 27, 2010) (groundwater contamination and truck traffic associated with natural gas drilling); *Armstrong v. Chesapeake Appalachia, LLC*, No. 10-cv-000690 (Pa. Ct. Com. Pl. Oct. 27, 2010) (groundwater contamination from natural gas drilling); *Hagy v. Equitable Prod. Co.*, No. 10-c-164 (Jackson Cnty. Cir. Ct. Oct. 26, 2010), removed to S.D. W. Va., No. 2:10-cv-01372 on Dec. 10, 2010) (groundwater contamination from natural gas drilling causing neurological symptoms); *Bidlack v. Chesapeake Appalachia, LLC*, No 3:11-cv-00129-ARC (M.D. Pa. Jan. 19, 2011) (groundwater contamination from natural gas drilling, fear of future illness); *Otis v. Chesapeake Appalachia LLC*, No. 3:11-cv-00115-ARC (M.D. Pa. Jan. 18, 2011) (same); *Kamuck v. Shell Energy Holdings HP, LLC*, No. 4:11-cv-01425-MCC (M.D. Pa. Aug. 3, 2011) (groundwater and surface contamination from hydraulic fracturing, increased traffic, noise, and dust); *Teel v. Chesapeake Appalachia*, No. 5:11-cv-00005-FPS (N.D. W. Va. Jan. 6, 2011) (foul smell, soil contamination from natural gas drilling, damage to grass, trees, plants); *Whiteman v. Chesapeake Appalachia, LLC*, No. 5:11-cv-00031-FPS

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Some claim intentional behavior; some claim negligent behavior; others only claim that the condition was out-of-place with its surroundings. Given the muddled state of nuisance law, this article first outlines the history of nuisance law to give context to the present confusion. With that historical context in mind, it then discusses modern private nuisance in Texas and Pennsylvania, with reference to other jurisdictions having significant oil and gas development—what it is, what it is not, and a host of issues surrounding recent nuisance cases.

I. HISTORY

Nuisance law is ancient. Its roots go back to at least the early thirteenth century.[14] So too does the confusion surrounding the term.[15] The term "nuisance" means only "hurt, annoyance, or

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(N.D. W. Va. Feb. 23, 2011) (soil contamination and groundwater contamination from natural gas drilling); *Baker v. Anshutz Exploration Corp.*, No. 6:11-cv-06119 (W.D.N.Y. Mar. 9, 2011) (groundwater and soil contamination from natural gas drilling, loss of use of land, fear of developing cancer); *Strudley v. Antero Res. Corp.*, No. 2011-cv-2218 (Denver Cnty. Mar. 23, 2011) (air and groundwater contamination from natural gas drilling, loss of quality of life, loss of use and value of property); *Beckman v. EXCO Res., Inc.*, No. 5:11-cv-00617-TS-MLH (W.D. La. Apr. 18, 2011) (groundwater contamination and loss from property market value "stigma" from natural gas drilling); *Andre v. EXCO Res., Inc.*, No. 5:11-cv-00610-TS-MLH (W.D. La. Apr. 15, 2011) (same); *Ginardi v. Frontier Gas Servs., LLC*, No. 4:11-cv-0420-BRW (E.D. Ark. May 17, 2011) (air, soil, and groundwater contamination from compressor and transmission stations); *Berry v. Sw. Energy Co.*, No. 1:11-cv-0045-DPM (E.D. Ark. May 17, 2011) (groundwater, soil, and air contamination from natural gas drilling); *Scoggin v. Cudd Pumping Servs.*, No. 4:11-cv-00678-JMM (E.D. Ark. Sept. 12, 2011) (air contamination from hydraulic fracturing).

There have also been numerous nuisance cases alleging groundwater contamination caused by various drilling-related activities. *See Scoma, Mitchell, Smith, Harris, Lipsky, Beck, Strong, Murray, Ely*, and *Roth, supra* note 11; ; *Hallowich, Armstrong, Hagy, Bidlack, Otis, Kamuck, Baker, Strudley, Beckman, Andre, Ginardi, Berry*, and *Scoggin, supra* this note. In several cases, plaintiffs claimed that drilling caused increased seismicity, which in turn caused structural damage to their property. *Finn, supra* note 11.

[14] C.H.S. FIFOOT, HISTORY & SOURCES OF THE COMMON LAW: TORT & CONTRACT 7 (1949) (tracing the roots of nuisance doctrine and noting that by "the early years of the thirteenth century cases of nuisance were not uncommon; but there had been no attempt at generalization"); FOWLER V. HARPER, FLEMING JAMES, JR., & OSCAR S. GRAY, HARPER, JAMES & GRAY ON TORTS § 1.23, at 90–91 [hereinafter HARPER] ("The recognition of nuisance as tort goes back at least to the thirteenth century . . . .").

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inconvenience."[16] In its infancy, it described "interferences to servitudes" (such as easements) "or other rights to the free use of land."[17] Early nuisance cases were brought under the old writ system and provided civil relief for invasions not covered by a writ of trespass; that is, invasions of property that did not directly cross the property's boundary.[18]

Nuisance therefore originally connoted a connection to property, but from the outset it was unclear if nuisance dealt with property rights, personal rights, or both.[19] This vagueness plagued early definitions in much the same way as it plagues modern ones.[20] To the extent nuisance had any discrete

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[15] Professor Winfield, for example, began his history of nuisance as a tort by stating that "[i]t would clear the ground if we could start with a definition of nuisance, but it has been truly said that it is not a term capable of exact definition, and, considering its historical origin, we should be astonished if it were." P..H. Winfield, *Nuisance as a Tort*, 4 CAMB. L.J. 189, 189 (1931).

[16] 3 William Blackstone, Commentaries *216.

[17] W. PAGE KEETON ET AL., PROSSER & KEETON ON TORTS § 86, at 617 (5th ed. 1984) [hereinafter PROSSER & KEETON]; *see* FIFOOT, *supra* note 14, at 3-11.

[18] FIFOOT, *supra* note 14, at 7; PROSSER & KEETON § 86, at 617.

[19] Winfield, *supra* note 15, at 189–90 (noting this confusion likely began with the thirteenth century writings of Henry de Bracton); *see also* FIFOOT, *supra* note 14, at 3 (stating that nuisance was "concerned more or less intimately with incidents of property" but cautioning that a "student of legal history [should] take constant care not to apply to mediaeval conditions the current categories of tort, contract, and property.").

[20] Winfield, *supra* note 15, at 190 (1931) ("The best that Blackstone could do with it was 'anything done to the hurt or annoyance of the lands, tenements, or hereditaments of another,' but even then he made more to say in another chapter entitled 'Of Disturbance' about matters, some of which are now regarded as nuisances."). More modern definitions have also attempted to straddle the line between property rights and personal rights. *See Crosstex* at *5 ("[T]he Court's early opinions" showed that a defendant "could be liable for harming a wide variety of the plaintiff's interests by, for example, harming the plaintiffs' health, offending the plaintiffs' 'senses,' or interfering with the plaintiffs' enjoyment of, or operation of a business on, their land."); THOMAS COOLEY, A TREATISE ON THE LAW OF TORTS OR THE WRONGS WHICH ARISE INDEPENDENT OF CONTRACT (1880) (relegating nuisance to a late chapter for a discussion separate from wrongs affecting personal security or invasions of property); *cf. Milwaukee v. Illinois*, 451 U.S. 304, 317 (1981) (noting the "vague and indeterminate" nature of nuisance concepts).

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historical meaning, it denoted an infringement of the use and enjoyment of property—much like private nuisance today.[21]

The term, however, became even more unbound through "a series of historical accidents."[22] The first of these is the parallel development of a "catch-all low-grade criminal offense" also called "nuisance"—now generally referred to as public nuisance, to distinguish it from private nuisance.[23] By the mid-thirteenth century, this broad offense included "obstructed highways, lotteries, unlicensed stage-plays, and a host of other rag ends of the law" which involved infringements of "public rights."[24] Put simply, the offense of public nuisance had nothing in common with private nuisance, except that both concern "annoyance or inconvenience."[25]

This might have been little more than a historical oddity if public nuisance remained strictly a criminal offense with no civil remedy. But that did not happen. By the sixteenth century, courts had recognized that an individual who suffered damage different than the rest of the public had a civil remedy for damages caused by the nuisance.[26] Adding to the confusion, public nuisances can also sometimes be both public and private nuisances.[27] The classic example is a brothel that is a public nuisance that may also interfere with the use and enjoyment of a neighbor's land in such a way as to also constitute a private nuisance.[28]

A second historical accident is that the term "nuisance" began to be used to refer to different legal concepts. Among other things, courts used nuisance to mean (1) a discrete cause of action, (2)

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[21] Winfield, *supra* note 15, at 189-90.

[22] PROSSER & KEETON § 86, at 617.

[23] *Id.* § 87, at 617.

[24] *Id.* (quoting Newark, *supra* note 3, at 482).

[25] Nuisance Without Fault at 411.

[26] PROSSER & KEETON § 87, at 618; BLACKSTONE, *supra* note 16, at *219–20 ("Yet this rule [of criminal liability] admits of one exception, where a private person suffers some extraordinary damage, beyond the rest of the king's subjects, by a public nuisance, in which case he shall have a private satisfaction.").

[27] PROSSER & KEETON § 87, at 618.

[28] RESTATEMENT (SECOND) OF TORTS § 821B cmt. h (1979).

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the defendant's conduct or activity, and (3) the harm caused by the defendant's conduct or activity.[29] This loose usage partially may have stemmed from the loose definition itself.[30]

But changes in the English legal system also may have played a part in the varied usage of the term "nuisance." In its earliest form, a plaintiff could only bring a nuisance action through one of the specialized common law writs.[31] By the late fourteenth century, however, English law had recognized an action for "trespass on the case" which covered a variety of indirect harms.[32] For reasons mainly of convenience and strategy, trespass on the case entirely superseded the old writs that lawyers had used to bring nuisance cases.[33] Trespass on the case, however, was a sort of catch-all action. It covered a variety of "indirect" legal harms, such as fraud and defamation—not just nuisance.[34] As a result of this shift away from the specialized nuisance writs, nuisance may have lost some of its character as a discrete form of action.[35]

Much later, history provided a third twist. From the thirteenth century to the mid-nineteenth century, the common law forms of action—such as trespass on the case and the various writs of trespass—determined the necessary elements of a case and the defenses and remedies available.[36] For

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[29] *See id.*; *see also Crosstex* at *6.

[30] *See* Winfield, *supra* note 15, at 189–90. "Nuisance" has also been used in conjunction with the attractive-nuisance doctrine which deals with dangerous conditions that may lure children to trespass. *See, e.g.*, *Nuisance Without Fault* at 410. Attractive-nuisance is a concept entirely separate from private nuisance and public nuisance. *See id.*

[31] Winfield, *supra* note 15, at 190–92 (discussing the assize of nuisance, the action *quod permittat prosternere*, and the writ of trespass); *see also* BLACKSTONE, *supra* note 16, at *220-222.

[32] *See* Winfield, *supra* note 15, at 191–92.

[33] Winfield, *supra* note 15, at 191–92 (discussing the various factors which led to trespass on the case becoming the "sole Common Law action" for nuisance); *see also* PROSSER & KEETON § 87, at 617.

[34] *See* Edwin E. Bryant, The Law of Pleading Under the Codes of Civil Procedure 7 (2d ed. 1899); 1 Am. Jur. 2d *Actions* § 23 (1994).

[35] This kind of usage problem arises in other areas of the law as well, so this ambiguity may not be a particular historical quirk of nuisance. *See, e.g.*, Robert L. Rabin, The Historical Development of the Fault Principle: A Reinterpretation, 15 GA. L. REV. 925, 932 (1981) (discussing ambiguity with regards to negligence).

[36] *See* Kenneth J. Vandevelde, A History of Prima Facie Tort: The Origins of a General Theory of Intentional Tort, 19 HOFSTRA L. REV. 447, 454 (1990).

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a plaintiff, "choosing the wrong form of action was fatal to the case"—the plaintiff's case would be dismissed "even if facts were shown that would entitle recovery in another form."[37] Facing criticism that such formalism was unjust, jurisdictions across the county largely abandoned the common law forms of action and the writ system in the latter half of the nineteenth century.[38]

The initial shift away from the writ system was largely procedural, however. Under the new, more liberal pleading rules, a plaintiff was not required to specify the form of action, but the plaintiff still had to plead facts that constituted a cause of action that was recognized under the old system.[39] In other words, the rules of substantive law did not change—"[i]n determining what facts were necessary to state a cause of action, courts referred back to the common law writs."[40]

The abolition of the common law forms of action, however, opened the door for courts and scholars to reimagine tort doctrine and to reorganize it around fault-based principles.[41] Parallel to the shift away from the writ system, negligence in the modern sense—a failure to exercise reasonable

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[37] *Coastal Oil & Gas Corp. v. Garza Energy Trust*, 268 S.W.3d 1, 10 & n. 27 (Tex. 2008) [hereinafter *Coastal*] (quoting, in part, HARPER § 1.3, at 11).

[38] *Coastal* at 10 n.27 (quoting HARPER § 1.3, at 11); *see* Vandevelde, *supra* note 36, at 454-455. A few writs, such as the writ of certiorari, the writ of habeas corpus, and the writ of attachment, survived the transition with their names intact. For its part, Texas never recognized the common law forms of action. *Banton v. Wilson*, 4 Tex. 400, 406 (1849) ("All forms of action have been abolished in our system of jurisprudence, or rather they were never introduced."); *see Chevalier v. Rusk*, Dallam 611, 613 (Tex. 1844) (stating, before statehood, that "[u]nder our statutes, intended to simplify the rules of pleading, no distinctions as to forms of action are recognized").

[39] *See* Vandevelde, *supra* note 36, at 455; *Coastal* at 10 ("[U]nder our liberal pleading rules, unlike the common law, [plaintiff] was not required to specify which form [of action applied.").

[40] *See* Vandevelde, *supra* note 36, at 455 & n.58 ("'[T]he abolition of the common-law forms of pleading has not changed the rules of substantive law'" (quoting O.W. HOLMES, THE COMMON LAW 67 (M. Howe ed. 1963))); *Coastal* at 9-10 (rejecting argument that plaintiff lacked standing to sue for trespass because plaintiff had sufficiently pled an action for "trespass on the case")

[41] HARPER § 1.24, at 111 (arguing the "procrustean insistence on fault" in nuisance doctrine is misguided and "quite in keeping with the late-nineteenth-and early twentieth-century urge to reduce all tort liability to terms of fault")

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care—also entered the scene.[42] Although there is some disagreement among scholars, the majority view is that most torts—including nuisance—largely did not operate on fault-based principles prior to the advent of negligence.[43]

The shift to fault-based liability and its effect on nuisance (and other torts) is perhaps best exemplified by the treatises of the day. Early American torts treatises were generally organized around the age-old principle that "where there is a legal right, there is also a legal remedy."[44] For example, one 1880 torts treatise included chapters such as "Wrongs Affecting Personal Security," "Invasions of Rights in Real Property," and "Wrongs in Respect to Personal Property," and discussed the various causes of action—assault, false imprisonment, trespass, trespass to chattels, and so on—that remedied the invasions of those rights under those headings.[45] Consistent with the idea that torts did not operate based on fault, the treatise concluded that "the good or bad motive which influenced the action complained of is generally of no importance whatsoever."[46]

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[42] *See* Vandevelde, *supra* note 36, at 455 ("The conventional wisdom is that the emergence of modern negligence began with the 1850 decision in *Brown v. Kendall* by Chief Justice Lemuel Shaw of Massachusetts." (internal footnote omitted)).

[43] *See* Vandevelde, *supra* note 36, at 450 ("Until Holmes conceptualized American tort law, all of the classic intentional torts rested on strict liability."); Richard A. Posner, *A Theory of Negligence*, 1 J. LEGAL STUD. 29, 29-30 & n.3 (1972) ("There is an orthodox view of the negligence concept to which I believe most legal scholars and historians would subscribe that runs as follows: Until the nineteenth century a man was liable for harm caused by his accidents whether or not he was at fault; he acted at his peril . . . [but] whether the period before the advent of the negligence standard is properly characterized as one of liability without fault remains, so far as I am aware, an unresolved historical puzzle."); *see also* HARPER § 1.24, at 111.

[44] *See Marbury v. Madison*, 5 U.S. (1 Cranch) 137 (1803) ("[I]t is a general and indisputable rule, that where there is a legal right, there is also a legal remedy, by suit or action at law, whenever that right is invaded"); *see also* BLACKSTONE, *supra* note 16, at *116 ("[S]ince all wrongs may be considered as merely a privation of right, the plain natural remedy for every species of wrong is the being put in possession of that right whereof the party injured is deprived."); *see also* Vandevelde, *supra* note 36, at 455-57 (also arguing that some early American tort treatises could hardly be called organized at all).

[45] COOLEY, *supra* note 20; *see* Vandevelde, *supra* note 36, at 455–57 (discuss early American tort treatises). This approach mirrored William Blackstone's organization in his Commentaries on the Laws of England, published in 1765. *See* Vandevelde, *supra* note 36, at 455–57.

[46] COOLEY, *supra* note 20, at 830.

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By the late 1880s, however, torts treatises began to take a different shape. Influenced by the writings of Oliver Wendell Holmes and other legal theorists, scholars began to organize their treatises around the notion that tort liability fell into three classes: intentional torts, negligence, and strict liability torts.[47] This fault-based liability system did not jettison the rights-and-remedies model, however; it supplemented it.[48] So, for example, an 1887 treatise still addressed rights-and-remedies such as "Personal Wrongs," "Wrongs to Person, Estate, and Property generally," and "Wrongs to Property."[49] But grafted on top of the rights-and-remedies model was a requirement of fault. "Personal Wrongs," such as assault, battery, and false imprisonment, were only actionable if they were intentional; "Wrongs to Person, Estate, and Property generally" were only actionable if the actor was negligent; and "Wrongs to Property," such as trespass to land or chattels, were strict liability torts.[50]

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[47] *See, e.g.*, F. POLLOCK, THE LAW OF TORTS (1887). This shift is readily apparent in Melville Bigelow's torts treatise. *See* MELVILLE BIGELOW, ELEMENTS OF THE LAW OF TORTS: FOR THE USE OF STUDENTS, v-vi (1894) (discussing the organizational changes from the 1878 edition to address fault-based liability).

[48] Holmes took the reorganization a step further, but his views were not universally accepted. In an 1873 article, Holmes proposed the three classes of tort liability. Vandevelde, *supra* note 36, at 457-62. By 1894, Holmes proposed jettisoning the distinction between intentional torts altogether. *Id.* at 473–76. Under this approach, the modern intentional torts—assault, battery, false imprisonment, and so on—would no longer be considered discrete causes of action and would be reorganized under a general theory of intentional tort that paralleled the general theory of negligence. *See id.* Modern courts and scholars refer to this idea as "prima facie tort." *See* RESTATEMENT (SECOND) OF TORTS § 870 & cmt. a (1979).

While the Restatement and some courts have adopted "soft" versions of prima facie tort, Texas has rejected this theory of liability entirely. *See id.*; Vandevelde, *supra* note 36, at 477–95; *A.G. Servs., Inc. v. Peat, Marwick, Mitchell & Co.*, 757 S.W.2d 503, 507 (Tex. App.—Houston [1st Dist.] 1988, writ denied) ("[T]he adoption of such a cause of action [for prima facie tort is] a matter of public policy and is within the province of the Legislature, not the courts"); *see Wal-Mart Stores, Inc. v. Sturges*, 52 S.W.3d 711, 717 (Tex. 2001) (noting that misassociation and confusion surrounding tortious interference torts "may have been due to, and were certainly exacerbated by, the concept of a prima facie tort that was being advanced [in the late nineteenth and early twentieth century]").

[49] POLLOCK, *supra* note 47, at 5–6.

[50] *Id.* at 5–8.

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For the first time treatises spoke of fault as a requirement—unless a tort was a strict liability tort, fault was now an explicit element. This is the basic model that survives to the present day.[51]

Troublesome as always, nuisance did not fit cleanly into the new fault-based approach. One early treatise lumped nuisance in with negligence.[52] Another placed nuisance under strict-liability torts.[53] By the time the First Restatement of Torts was published in 1939, the prevailing view was that, unlike other torts, nuisance could be an intentional, negligent, or strict liability tort.[54] This tripartite division of nuisance survives to the present day.[55]

In Texas, Pennsylvania, and elsewhere, these three historical concepts—the development of public nuisance, the varied usage of the term, and the development of fault-based liability—all contributed to the development of modern nuisance doctrine and, predictably, created much confusion along the way—confusion that persists today.

II. MODERN PRIVATE NUISANCE

Both Texas and Pennsylvania—as well as other jurisdictions in oil and gas producing states including Colorado, West Virginia, North Dakota, Ohio and New York—have adopted Sections 821 and 822 of the Restatement (Second) of Torts, outlining the elements of nuisance. While these elements remain part of the nuisance inquiry in those jurisdictions, the Texas Supreme Court

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[51] *See, e.g.*, RESTATEMENT (SECOND) OF TORTS § 6, cmt. a (1979). The *Palsgraf* case is a notable example of a court discussing both rights-and-remedies and fault-based liability. *See Palsgraf v. Long Island R. Co.*, 162 N.E. 99, 99 (N.Y. 1928) (Cardozo, J.) ("Negligence is not actionable unless it involves the invasion of a legally protected interest, the violation of a right. Proof of negligence in the air, so to speak, will not do.").

[52] POLLOCK, *supra* note 47, at 5–8.

[53] BIGELOW, *supra* note 47.

[54] *See* RESTATEMENT (FIRST) OF TORTS § 822 (1939).

[55] *See e.g.*, RESTATEMENT (SECOND) OF TORTS § 822 (1979). Professor Keeton advocated for limiting private nuisance to intentional private nuisance in order to limit confusion—negligent nuisance and strict liability nuisance would be handled as simple negligence cases and strict liability cases. *See Crosstex* at *14 ("When Keeton took over the commentary, however, he abandoned the three-category approach because 'the utilization of the same label ['nuisance'] to describe all these types of actionable conduct brings about much confusion regarding when the conduct is actionable and what the defenses to such conduct should be.'" (quoting PROSSER & KEETON § 87, at 623). The Texas Supreme Court rejected Keeton's approach in *Crosstex*. *Id.*

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concluded in a recent opinion that, "[g]iven the long and storied history of nuisance law, it is not surprising that the courts and parties in this case have struggled to articulate the elements of [the plaintiff's] nuisance claim."[56] The decision, *Crosstex North Texas Pipeline v. Gardiner*, provides some much-needed clarification for how the concept of nuisance will now be applied in Texas, and while not binding in other jurisdictions with significant energy development, may serve as guidance such jurisdictions. But while *Crosstex* is perhaps the Texas Supreme Court's most comprehensive discussion of private nuisance to date, it does not answer every question—nor could it—and it is not binding on courts outside of the state.

This section outlines the general elements of nuisance law under the Sections 821 and 822 of the Restatement (Second) of Torts, which have been adopted by Texas and Pennsylvania courts, and examines some common issues that arise in connection with nuisance claims. We then describe how *Crosstex* addresses the historical "accidents" that have created much of the confusion surrounding nuisance. Finally, this section considers a few defenses in the nuisance context.

A. Elements of a private nuisance case

To establish a claim for private nuisance in Texas,[57] Pennsylvania, and other jurisdictions that have adopted Sections 821 and 822 of the Restatement (Second) of Torts, a plaintiff must prove that the conduct at issue "is a legal cause of an invasion of another's interest in the private use and enjoyment of land, and the invasion is either (a) intentional and unreasonable, or (b) unintentional and otherwise actionable under the rules controlling liability for negligent or reckless conduct, or for abnormally dangerous conditions or activities."[58] For claims governed by jurisdictions adopting this definition, plaintiffs must prove (1) standing; (2) legal injury; (3) tortious conduct; (4) causation; and (5) actual damages. Each of these elements is discussed briefly below.

1. **Standing.** The plaintiff must have a legally cognizable interest in the property.[59]

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[56] *Crosstex* at *26. *See supra*, note 12, for the full case citation.

[57] Despite discussing numerous aspects of Texas nuisance law in *Crosstex*, the court did not lay out a list of elements applicable to all nuisance claims. Therefore, even after *Crosstex*, it appears as though the elements of nuisance laid out in Sections 821 and 822 of the Restatement (Second) of Torts still apply.

[58] RESTATEMENT (SECOND) OF TORTS § 822 (1979); *see also Washak v. Moffat*, 109 A.2d 310, 314 (Pa. 1954).

[59] The Court did not expressly address standing in *Crosstex*, but the decision appeared to implicitly recognize standing as an element. *See generally Crosstex* (discussing "plaintiffs' property" numerous

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Because nuisance is related to property rights, sometimes there is a question as to whether those without legal title—such as tenants or a property owner's family members—have any right to complain of a nuisance. Generally, they do. At one time, a plaintiff only had standing if he was the landowner. Courts have since relaxed the standing requirement so that generally "any interest sufficient to be dignified as a property right will support the action."[60] The modern standing requirements, however, still exclude those such as employees, customers, and the like.

Comment a to Section 821E of the Restatement (Second) of Torts limits nuisance claims to those who have "property rights and privileges in respect to the use and enjoyment of the land affected," that is, "legally protected interests."[61] However, this does not necessarily require that those asserting a nuisance claim are property ***owners***: they merely must have a legal right associated with the property at issue.[62]

In Texas and Pennsylvania, a right to occupy the property—which tenants and a property owner's family members have—is sufficient to give a plaintiff standing. The type of standing held by a plaintiff does, however, affect the plaintiff's remedy. In other words, a plaintiff's right determines the remedy. So while mere occupants of property may have standing to seek damages for personal injury, they generally cannot seek to recover permanent property damages.[63] However, there is some

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times). Many other decisions in Texas, Pennsylvania, and other jurisdictions recognize standing as an element. *See infra* notes 60-63, and accompanying text.

[60] PROSSER & KEETON § 86, at 617.

[61] RESTATEMENT (SECOND) OF TORTS § 821E, cmt. a (1979).

[62] *Id.*

[63] *See, e.g., id.*; *id.* at cmt. b (the Restatement provision on nuisance "does not state the rules applicable in determining when a person's rights and privileges in respect to land constitute property rights and privileges" for purposes of standing in a nuisance suit, deferring instead to property law for that determination); *In re One Meridian Plaza Fire Litig.*, 820 F. Supp. 1460, 1480 (E.D. Pa. 1993) ("I hold that the only plaintiffs who have a sufficient interest in property to bring a private nuisance claim are [tenants], as they all leased space which was allegedly the subject of the private nuisance."); *Auchard v. Tenn. Valley Auth.*, No. 3:09-CV-54, 2011 U.S. Dist. LEXIS 30407, at *13 (E.D. Tenn. Mar. 22, 2011) (rejecting application of Section 821E and finding that "because [adult child who lived with parent landowners] has no property interest in the Chandler Lane tract and because her sole claim is a private nuisance claim for loss and enjoyment of the property, she has no standing to assert such a claim and [defendant] is entitled to summary judgment as a matter of law); *Hot Rod Hill Motor Park v. Triolo*, 293 S.W.3d 788, 790-91(Tex. App.—Waco 2009, pet. denied) (applying Section 821E and holding that adult child, who listed parents' address as his address and stayed there with some

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authority for the proposition that a mere occupant may, in certain circumstances, recover property damages without legal title.[64]

2. **Legal injury.** A plaintiff must show ***substantial*** interference of the use and enjoyment of property that caused ***unreasonable*** discomfort or annoyance to the plaintiff.[65]

There are not clearly delineated bounds on the types of interferences that may constitute a nuisance—"virtually any disturbance of the enjoyment of property may amount to a nuisance."[66] The interference may be physical damage to property, economic harm to property's market value, harm to the plaintiff's health, or psychological harm to the plaintiff's peace of mind in the use and enjoyment of their property.[67]

To constitute a nuisance under Texas law, however, the interference must be "substantial" and cause "unreasonable" discomfort and annoyance.[68] These conditions distinguish "nuisances" from "the petty annoyances and disturbances of everyday life."[69] However, unless the underlying facts are undisputed or reasonable minds cannot differ, these distinctions are generally questions of fact—"the practical judgment of an intelligent jury" must decide "[t]he point at which an odor moves from unpleasant to insufferable or when noise grows from annoying to intolerable."[70]

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regularity but did not pay bills or taxes on the property, lacked standing to bring a private nuisance claim).

[64] *See New v. Khojal*, No. 04-98-00768-CV, 1999 WL 675448, at *3, *7 (Tex. App.—San Antonio, Aug. 31, 1999, no pet.) (standing for property damages claim where man lived in deceased mother's home for over a decade, paid for taxes and repairs, and believed himself to be the owner of the house after his mother died).

[65] *See Crosstex*. at *7–8.

[66] *Crosstex* at *8.

[67] *Id.*

[68] *Id.* at *7.

[69] *Id.*; *see also Kamuck v. Shell Energy Holdings GP*, No. 4:11-CV-1425, 2012 WL 1463594 (M.D. Pa., Mar. 19, 2012) (holding that while level of intrusion is typically a fact issue, plaintiff could identify only increased truck traffic and Pennsylvania courts have concluded traffic is too trivial to present a nuisance claim).

[70] *Crosstex* at *20 (quoting *Nat. Gas Pipeline Co. of Am. v. Justiss*, 397 S.W.3d 150, 155 (Tex. 2012)).

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Likewise in Pennsylvania, in order to constitute the legal cause of an invasion of an interest in property, plaintiffs must show that a defendant's conduct was a substantial factor in causing the harm to such interest.[71] Additionally, the harm alleged must be "significant harm, of a kind that would be suffered by a normal person in the community or by property in normal condition and used for a normal purpose."[72] "Significant harm" is defined as "harm of importance" which, for private nuisance, must involve "real and appreciable invasion with the plaintiff's use or enjoyment of his land."[73] The harm suffered by a private nuisance plaintiff must be more than mere fear of harm or unease with a defendant's actions.[74] Additionally, the inability to sell land is not a private nuisance.[75]

While legal injury issues are generally questions of fact, the Texas Supreme Court clarified two important legal points in *Crosstex*: (1) the focus is on the unreasonableness of the interference's effect on plaintiff's comfort or contentment and not on defendant's conduct; and (2) the determination must be based on an objective standard of persons of ordinary sensibilities and not on the subjective response of any particular plaintiff.[76] In short, to show a legal injury of nuisance, a plaintiff need not prove the defendant's conduct was unreasonable, but he cannot rely on his own particular sensitivities.

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[71] *Diess v. Pa. Dep't of Transp.*, 935 A.2d 895, 906-907 (Pa. Commw. Ct. 2007) (citing RESTATEMENT (SECOND) OF TORTS § 433 (1979)).

[72] *Kembel v. Schlegel*, 478 A.2d 11, 14-15 (Pa. Super. Ct. 1984) (citing RESTATEMENT (SECOND) OF TORTS § 821F (1977)).

[73] RESTATEMENT (SECOND) OF TORTS § 821F, cmt. c (1977).

[74] *Id.*; *Simmons v. Pacor, Inc.*, 674 A.2d 232, 236-239 (Pa. 1996) (damages for fear of injury or disease are not recoverable absent a physical manifestation of the injury or disease); *Wier's Appeal*, 74 Pa. 230 (Pa. 1873) (plaintiffs must establish private nuisance by clear and satisfactory proof of actually existing danger).

[75] *Golen v. Union Corp., U.C.O.-M.B.A., Inc.*, 718 A.2d 298, 299 (Pa. Super. Ct. 1998) (holding that inability to sell property was, by itself, insufficient to establish private nuisance because if court were to grant request for compensation, liability would attach any time property owner engaged in activity that ostensibly reduced surrounding property values).

[76] *Crosstex* at *8; *see also Kembel*, 478 A.2d at 14-15.

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3. **Tortious conduct.** The plaintiff must prove that the defendant intentionally, negligently, or through an abnormally dangerous activity interfered with the plaintiff's use and enjoyment.[77]

The proper standards for culpable conduct—whether a nuisance is intentional, negligent, or subject to strict liability—have been at issue in a number of recent cases. *Crosstex* clarifies these standards in Texas, though it leaves unanswered questions as to strict liability nuisance. Strict liability nuisance may be a less viable claim in Pennsylvania courts given recent decisions finding that certain oil and gas activities are not subject to strict liability. Notably, some instructions in the Texas and Pennsylvania Pattern Jury charges on nuisance are now questionable in light of *Crosstex* and other case law.

To prove intentional nuisance, a plaintiff must establish that the defendant intentionally caused the interference, not just that the defendant intentionally engaged in the conduct that caused the interference.[78] Intent includes not only a desire to create an interference, but also knowledge that the interference is substantially certain to result.[79] Intent does not entail an inquiry into whether the defendant's conduct is unreasonable.[80] It is the condition created by the interference, *i.e.*, the effects of the conduct, rather than the defendant's conduct that must be unreasonable.[81]

Negligent nuisance operates on ordinary negligence principles.[82] To establish negligence, a plaintiff must show the existence of a legal duty, a breach of that duty, and damages proximately caused by it.[83] To establish breach, a plaintiff must show that the defendant did or failed to do what a person of ordinary prudence in the same circumstances would have done or not done, that is, a failure

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[77] *See Crosstex* at *12–19; *see also* RESTATEMENT (SECOND) OF TORTS § 821E (1979).

[78] *Crosstex* at *16-17; RESTATEMENT (SECOND) OF TORTS § 821E & cmt. a thereto (1979).

[79] *Crosstex* at *16-17; *McQuiliken v. A & R Dev't Corp.*, 576 F. Supp. 1023, 1030-31 (E.D. Pa. 1983).

[80] *Id.*; *McQuiliken*, 576 F. Supp. at 1031.

[81] *Id.*; *McQuiliken*, 576 F. Supp. at 1031.

[82] *Crosstex* at *17-18; *Kleinknecht v. Gettysburg Coll*, 989 F.2d 1360, 1366 (3d Cir. 1993) (applying Pa. law).

[83] *Crosstex* at *17-18 (but also noting that, in addition to the ordinary negligence elements, there is a "unique element, which derives from the nature of the legal injury on which the plaintiff bases the claim, [of] the burden to prove that the defendant's negligent conduct caused a nuisance, which in turn resulted in the plaintiff's damages."); *Kleinknecht*, 989 F.2d at 1366.

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to take precautions against a risk apparent to a reasonable man, *e.g.*, to repair or abate a condition under his control.[84]

For culpability based on abnormal or out-of-place conduct, *i.e.*, *Rylands v. Fletcher* strict liability, the underpinnings are based on the notion that the defendant engaged in activity exposing others to a risk of harm from an accidental invasion under circumstances that justify allocating loss from such risk to the defendant even though the defendant acted with reasonable care.[85] In other words, the focus is on the nature of the risk rather than on the nature of the interference—"the mere fact that the defendant's use of its land is 'abnormal and out of place in its surroundings' will not support a claim for nuisance; instead, in the absence of evidence that the defendant intentionally or negligently caused the nuisance, the abnormal and out-of-place conduct must be abnormally 'dangerous' conduct that creates a high degree of risk of serious injury."[86]

Additionally, the Texas and Pennsylvania Pattern Jury Charges are questionable in light of *Crosstex* and other case law. The Texas Pattern Jury Charge on intentional nuisance states that "intentionally" includes that the defendant "acted with intent with respect to the nature of his conduct."[87] As noted above, *Crosstex* explicitly rejects this definition of intent.[88] Neither the Texas Pattern Jury Charge on "abnormal and out of place in its surroundings" nor the Pennsylvania Pattern Jury Charge on "inherently dangerous [instrumentality/material/substance" include any statement

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[84] *Crosstex* at *17-18; *Kleinknecht*, 989 F.2d at 1366.

[85] *Crosstex* at *18-19; *Kembel*, 478 A.2d at 14-15.

[86] *Crosstex* at *19, *26 (taking issue with the court of appeals' holding that the plaintiffs should have been allowed a trial amendment for an "abnormal and out of place" nuisance claim—there was no evidence in the record that the compressor station had engaged in the type of abnormally dangerous or ultra-hazardous conduct that would support such a cause of action); *Kembel v. Schlegel*, 478 A.2d at 14-15.

[87] Tex. PJC 12.2A ("'Intentionally' means that *Don Davis* acted with intent with respect to the nature of *his* conduct or to a result of *his* conduct when it was the conscious objective and desire to engage in the conduct or the result.").

[88] *Crosstex* at *16-17; *see also Likes*, 962 S.W.2d at 503 (characterizing an intentional nuisance as a nuisance "inflicted by conduct which is intended to cause harm"); *City of Princeton v. Abbott*, 792 S.W.2d 161, 166 (Tex. App.—Dallas 1990, writ denied) ("An invasion is intentional if (1) the actor acts for the purpose of causing it, or (2) the actor knows that it is resulting or is substantially certain to result from his conduct.")

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regarding "abnormally 'dangerous' conduct."[89] As noted above, Texas and Pennsylvania require such conduct to impose strict liability nuisance.[90]

Importantly, a Pennsylvania federal court recently held that hydraulic fracturing and associated natural gas drilling operations are not "abnormally dangerous" or "ultra-hazardous" activities subject to strict liability.[91] The availability of strict liability nuisance is more of an open question in Texas, where *Crosstex* left open questions on the viability and scope of this theory,[92] and in Ohio, where courts seem willing to consider differences between hydraulic fracturing and other extraction activities before deciding whether strict liability could apply.[93]

4. **Causation.** A plaintiff must prove that the defendant's conduct was a legal cause of the interference with the plaintiff's use and enjoyment of the property.[94]

Like any other tort, nuisance claims require a showing of causation. Even a modicum of evidence of causation may be sufficient to send the question to the jury. For example, in *Ely v. Cabot*

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[89] *Compare* Tex. PJC 12.2C ("Was *Don Davis*'s conduct abnormal and out of place in its surroundings such as to constitute a public nuisance?") *with, e.g.*, Tex. PJC 13.2 (for strict liability for vicious animals, asking "[o]n the occasion in question, did [the animal] have dangerous propensities abnormal to its class?"); *see* Penn. PJC 13.90 ("[A person who] [A business that] [provides] [uses] an inherently dangerous [instrumentality/material/substance]...must use the highest standard of care, using every reasonable precaution to avoid injury to everyone lawfully in the area. If you find [name of defendant] did not use the highest standard of care, then you must find [name of defendant] negligent.").

[90] *Crosstex* at *18-19.

[91] *Ely v. Cabot Oil & Gas Corp.*, 38 F. Supp. 3d 518, 519 (M.D. Pa. 2014) (refusing to "take a step which no court in the United States has chosen to take, and decide hydraulic fracturing to be an ultra-hazardous activity that gives rise to strict tort liability . . . . Instead, courts consistently have found that claims for property damage and personal injury allegedly resulting from natural gas drilling operations are governed by the more traditional negligence principles.").

[92] *Crosstex* at * 19 (noting that the Court was only addressing strict liability nuisance "to the extent that [such] a claim exists in Texas.").

[93] *Boggs v. Landmark 4, LLC*, No. 1:12CV614, 2013 WL 944776 (N.D. Ohio Mar. 11, 2013) (declining to dismiss strict liability nuisance claim and noting that, in the context of hydraulic fracturing, factual development is necessary to decide whether defendants' activities were abnormally dangerous).

[94] *See id.* at *15.

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Oil & Gas Corp., the plaintiffs claimed property damage from Cabot's natural gas drilling operations.[95] During trial, after the close of the plaintiffs' case-in-chief, Cabot moved for a directed verdict based on lack of evidence of causation, citing the lack of evidence showing a definitive pathway between Cabot's gas wells and the plaintiffs' water wells and the fact that plaintiffs had testified that they had experienced problems with their water before Cabot began drilling the gas wells at issue. The trial judge expressed "grave concerns" about the plaintiffs' proof of causation, but denied Cabot's motion without prejudice and allowed the plaintiffs' nuisance claims to be decided by the jury. The jury awarded plaintiffs approximately $4.25 million for their nuisance claims.[96] Cabot's motion for new trial, to set aside the judgment, and for remittitur, based in part on the causation issues identified during trial, is pending before the trial court.[97]

Two additional causation issues are discussed below: (1) whether a plaintiff may avoid medical causation requirements under a nuisance theory; and (2) whether a plaintiff may be required to comply with a "Lone Pine" case management order before discovery.

The first issue—whether a plaintiff may, under a nuisance theory, avoid medical causation requirements for personal injuries—is currently being litigated in two separate appeals in Texas. In *Cerny v. Marathon Oil Corporation*, the plaintiffs claimed that Marathon's operations caused extensive property damage and noxious fumes, along with numerous physical ailments, including headaches, rashes, and nosebleeds.[98] The plaintiffs, however, disclaimed "disease" allegations and claimed to seek damages only for "discomfort."[99] Despite this disclaimer, the court granted Marathon's motion for summary judgment on grounds that the plaintiffs could not prove causation.[100] As to the plaintiffs' physical ailments, the court stated that plaintiffs could not meet the medical causation requirements the Texas Supreme Court set forth in *Merrell Dow Pharmaceuticals, Inc. v. Havner*, requiring a plaintiff to present reliable expert testimony that establishes general and specific causation, establishes dose, and rules out other potential causes.[101] The court of appeals affirmed the

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[95] 38 F. Supp. 3d at 518.

[96] *See Ely v. Cabot Oil & Gas Corp.*, No. 3:09-02284-JEJ-MCC (M.D. Pa. Nov. 9, 2011) (Doc. 765).

[97] *Id.*

[98] *Cerny v. Marathon Oil Corp.*, No. 13-05-00118-CVK (Tex. Dist. Ct. Karnes Cnty. Aug. 14, 2014).

[99] *Id.*

[100] *Id.*

[101] *Merrell Dow Pharmaceuticals, Inc. v. Havner*, 953 S.W.2d 706 (Tex. 1997).

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trial court's grant of summary judgment, and plaintiffs have filed a petition for review in the Texas Supreme Court.[102]

In *Parr v. Aruba Petroleum, Inc.*, the plaintiffs claimed property damage from Aruba's operations, as well as physical ailments such as headaches, rashes, and nosebleeds.[103] Aruba moved for summary judgment, arguing—like Marathon in *Cerny*—that the plaintiffs could not meet *Havner*'s causation requirements. To avoid *Havner*, the Parr plaintiffs—like the Cerny plaintiffs—disclaimed "disease" allegations and sought damages only for "discomfort."[104] The court granted summary judgment in part but allowed plaintiffs to seek damages for injuries within the common knowledge and experience of a layperson.[105] The plaintiffs then presented a "toxic tort" case to the jury. The jury awarded plaintiffs approximately $2.9 million, including almost $300,000 for diminution in property value.[106] This case is now on appeal.[107]

Second, "Lone Pine" orders, which have been litigated recently in Colorado and other jurisdictions, may be a viable discovery tactic in some jurisdictions.[108] In many cases, energy companies have attempted to obtain "Lone Pine" orders requiring toxic tort plaintiffs to provide evidence of injury, exposure, and causation before discovery—facts generally only obtainable by the plaintiff—or face dismissal.[109]

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[102] *Cerny v. Marathon Oil Corp.*, No. 04-14-00650-CV (Tex. App.—San Antonio Oct. 7, 2015, pet. filed).

[103] *Parr v. Aruba Petroleum, Inc.*, No. 11-01650-E (Tex. Cnty. Ct., Dallas Cnty. Apr. 22, 2014).

[104] *Id.* The Parr plaintiffs added their "disclaimer" to their petition before the Cerny plaintiffs, but the *Cerny* case reached final judgment before the *Parr* case.

[105] *Id.*

[106] *Id.*

[107] *Aruba Petroleum, Inc. v. Parr*, No. 05-14-01285-CV (Tex. App.—Dallas, filed Oct. 6, 2014).

[108] In *Lore v. Lone Pine Corp.*, No. L33606-85 (N.J. Super. Ct. Law. Div., Monmouth Cnty., Jan. 1, 1986), the case from which these discovery control orders derive their name, the court ordered plaintiffs to provide specific documentation regarding each claim for personal injuries and information and reports supporting each individual plaintiff's claim for diminution of property value.

[109] *See, e.g. Schneider* at 268 (noting the trial court signed a "Lone Pine" order regarding plaintiffs' nuisance claims).

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In *Strudley v. Antero Resources Corp.*,[110] a Colorado district court entered a "Lone Pine" order requiring plaintiffs to make a *prima facie* showing linking their alleged personal injuries to defendant's nearby oil and gas drilling.[111] In their lawsuit, the plaintiffs alleged that Antero's hydraulic fracturing operations contaminated their water well and caused a myriad of personal injuries.[112] When they failed to make a *prima facie* showing of any connection between Antero's activities and their injuries, the court dismissed the lawsuit with prejudice.[113] The Colorado Court of Appeals subsequently reversed the "Lone Pine" order and the dismissal order, holding that a "Lone Pine" order was inappropriate for a case that was not "any more complex or cost intensive than an average toxic tort case."[114] The Colorado Supreme Court agreed with the court of appeals, holding that the Colorado Rules of Civil Procedure do not allow a trial court to use a case management order such as a "Lone Pine" order, and remanded the case to the trial court.[115]

Although the Supreme Court of Colorado's decision forecloses the use of "Lone Pine" orders in state court cases in Colorado, the ruling is based on the unique language of Colorado Rule of Civil Procedure 16, which limits a trial court's discretion and has no parallel in Texas or Pennsylvania. Indeed, defendants have obtained "Lone Pine" orders in other jurisdictions,[116] although the timing of

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[110] *Strudley v. Antero Res. Corp.*, No. 2011-cv-2218 (Denver Cnty. Dist. Ct. Mar. 23, 2011).

[111] *Antero Res. Corp. v. Strudley*, 347 P.3d 149, 158-59 (Colo. 2015).

[112] *Id.*

[113] *Id.*

[114] *Id.*

[115] *Id.*

[116] *See, e.g.*, *Roth v. Cabot Oil & Gas Corp.*, 919 F. Supp. 2d 476 (M.D. Pa. 2013); *Morgan v. Ford Motor Co.*, No. 06-1080 (JAP), 2007 U.S. Dist. LEXIS 36515, at *39-40 (D.N.J. May 17, 2007) (holding that, in a mass action, "[d]efendants are not entitled to file what amounts to a summary judgment motion without first allowing the party opposing the motion a chance to conduct discovery" and instead mandated that plaintiffs provide only "a simple statement from each plaintiff pursuant to Rule 26(a)(1) identifying the 'nature and extent of injuries suffered'" and also granted a request for the use of bellwether plaintiffs as a case management tool."); *Burns v. Universal Crop Protection Alliance*, No. 4:07-CV-535, 2007 U.S. Dist. LEXIS 71716, at *3 (E.D. Ark. Sept. 25, 2007) (granting a "Lone Pine" order before commencing discovery).

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requesting one can affect a court's willingness to grant one.[117] "Lone Pine" orders "appear to be utilized most often in cases involving complicated legal and factual issues in complex mass tort and toxic tort litigation involving multiple parties,"[118] although their future viability may be in question.

5. **Actual damages.** A plaintiff must prove that the interference resulted in actual damages to the plaintiff.[119]

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[117] *See, e.g.*, *Morgan*, 2007 U.S. Dist. LEXIS at *39-40; *Simeone v. Girard City Bd. of Educ.*, 872 N.E.2d 344, 352 (Ohio Ct. App., Trumbull Cnty. 2007) (overturning a trial court's grant of a Lone Pine order as an abuse of discretion because "the timing of the issuance of the 'Lone Pine' order ... [before discovery] effectively and inappropriately supplanted the summary judgment procedure" and shifted the usual burdens of proof onto the non-moving party; *Abrams v. Ciba Specialty Chem. Corp.*, No. 08-68, 2008 U.S. Dist. LEXIS 86487, at *18 (S.D. Ala. Oct. 23, 2008) (declining to issue a Lone Pine order precisely because some discovery had already occurred: "Lone Pine orders are 'pre-discovery' orders. ... [T]he entry of a Lone Pine order is unwarranted [in this case because] the properties of each plaintiff have been tested for the presence of [the chemical substance] DDTr and defendants have been provided with the results.").

[118] *Roth v. Cabot Oil & Gas Corp.*, 287 F.R.D. 293, 297 (M.D. Pa. 2012); *see also Acuna v. Brown & Root*, 200 F.3d 335, 339 (5th Cir. 2000) ("Lone Pine orders are designed to handle the complex issues and potential burdens on defendants and the court in mass tort litigation" and such orders "are issued under the wide discretion afforded district judges over the management of discovery under Fed. R. Civ. P. 16.").

[119] In light of the emphasis in *Crosstex* on the "legal injury" (or invasion of a legal right) aspect of nuisance, some may argue that actual damages are no longer an essential element. It is true that there is some authority for the general proposition that actual damages are not required, and nominal damages may be recovered, when a "plaintiff sues for damages for the invasion of a legal right, and fails to show on the trial any actual damage sustained." *See, e.g.*, *Ehlert v. Galveston, H. & S.A. Ry. Co.*, 274 S.W. 172, 174 (Tex. Civ. App.—Galveston 1925, writ dism'd w.o.j.). For example, actual damages are not an essential element for trespass claims. *See, e.g.*, *Meyers v. Ford Motor Credit Co.*, 619 S.W.2d 572, 573 (Tex. Civ. App.—Houston [14th Dist.] 1981, no writ) ("The law is well settled that a trespasser is liable to the property owner even though there is no proof of actual damages in any specific amount.").

Despite the general proposition above and the Texas Supreme Court's emphasis in *Crosstex* on "legal injury," actual damages are likely still an essential element of a nuisance claim. First, nuisance is derived from trespass on the case, and the court has explained that a trespass on the case plaintiff "must prove actual injury" and is not entitled to nominal damages. *Coastal* at 11. Second, without actual damages, a nuisance claim should logically fail to meet the legal injury requirements—that the interference is substantial and unreasonable. *See Crosstex* at *8 ("Only a substantial interference that

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The general damages remedies for nuisance are fairly well defined. In general, for a temporary nuisance, the land owner may recover only lost use and enjoyment, *e.g.*, loss of rental value or possibly the cost of restoration.[120] If permanent, the plaintiff may recover lost market value, a value which reflects all property damages, including lost rents expected in the future.[121] The presumed highest and best use of land, against which damages are to measured, is its existing use.[122] Although generally the test in permanent injury is the market value before and after the injury, where there is no isolated event that caused the injury, the proper comparison may be of market value with and without the alleged nuisance.[123] Yet issues remain to be resolved.

One area of dispute is the possibility of damages for "annoyance and discomfiture" or "inconvenience and discomfort." Like many other areas of nuisance law, there is considerable conflicting authority on the scope of these kinds of damages, and it is unclear whether and how these damages might interact with other categories of damages, such as mental anguish.

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has unreasonable effects constitutes the kind for which the defendant should be liable in damages.") (internal quotations and citations omitted); *Trinity Portland Cement Co. v. Horton*, 214 S.W. 510, 511 (Tex. Civ. App.—Amarillo 1919, writ dismissed w.o.j.) (stating that nominal damages are not available for nuisance because "[t]he gravamen of the action is the injury"); Thomas W. Merrill, *Trespass, Nuisance, & the Costs of Determining Property Rights*, 14 J. LEGAL STUD. 13, 18 (1985) ("Failure to show actual damages in nuisance . . . usually results in the denial of all relief (because of the failure to satisfy the 'substantial harm' requirement for liability).").

[120] *Crosstex* at *21; *Hughes v. Emerald Mines Corp.*, 450 A.2d 1, 8 (Pa. Super. Ct. 1982); *Bumbarger v. Walker*, 164 A.2d 144, 150 (Pa. Super. Ct. 1960).

[121] *Id.*

[122] *Id.*

[123] *Id.* One issue currently being litigated in Texas is the scope of injunctive relief available. In *Lazy R Ranch, L.P. v. ExxonMobil Corp.*, 456 S.W.3d 332 (Tex. App.—El Paso 2015, pet. granted), the trial court awarded injunctive relief which would require the defendant to incur substantial remediation costs. On appeal to the Texas Supreme Court, petitioners and amici have argued that the trial court's injunction essentially allowed plaintiffs' an end-around the fair market value cap for permanent damages. Petitioners have asserted that the remediation costs are over 100,000 times the market value of the land.

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In Pennsylvania, nuisance plaintiffs may recover for "personal annoyance, inconvenience and discomfort" in addition to damages for loss of use and enjoyment of the property.[124] Such damages are "wholly within the sound discretion of the jury" and are not addressed in the Pennsylvania pattern jury charge.[125]

Texas law is less defined in this area, and some authority even suggests that non-physical "annoyance and discomfiture" is not an injury that allows an award of separate damages.[126] Because annoyance and discomfiture damages were not pled in *Crosstex*, the Court there declined to address "the scope of these damages or determine if they are available for either temporary nuisance, permanent nuisance, or both."[127]

Damages for inconvenience and discomfort may be recoverable under both a negligence theory and a nuisance theory. In *Houston*, the plaintiffs brought a claim for negligence, but not

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[124] *Noerr v. Lewistown Smelting & Refining, Inc.*, 60 Pa. D. & C.2d 406, 458 (Pa. Ct. Com. Pl. 1964); *Evans v. Moffatt*, 160 A.2d 465, 473 (Pa. Super. Ct. 1960) ("The additional award was for the personal annoyance and discomfort plaintiffs suffered – not merely loss of use and enjoyment.").

[125] *Noerr*, 60 Pa. D. & C.2d at 458.

[126] *See Vestal v. Gulf Oil Corp.*, 235 S.W.2d 440, 441 (Tex. 1951) (construing case law to state that additional damages are only allowed for "damages to health or physical discomfort"). Rather, in some instances, these damages seem to be treated as a "loss of enjoyment" and are considered part of property damages. *See Bates*, 147 S.W.3d at 269 n.5 (stating *Vestal* held "award for discomfort and loss of enjoyment was not claim for personal injuries."); *Brooks v. Chevron USA Inc.*, No. 13-05-029, 2006 Tex. App. LEXIS 4479, at *22 n.9 (Tex. App.—Corpus Christi May 25, 2006, pet. denied) (citing *Vestal* for the proposition that "symptoms of discomfort or loss of enjoyment are not personal injury damages"); *Leyendecker & Assocs., Inc. v. Wechter*, 683 S.W.2d 369, 373 (Tex. 1984) (citing *Vestal* for the proposition that "[w]here an injury to realty is permanent, the general measure of damages comprehends and includes the loss of use and enjoyment"). In other cases, "annoyance and discomfiture" appears to be treated as a separate and distinct kind of damages. *See, e.g., Lacy Feed Co. v. Parrish*, 517 S.W.2d 845, 851 (Tex. Civ. App.—Waco 1974, writ ref'd n.r.e.) ("[D]amage to the property of the Plaintiff (which includes loss in market value as well as loss of the use and enjoyment of the property) is one element of damage; whereas, damage to the person of the Plaintiff (for personal discomfort, annoyance, and inconvenience) is a separate and distinct, and different element of damage.").

[127] *Id.*; *see also Likes*, 962 S.W.2d at 504 (noting that a nuisance claim may give rise to these damages); *Schneider* at 292 n.144 ("[T]he residents do not allege the nuisances here caused personal injuries beyond symptoms of discomfort and annoyance.").

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nuisance. While the court ultimately determined that inconvenience and discomfort damages were not permissible because of deficient pleadings, the court implied that, were the damages specifically plead, they would be allowed under negligence.[128]

There is little guidance given in jury charges regarding annoyance and inconvenience damages. In *Evans*, the court heard testimony from the plaintiffs regarding "gases and their foul odors, their prevalence, the choking and irritating effect they have on the throat, the interference with sleep they can cause, how they can produce headaches and cause nausea and general discomfort, nuisance and annoyance."[129] In *Noerr*, the jury awarded damages for annoyance, inconvenience, and discomfort damages after hearing evidence of "frequent sore throats, headaches, sensation of eyes burning,

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[128] It is well established that inconvenience and discomfort damages must be pled to be awarded. *See Houston v. Texaco, Inc.*, 538 A.2d 502, 506 (Pa. Super. Ct. 1988) ("although the law does recognize a cause of action for inconvenience and discomfort caused by interference with another's peaceful possession of his or her real estate, such a claim must be pleaded"); *see also Roth v. Cabot Oil & Gas Corp.*, No. 12-898, 2013 U.S. Dist. LEXIS 12261, at *43-44 (Jan. 30, 2013) (dismissing cause of action for nuisance and clarifying that *Houston* case requires that claim for inconvenience and discomfort damages must be plead in order to be awarded, but is not in itself independent cause of action).

Although the *Houston* court ultimately decided that inconvenience and discomfort damages were not recoverable, the trial court's jury charge in that case is notable:

> Since certain expenses of all of these plaintiffs have been paid to date by [defendant], such as the drilling of new wells on their properties, your determination of the appropriate damages on the unique facts of this case must be determined as follows: With regard to what we call compensatory damages: 1. Each plaintiff shall be entitled to be reasonably compensated for all aggravation and inconvenience that he or she has suffered as a result of the contamination of their well water; 2. And this is still part of what we call compensatory damages. Each plaintiff shall be entitled to be reasonably compensated for all mental anguish suffered as a result of the contamination of their well water in the manner in which the gas station has been and is being operated.

Houston, 538 A.2d at 504. *See also Noerr*, 60 Pa. D. & C.2d at 437 (awarding $2000 for annoyance, inconvenience, and discomfort in addition to damages to personal property; damages to real property were not at issue).

[129] 160 A.2d at 472.

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inability, at times, to sleep with windows open, discoloration of painted surfaces, soiling of clothes on wash line and being required to spend extra hours of work tending to sick cattle . . . ."[130]

Another open question under Texas and Pennsylvania law is the availability of "stigma" damages. A majority of federal and state courts that have addressed the issue have held that to recover damages for lost market value based on stigma, there must be physical damage to the property.[131]

Although the Pennsylvania Supreme Court has not yet ruled on this issue, the Third Circuit has attempted to predict what it would decide:

> The U.S. Court of Appeals for the Third Circuit has held that eligibility for stigma damages [under Pennsylvania law] entails three elements: "(1) defendants have caused some (temporary) physical damage to plaintiffs' property; (2) plaintiffs demonstrate that repair of this damage will not restore the value of the property to its prior level; and (3) plaintiffs show that there is some ongoing risk to their land." *In re Paoli R.R. Yard PCB Litig.* ("*Paoli II*"), 35 F.3d 717, 798 (3d Cir. 1994). "*Paoli II* specifically requires proof of some real physical damage to plaintiffs' land, some damage that 'exists in fact' as opposed to damage caused by negative publicity alone." *In re Paoli R.R. Yard PCB Litig.*, 113 F.3d 444, 462-63 (3d Cir. 1997).[132]

Significant for high-profile litigation—like recent cases involving hydraulic fracturing—Pennsylvania law does not allow a plaintiff to recover damages for stigma due to negative publicity

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[130] 60 Pa. D. & C.2d at 437.

[131] *See In re Paoli R.R. Yard PCB Litig.*, 113 F.3d 444, 463 (3d Cir. 1997); *Bradley v. Armstrong Rubber Co.*, 130 F.3d 168, 175-76 (5th Cir. 1997); *Adams v. Star Enter.*, 51 F.3d 417, 424 (4th Cir. 1995); *Berry v. Armstrong Rubber Co.*, 989 F.2d 822, 829 (5th Cir. 1993); *Lewis v. Kinder Morgan Se. Terminals LLC*, Nos. 2:07cv47KS-MTP, 2:07cv48KS-MTP, 2008 WL 3540174, at *5 (S.D. Miss. Aug. 6, 2008); *Mehlenbacher v. Akzo Nobel Salt, Inc.*, 71 F. Supp. 2d 179, 185-89 (W.D.N.Y. 1999), *rev'd on other grounds,* 216 F.3d 291 (2d Cir. 2000); *Mercer v. Rockwell Int'l Corp.*, 24 F. Supp. 2d 735, 743-45 (W.D. Ky. 1998); *Wilson v. Amoco Corp.*, 33 F. Supp. 2d 981, 986 (D. Wyo. 1998); *In re W.R. Grace & Co.*, 346 B.R. 672, 675-77 (Bankr. D. Del. 2006); *Smith v. Kan. Gas. Serv. Co.*, 169 P.3d 1052, 1059 (Kan. 2007); *Walker Drug Co. v. La Sal Oil Co.*, 972 P.2d 1238, 1245-48 (Utah 1998); *Chance v. BP Chems., Inc.*, 670 N.E.2d 985, 993 (Ohio 1996); *Adkins v. Thomas Solvent Co.*, 487 N.W.2d 715, 725 (Mich. 1992).

[132] *Kemblesville HHMO Ctr., LLC v. Landhope Realty Co.*, No. 08-2405, 2011 U.S. Dist. LEXIS 83324, at *12 (E.D. Pa. July 28, 2011).

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alone.[133] While not explicitly defined, the term "ongoing risk" as used in *Paoli II* appears to mean that there is an ongoing risk associated with physical property damage (such as the continued presence of PCBs on the property, or the small risk of future flooding). However, a claim that a property is unmarketable due to the stigma associated with alleged contamination, without more, is insufficient to support a claim for negligence or nuisance damages. In *Golen v. Union Corp., U.C.O.-M.B.A.*,[134] plaintiffs claimed that pollution from the defendant's operations rendered their property unmarketable, and they sought to recover damages under a theory of private nuisance for the inability to sell the property. The court denied the claim, holding that the plaintiffs' "claim of inability to sell property is, by itself, insufficient to establish a private nuisance" and noting that permitting recovery purely for the inability to sell property would "allow unfounded prejudices to dictate property use."[135]

Texas has not squarely addressed the issue of stigma either. In *Houston Unlimited, Inc. Metal Processing v. Mel Acres Ranch*, the Texas Supreme Court noted as much, yet left the question open.[136] Texas has disallowed damages for nuisance "based solely on fear, apprehension, or other emotional reaction that results from the lawful operation of industries" in the past, but the availability of stigma damages—and whether physical damage to the property is required—remains an open question.[137]

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[133] *See O'Neal v. Dep't of the Army*, 852 F. Supp. 327, 336 (M.D. Pa. 1994); *Gates v. Rohm & Haas Co.*, N. 06-1743, 2008 U.S. Dist. LEXIS 58036, at *7-8 (E.D. Pa. Jul. 31, 2008).

[134] 718 A.2d 298 (Pa. Super. Ct. 1998).

[135] *Id.* at 301 ("Although hazardous waste contamination is undeniably pernicious, when such contamination only impacts a property owner's ability to sell his or her property, a nuisance action does not exist.").

[136] *Houston Unlimited, Inc. Metal Processing v. Mel Acres Ranch*, 443 S.W.3d 820, 822 (Tex. 2014) ("Although some federal and other states' courts have recognized a legal right to recover stigma damages, we have never addressed the issue...We decline to do so here, however, because even if we recognized such a right, the landowner's evidence of lost market value in this case is not legally sufficient to support the trial court's judgment").

[137] *See Maranatha Temple, Inc. v. Enter. Prods. Co.*, 893 S.W.2d 92, 100 (Tex. App.—Houston [1st Dist.] 1994, writ denied); *see also Rankin v. FPL Energy, LLC*, 266 S.W.3d 506, 512 (Tex. App.—Eastland 2008, pet. denied) (holding that where the challenged activity is lawful, nuisance actions are limited to instances in which "the activity results in some invasion of the plaintiff's property and by not allowing recovery for emotional reaction alone.").

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B. Redefining private nuisance in Texas—*Crosstex North Texas Pipeline v. Gardiner*

In *Crosstex*, issued June 24, 2016, the Texas Supreme Court considered a noise nuisance claim involving a natural gas compressor station, seizing on the opportunity to redefine nuisance law. Taking a different tone than prior opinions, the Court's analysis squarely addressed where Texas stands on the three historical "accidents" that have troubled nuisance law for over a century.[138]

First, the court distinguished public nuisance from private nuisance.[139] A claim for public nuisance "generally addresses conduct that interferes with 'common public rights' as opposed to private individual rights."[140] Although the Court declined to address public nuisance in full, its short discussion was in line with most modern treatises—public and private nuisance "have nothing in common, except that each causes annoyance or inconvenience."[141] The Court further acknowledged that "a public nuisance may also be a private nuisance," but reaffirmed that "they are two distinct conditions with different requirements and limitations."[142]

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[138] *Cf. Wales Trucking Co. v. Stallcup*, 474 S.W.2d 184, 186 (Tex. 1971) (refusing to attempt to give nuisance "any exact or comprehensive definition.")

[139] *Crosstex* at *4 n.3. Most modern Texas cases acknowledge the distinction between public and private nuisance, but courts have at times, usually in dicta, blurred the lines between the two. *Compare Sciscoe v. Enbridge Gathering (N. Tex.), L.P.*, No. 07-13-00391-CV, 2015 WL 3463490, at *6 (Tex. App.—Amarillo June 1, 2015, pet. filed) (describing three categories of nuisance as negligent, intentional, and "other inappropriate conduct" and citing statute dealing with public nuisances to describe "other inappropriate conduct") *with, e.g., City of Tyler v. Likes*, 962 S.W.2d 489, 503 (Tex. 1997) ("Courts have broken actionable nuisance into three classifications: negligent invasion of another's interests; intentional invasion of another's interests; or other conduct . . . which involves an unusual hazard or risk." (internal quotations and citations omitted)).

[140] *Crosstex* at *4 n.3.

[141] *Id.*; *see supra* notes 23-25 and accompanying text.

[142] *Crosstex* at *4 n.3; *see supra* notes 26-28 and accompanying text. The boundaries of public nuisance are beyond the scope of this article, but many of the same principles apply in public nuisance cases. *See, e.g., Ortega v. Phan-Tran Prop. Mgmt., LLC*, No. 01-15-00676-CV, 2016 WL 3221423, *4-5 (Tex. App.—Houston [1st Dist.] June 9, 2016, pet. filed) (mem. op.) (holding summary judgment proper on negligent public nuisance claim because there was no evidence that defendant owed plaintiff a duty) [Disclosure: Mr. Stewart is counsel for Phan-Tran in the *Ortega* case.].

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Second, the Court examined the varied usage of the term nuisance and held that private nuisance is neither a cause of action nor a description of the defendant's conduct; rather, it is a legal injury related to plaintiff's use and enjoyment of property.[143] Stated another way, nuisance—a particular type of injury to a person's right to use and enjoy property—is only one element of a cause of action and "'[a]n injury without wrong does not create a cause of action.'"[144]

Third, the Court clarified that liability for nuisance is fault-based. Consistent with most Texas decisions in the past few decades, the Court held that an action for nuisance could be based an intentional, negligent, or strict liability conduct.[145] In doing so, it rejected the urging of commentators to limit nuisance to intentional conduct—that is, negligent nuisance should be treated as a normal negligence claim, and strict liability nuisance should be treated as a normal strict liability claim.[146]

Finally, the Texas Supreme Court addressed the difference between private nuisance and trespass. Both involve an interference with an interest in land, and the distinction between the two has been "complex and troublesome."[147] For example, the court "recently referred in passing to trespass claims as those that involve a physical entry . . . as distinguished from nuisance claims in which the entry . . . is 'not physical.'"[148] However, the modern distinction between the two is that "a trespass involves interference with the plaintiffs' right to *exclusive possession* of their land, while a nuisance involves interference with the plaintiffs' right to *the use and enjoyment* of their land."[149] If "a defendant's conduct interferes with both, the plaintiffs may assert either claim, or both."[150]

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[143] *Crosstex* at *6-7.

[144] *Id.* at *12 (quoting *State v. Brewer*, 169 S.W.2d 468, 471 (Tex. 1943)).

[145] *Id.* at *15; *see, e.g., Likes*, 962 S.W.2d at 503 (discussing the three categories of actionable nuisance).

[146] *Crosstex* at *15.

[147] *Id.* at *14 n.17 (internal quotations omitted)

[148] *Id.* (quoting *Gilbert Wheeler*, 449 S.W.3d at 474).

[149] *Id.* One persistent issue courts have struggled with is whether migratory microscopic particles are actionable in trespass, nuisance, or both. *See* HARPER § 1.23, at 103 & n.44 (stating that "with the increase in scientific knowledge and methods many invasions are perceived today as physical that would once have supported an action for nuisance only" and citing conflicting results). The Texas Supreme Court has not definitely weighed in on this subject. *See Schneider* at 292 (sidestepping the issue by "[a]ssuming that entry of photons, particles, or sound waves can constitute a trespass . . . ."); *see also Stevenson v. E.I. Dupont de Nemours & Co.*, 327 F.3d 400, 405-06 (5th Cir. 2003) (making an

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C. Some defenses in the nuisance context

While a number of defenses to other torts apply to nuisance, two particular defensive theories have recently been litigated, with mixed results. First, limitations arguments continue to be a troublesome area, particularly for nuisance cases in Texas. Second, where a landowner has leased minerals under the land in dispute, a lessee recently successfully argued that the landowners/lessor were quasi-estopped to bring its claim.

First, limitations continues to be a challenging defense in the nuisance context. The limitations period for a private nuisance claim in Texas and Pennsylvania is two years.[151] After the limitations period expires, any nuisance claim is barred.[152] However, determining the accrual date has proved troublesome. In both jurisdictions, the accrual date depends on whether a nuisance is "temporary" or "permanent"—a "permanent nuisance claims accrues when injury *first* occurs or is discovered; a temporary nuisance accrues *anew* upon each injury."[153] This distinction[154] has resulted in a body of case law that "has no standard of reference" and is full of irreconcilable precedents.[155] Pennsylvania also recognizes "continual nuisance," which is similar to permanent nuisance but is characterized by an activity is ongoing and/or repetitive.[156] To classify a particular condition as permanent or continual, Pennsylvania courts consider (1) the character of the structure or thing producing the injury; (2)

Erie guess that "Texas law would permit recovery for airborne particulates" in trespass). One Texas appellate court recently held that "a trespass claim under Texas law may be premised upon the entry onto property of airborne particulates." *Sciscoe*, *supra* note 139, at *9. The *Sciscoe* case is currently pending in the Texas Supreme Court.

[150] *Crosstex* at *14 n.17.

[151] *See Schneider* at 279; *Dombrowski v. Gould Electronics, Inc.*, 954 F. Supp. 1006, 1011-12 (M.D. Pa. 1996).

[152] *Schneider* at 279.

[153] *Id.* at 270.

[154] This distinction has been called "one of the oldest and most complex in Texas law," *Id.* at 274-275.

[155] *Id.* at 274-75; *see also Crosstex* at *1 n.1 (noting the same in its discussion of nuisance as "a morass").

[156] *Cassel-Hess v. Hoffer*, 44 A.3d 80, 87 (Pa. Super. Ct. 2012) (discussing the distinction between permanent and continuing nuisance).

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whether the consequences of the nuisance will continue indefinitely; and (3) whether the past and future damages may be predictably ascertained.[157]

Similarly, in *Schneider*, the Texas Supreme Court stated that the distinction between permanent and temporary nuisance lies in whether the case involves "an activity of such a character and existing under such circumstances that it will be presumed to continue indefinitely."[158] Further complicating things, the Texas Supreme Court recently reformulated the distinction for injuries to real property so that:

- An injury to real property is considered permanent if (a) it cannot be repaired, fixed, or restored, or (b) even though the injury can be repaired, fixed, or restored, it is substantially certain that the injury will repeatedly, continually, and regularly recur, such that future injury can be reasonably evaluated.

- [A]n injury to real property is considered temporary if (a) it can be repaired, fixed, or restored, and (b) any anticipated recurrence would be only occasional, irregular, intermittent, and not reasonably predictable, such that future injury could not be estimated with reasonable certainty.[159]

Moreover, for some nuisance cases, the problem of a "new" nuisance arises, such as where the activity changes in character during the limitations period. In some instances, what might to some have seemed a "permanent" nuisance barred by limitations has been characterized as a new "temporary" nuisance because "an old nuisance does not excuse a new and different one."[160] Particularly relevant to defendants seeking to bar claims based on limitations, an accrual date based on

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[157] *Cassel-Hess*, 44 A.3d at 87; *Sustrik v. Jones & Laughlin Steel Corp.*, 197 A.2d 44, 46-47 (Pa. 1964) (establishing that permanent intrusions to land must be litigated in single action for past and future damages); *see also Cass v. Pa. Co.*, 28 A. 161, 163 (Pa. 1893) (holding that cause of action for permanent nuisance due to bridge that blocked traffic accrued "not later than the time when the work...had progressed to such an extent as to obstruct ingress and egress"); *Graybill v. Providence Twp.*, 593 A.2d 1314, 1316-17 (Pa. Cmmw. Ct. 1991) (finding that intermittent flooding up to ten times per year from construction activities was continuing trespass and not permanent injury).

[158] *Schneider* at 274-75.

[159] *Gilbert Wheeler*, 449 S.W.3d at 480.

[160] *Schneider* at 280; *see Atlas Chemical Indus., Inc. v. Anderson*, 524 S.W.2d 681, 683 (Tex. 1975) (new emissions to new property due to new natural forces—but same plaintiff—from plant operating for over forty years).

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"subjective criteria like smell and sound"—as opposed to measurable, objective criteria (such as chemical levels in the air)—may be left to the jury.[161]

Finally, a recent Texas case suggests a potential defense where a landowner complains of his lessee's actions, and those actions are taken pursuant to the parties' lease. In *Titan Operating LLC v. Marsden*, the surface owners brought a lawsuit against Titan claiming that noise from drilling, fumes from diesel engines, and lights from the well site that "lit up [the] whole house like a Christmas tree" constituted a nuisance.[162] The jury awarded $36,000. The court of appeals reversed and rendered because, as a matter of law, plaintiffs were precluded from "accepting the benefits of their oil and gas lease . . . and later maintaining a nuisance suit against Titan for acts that the lease . . . contemplated or authorized."[163]

Pennsylvania has not recognized this particular form of estoppel as a defense to nuisance. However, Pennsylvania may consider the extent to which a plaintiff "comes to the nuisance" "when determining the activity's reasonableness on the particular piece of land."[164] This consideration may indicate a willingness by Pennsylvania courts to adopt the *Titan* rule, because a lease constitutes an authorization for oil and gas development on land and, therefore, a tacit acknowledgement that doing so is reasonable.

III. CONCLUSION

As the case law illustrates, nuisance has been and remains an amorphous doctrine. Despite much recent litigation, a host of questions remain on issues ranging from what conduct supports a

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[161] *Justiss*, 397 S.W.3d at 155("The point at which an odor moves from unpleasant to insufferable or when noise grows from annoying to intolerable might be difficult to ascertain, but the practical judgment of an intelligent jury is equal to the task." (internal quotations, citations, and modifications omitted)).

[162] *Titan Operating, LLC v. Marsden*, No. 02-14-00303-CV, 2015 WL 5727573, at *3 (Tex. App.—Fort Worth Aug. 27, 2015, pet. denied) (mem. op., not designated for publication).

[163] *Id.* at *1; *see also Grimes v. Goodman Drilling Co.*, 216 S.W. 202, 204 (Tex. Civ. App.—Fort Worth 1919, writ dism'd) (affirming that plaintiff was not "entitled to an abatement of the nuisance" created by the drilling of a well on his property by defendants as plaintiff "purchased the premises burdened with the terms of the lease, he is in no position to complain of the conditions produced by [defendants], such as are usual and customary during the drilling of an oil well").

[164] *Carb v. City of Pittsburgh*, No. 2440CV2010, 2011 WL 10876846, at *2 (Pa. Cmmw. Ct. Oct. 19, 2011).

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nuisance claim to what damages are recoverable. Numerous nuisance cases against energy companies are still pending in various stages of trial and appeal. As the centuries-old doctrine continues to evolve, oil and gas drilling and production activities are today at ground zero in this process.

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What's New in Nuisance

Michael J. Mazzone

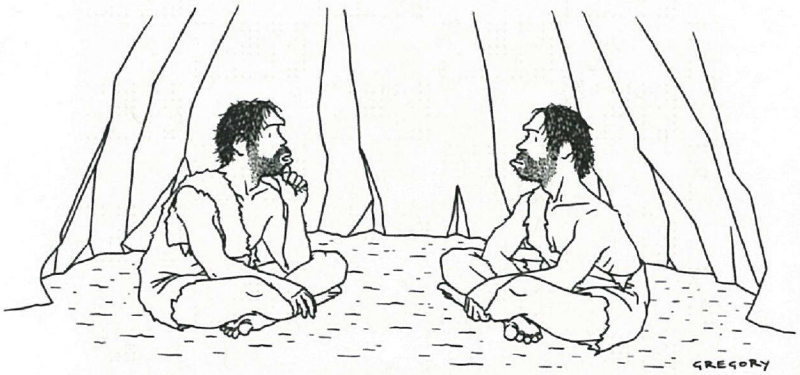
29th Annual Texas Environmental Superconference

August 3, 2017

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Context is Important



"Something's just not right—our air is clean, our water is pure, we all get plenty of exercise, everything we eat is organic and free-range, and yet nobody lives past thirty."

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2

There are Recent Developments in Nuisance Law



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Nuisance is a Legal Injury



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4

Nuisance is Mysterious



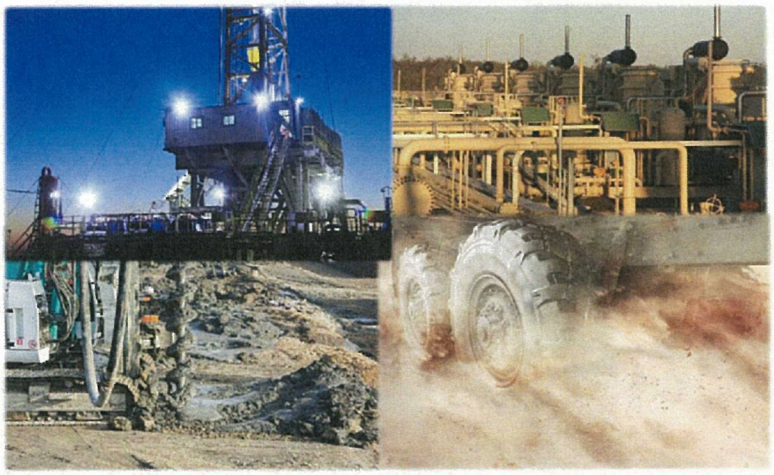




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Many Things Can Be a Nuisance



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But Not Aesthetics Alone



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There Are Three Kinds of Nuisance



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Intentional Nuisance Requires "Intent" or "Knowledge"

- Texas Pattern Jury Charge (2016):

JURY QUESTION NO. 1

Did Titan Operating, LLC intentionally create a private nuisance?

"Intentionally" means that Titan Operating, LLC acted with intent with respect to the nature of its conduct or to a result of its conduct when it was the conscious objective or desire to engage in the conduct or the result.

Answer "Yes" or "No."

Answer: Yes

- Texas law:
  - A defendant acted with intent if he (1) actually desired or intended to create the interference, or (2) actually knew or believed the interference would result. *Crosstex*, 505 S.W.3d at 605.

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Offender's Knowledge Must be Fairly Specific

REVERSE and RENDER, and Opinion Filed February 1, 2017.

In The
Court of Appeals
Fifth District of Texas at Dallas

No. 05-14-01205-CV

ARUBA PETROLEUM INC., Appellant

Although there is evidence that Lisa Parr spoke by phone with someone at Aruba's business office to ask about drilling activities in the Decatur and Allison area, spoke by phone with Aruba's public relations firm, and spoke with individuals who she said were either Aruba's employees or contractors at or near well sites, and there is evidence that the Parrs submitted complaints to the TCEQ concerning Aruba's operations, the Parrs have not cited any evidence that Aruba knew who placed these calls and made these complaints or that they were specific to the Parrs or their property.

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"Abnormal and Out of Place" is Out – "Abnormally Dangerous" is In

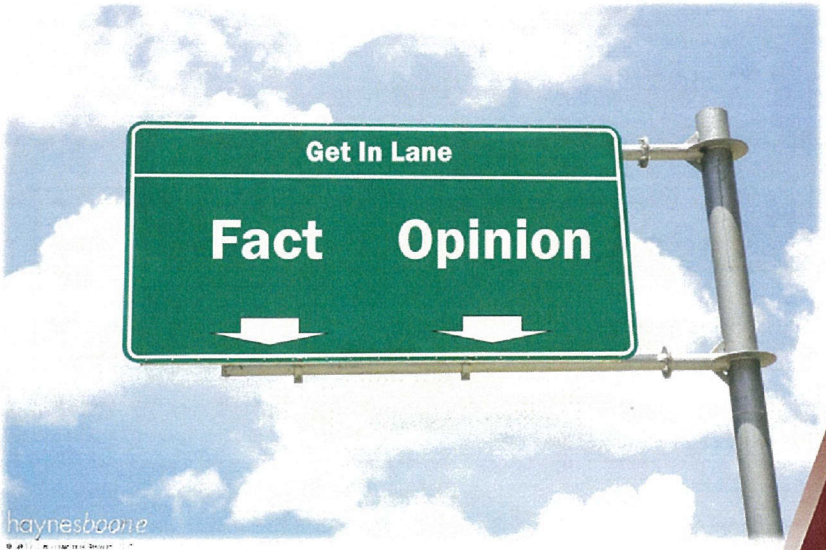


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Lay Testimony Is Sometimes Enough to Prove Causation

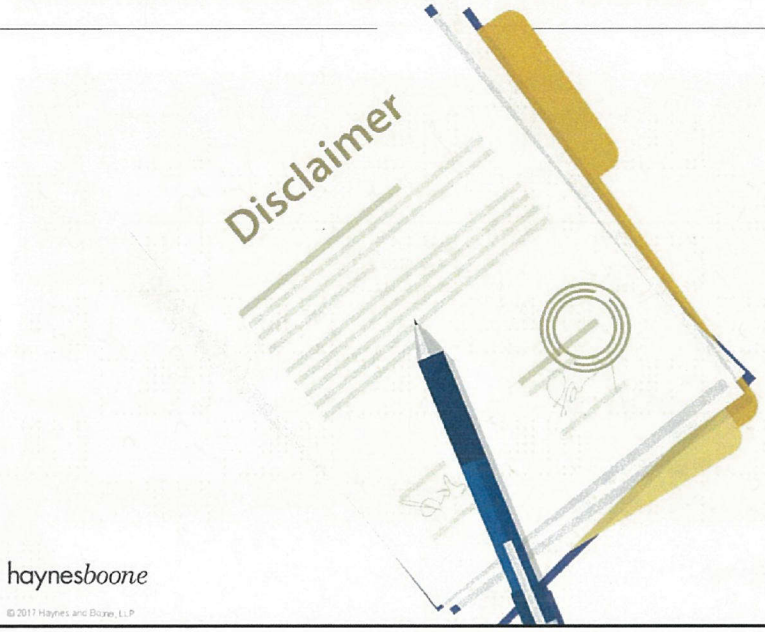


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Plaintiffs Are Disclaiming Their Causation Requirements



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Case Management ("Lone Pine") Orders are Cut Back



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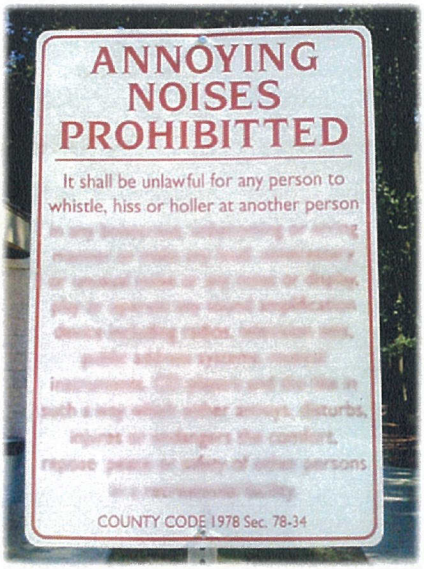
Damage Theories – Plaintiffs Have a Number of Ways to Win Money



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Discomfort and Annoyance Damages – Neither This Not That



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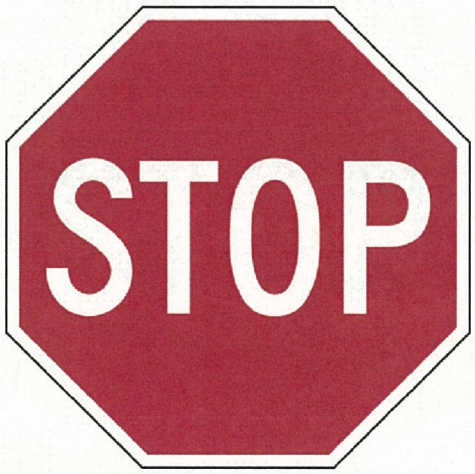
"Stigma" Damages are Hard to Get



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Using Injunctive Relief to Get Around Damage Caps



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Limitations – When Does the Clock Start



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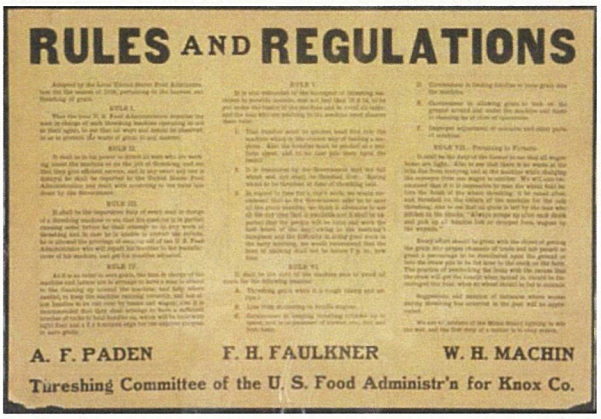
Quasi-estoppel: You Can't Have Your Cake and Eat it Too



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Preemption – Not a "Get Out of Tort Free" Card



RULES AND REGULATIONS

A. F. PADEN F. H. FAULKNER W. H. MACHIN

Tureshing Committee of the U. S. Food Administr'n for Knox Co.

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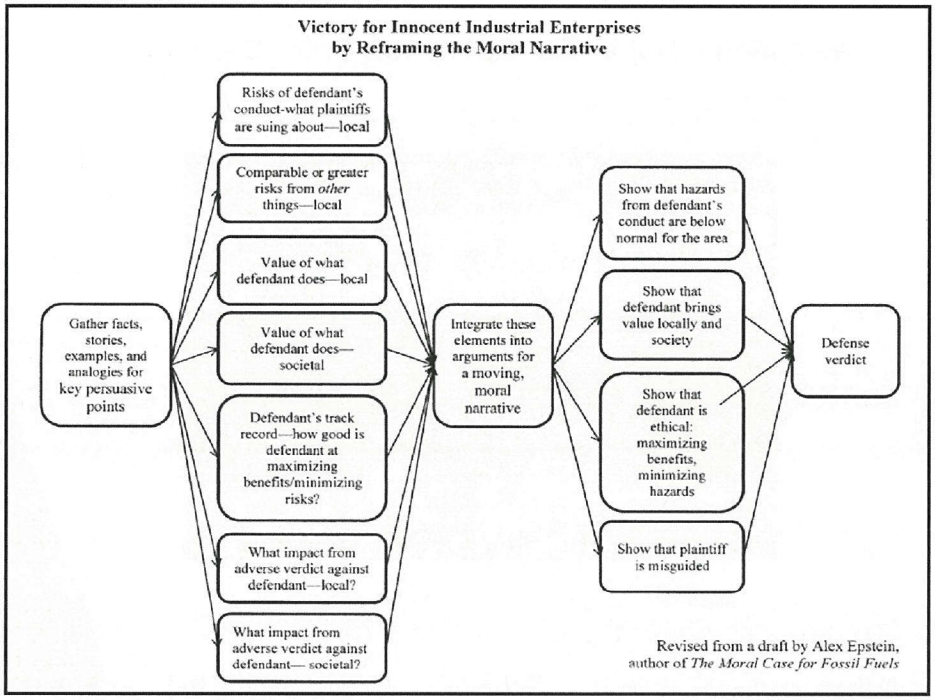
Recent Verdicts are Small

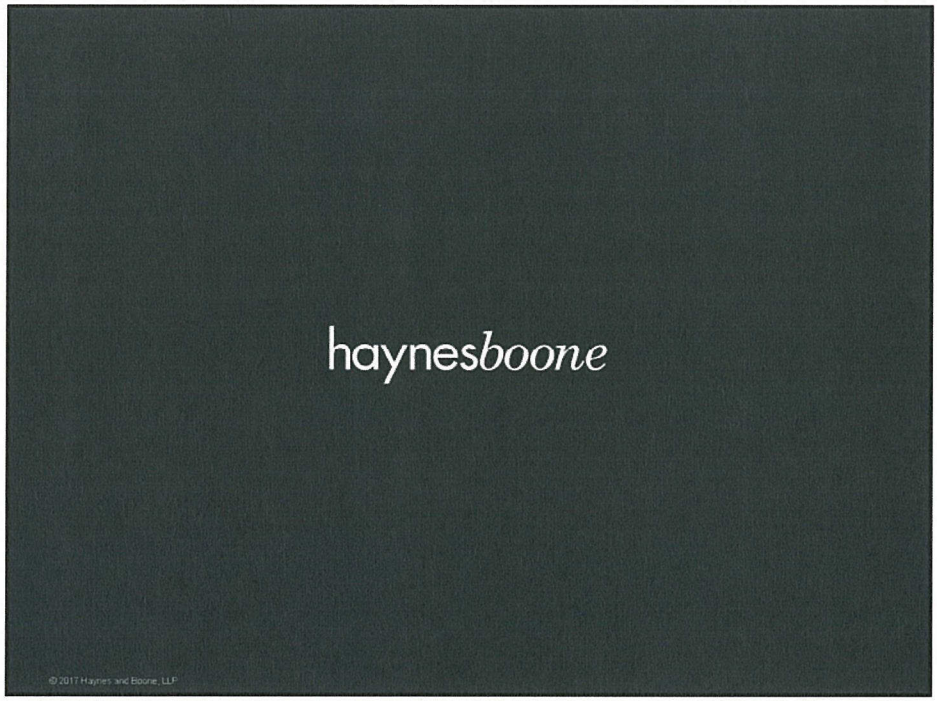
Case	Court	Complaint	Distance	Result
*Anglim**	Tarrant Cnty., TX	Noise and odor from drilling	595 ft.	Defense verdict
*Crowder**	Tarrant Cnty., TX	Noise and odor from drilling	329 ft.	$20k property damages
Marsden†	Parker Cnty., TX	Noise and odor from drilling	<300 ft.	$36k mental anguish
Cerny‡	Karnes Cnty., TX	Emissions from drip station	"Short" distance	SJ granted for defense
Parr†	Dallas Cnty., TX	Emissions from condensate tanks	791 ft.	$2.25m personal injuries $400k mental anguish $275k property damages
Carnahan‡	Beckham Cnty., OK	Emissions from condensate tanks		$234k property damages
Hiser‡	E. D. Ark.	Vibrations from drilling		$100k property damages $200k punitive damages

* Vacated after settlement; † Reversed on appeal; ‡ Affirmed on appeal.

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Victory for Innocent Industrial Enterprises
by Reframing the Moral Narrative
Gather facts, stories, examples, and analogies for key persuasive points
Risks of defendant's conduct-what plaintiffs are suing about—local
Comparable or greater risks from *other* things—local
Value of what defendant does—local
Value of what defendant does—societal
Defendant's track record—how good is defendant at maximizing benefits/minimizing risks?
What impact from adverse verdict against defendant—local?
What impact from adverse verdict against defendant— societal?
Integrate these elements into arguments for a moving, moral narrative
Show that hazards from defendant's conduct are below normal for the area
Show that defendant brings value locally and society
Show that defendant is ethical: maximizing benefits, minimizing hazards
Show that plaintiff is misguided
Defense verdict
Revised from a draft by Alex Epstein, author of *The Moral Case for Fossil Fuels*


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Samia Broadaway works on a wide range of environmental permitting, litigation, and regulatory compliance matters at the state and federal levels. Her experience includes water quality, water rights, air quality, enforcement, and waste issues. She also provides transactional support relating to air, water, waste and natural resources issues.

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- Representation of river authority in seeking water right permit
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- Litigation defense - Clean Air Act citizens' suit regarding NSR permitting; City enforcement for alleged historic waste disposal; CERLCA action for water contamination
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- Advice on Safe Drinking Water Act and public water utilities laws
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- Advice on wetlands mitigation obligations
- Advice on Title V and PSD impacts of co-located facilities
- Preparation of Clean Air Act Section 114 responses
- Transaction advice on strategic risks associated with acquisition of groundwater-contaminated properties
- Advice and transactional support for midstream companies
- Advice on Corps of Engineers requirements for alterations impacting navigation channel
- Advice on environmental risks associated with FPSO (floating production, storage, and offloading) facilities

PUBLICATIONS, SPEECHES, AND PRESENTATIONS

- M50 Water Resources Planning, Third Edition, Contributor, American Water Works Association M50 Publication, January 2017
- Toxic Taps: Flint Litigation and Drinking Water Infrastructure, Trends, American Bar Association Section of Environment, Energy, and Resources Newsletter, Vol. 48 Issue 2, November 2016
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- A Dive into the Waters of the U.S., Texas Water Conservation Association, October 2015

July 14, 2017

Recent Developments under NEPA: Presidential Permits and Climate

Samia Broadaway
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August 2017

Introduction

Infrastructure projects have received significant attention in the first few months of the Trump Administration. Within the first week of the new administration, President Trump had issued at least six executive directives aimed at infrastructure.[1]

Calls from the White House to streamline infrastructure permitting or focus on infrastructure development are neither new nor unique to this administration. Across the political spectrum, improving national infrastructure and streamlining its permitting have become durable, popular concepts touted by various administrations. In the 1990s, both President George H.W. Bush and President Bill Clinton issued executive orders addressing infrastructure investments.[2] In the following decade, President George W. Bush and President Barack Obama signed executive orders encouraging the streamlining of permitting requirements for infrastructure projects.[3] Since January 2017, the Trump Administration has similarly taken steps to improve infrastructure and streamline permitting.

The nature of the regulatory focus, however, has shifted with the new administration. Particularly with regard to the intersection of infrastructure and environmental review under the National Environmental Policy Act of 1969 ("NEPA"), pending projects may face vastly different regulatory landscapes today than they did just twelve or eighteen months ago.

This paper provides a basic NEPA framework before discussing two areas of recent development with implications for infrastructure projects in the United States: Presidential Permits and the intersection of NEPA and climate change.

Background - Key NEPA Concepts

NEPA is a procedural statute that requires federal agencies to examine the consequences of major federal actions that may impact the environment.[4] Under NEPA, federal[5] agencies must

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[1] *See, e.g.*, Executive Order ("E.O.") 13766, "Expediting Environmental Reviews and Approvals for High Priority Infrastructure Projects" 82 Fed. Reg. 8657 (Jan. 30, 2017); Presidential Actions, The White House, https://www.whitehouse.gov/briefing-room/presidential-actions (last visited Jul. 12, 2017).

[2] E.O. 12803, "Infrastructure Privatization," 57 Fed. Reg. 19063 (May 4, 1992); E.O. 12893, Principles for Federal Infrastructure Investments, 59 Fed. Reg. 4233 (Jan. 31, 1994).

[3] E.O. 13274, "Environmental Stewardship and Transportation Infrastructure Project Reviews, 67 Fed. Reg. 59449 (Sept. 23, 2002); E.O. 13604, "Improving Performance of Federal Permitting and Review of Infrastructure Projects," 77 Fed. Reg. 18885 (Mar. 28, 2012).

[4] *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989) (noting that, while NEPA "require[s] that agencies take a 'hard look' at environmental consequences...NEPA itself does not mandate particular results, but simply prescribes the necessary process") (internal quotations and citations omitted).

[5] While this paper focuses exclusively on NEPA and relevant federal regulations, several states have adopted their own NEPA-like statutes that mirror aspects of the federal statute. Council on Environmental Quality, "State NEPA

prepare a detailed environmental impact statement ("EIS") for all proposed major federal actions[6] "significantly affecting the quality of the human environment."[7] An EIS describes not only the proposed action, but also its consequences—its direct, indirect, and cumulative effects—and alternatives. Agencies often prepare a less-detailed environmental assessment ("EA") in situations where an EIS is not believed to be necessary.[8] If, after performing the EA, the agency confirms that the action will not significantly affect the quality of the human environment, the agency issues a finding of no significant impact ("FONSI").[9] Agencies may also set, by rule, "categorical exclusions" for certain categories of actions determined to have no significant effect on the environment.[10]

Although the primary NEPA implementing regulations were adopted in the late 1970s by the Council on Environmental Quality[11] ("CEQ"), individual federal agencies also maintain their own specific NEPA regulations to supplement the CEQ rules. These agency-specific rules set particular procedures or categorical exclusions relevant to that agency's activities.[12]

1) Presidential Permits

Background

Presidential Permits apply to certain types of cross-border infrastructure projects. The State Department receives applications and, in most cases, issues Presidential Permits for cross-border pipeline projects transporting petroleum products or hazardous liquids; the Federal Energy Regulatory Commission ("FERC") performs the same function for cross-border natural gas projects; and the Department of Energy ("DOE") permits cross-border electric transmission projects.

The underlying authority for border-crossing permits is based, not in statute, but on the President's "constitutional authority over foreign affairs and authority as Commander in Chief."[13] The State Department, DOE, and FERC review applications and issue Presidential Permits pursuant to four executive orders. Before the relevant agency may issue a Presidential Permit, the agency must determine that the project is "consistent with the public interest"[14] or

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Contacts," https://energy.gov/sites/prod/files/2013/09/f2/States_NEPA_Like_22June2013.pdf (last visited July 8, 2017).

[6] Note that "major federal actions" include both federally-permitted projects as well as projects constructed with federal assistance. 40 C.F.R. § 1508.18.

[7] 42 U.S.C. § 4332(2)(C) ("NEPA § 102(2)(C)").

[8] *See* 40 C.F.R. § 1508.9.

[9] *Id.* at § 1508.13.

[10] *Id.* at § 1508.4.

[11] The CEQ is part of the executive office of the President. NEPA § 202.

[12] For instance, DOE regulations implementing NEPA are at 10 C.F.R. Part 1021; FERC regulations implementing NEPA are at 18 C.F.R. Part 380; and State Department regulations implementing NEPA are at 22 C.F.R. Part 161.

[13] *Sierra Club v. Clinton*, 689 F. Supp. 2d 1147, 1163 (D. Minn. 2010).

[14] DOE and FERC have authority to review applications for (and, under some circumstances, issue) Presidential Permits for electric transmission and natural gas cross-border facilities under E.O. 10485, "Providing for the Performance of Certain Functions Heretofore Performed by the President with Respect to Electric Power and Natural Gas Facilities Located on the Borders of the United States," 18 Fed. Reg. 5397 (Sept. 3, 1953); and E.O. 12038, "Relating to certain functions transferred to the Secretary of Energy by the Department of Energy Organization Act," 43 Fed. Reg. 4957 (Feb. 3, 1978).

will "serve the national interest."[15] Under Executive Order 10485 (as amended by E.O. 12038), after DOE and FERC determine a project is in the public interest, these agencies must receive concurrence from the Secretaries of State and Defense before issuing a Presidential Permit for an electric transmission line or natural gas import or export pipeline.[16] Similarly, the Secretary of State is required to seek input from the Secretary of the Treasury, the Secretary of Defense, the Attorney General, the Secretary of the Interior, and others, and "may also consult" with local and federal government officials in evaluating a cross-border petroleum product pipeline.[17] Once the State Department determines whether the project is in the national interest, the parties that are required to be consulted are given 15 days to disagree with the Secretary of State's determination.[18] In the case of a disagreement, the Secretary of State must refer the application to the President for a final decision.[19]

Presidential Permits and NEPA

The obligation to evaluate Presidential Permit applications for their public or national interest overlaps with NEPA but does not supplant the agencies' underlying NEPA obligations.

For instance, when assessing cross-border electric transmission projects, DOE expressly considers both the environmental impact of a project and the project's impact on the reliability of the U.S. electric power supply system.[20] DOE's "public interest" determinations include assessments of the transmission facility's environmental impacts, its technical specifications, and its alternatives, as well as those alternatives' environmental impacts.[21] Smaller transmission line projects may qualify for DOE's categorical exclusions from NEPA.[22] DOE scrutinizes these smaller projects to determine whether the proposal fits within a categorical exclusion category, to ensure that there are no "extraordinary circumstances" regarding the project's anticipated environmental effects that require an EA or EIS, and to verify that the proposal has not been segmented in order to fit within a categorical exclusion.[23]

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[15] The State Department's authority to review applications for (and, under some circumstances, issue) Presidential Permits is governed by E.O. 11423, "Providing for the Performance of Certain Functions Heretofore Performed by the President with Respect to Certain Facilities Constructed and Maintained on the Borders of the United States," 33 Fed. Reg. 11741 (Aug. 20, 1968); and E.O. 13337, "Issuance of Permits with Respect to Certain Energy-Related Facilities and Land Transportation Crossings on the International Boundaries of the United States," 69 Fed. Reg. 25299 (May 5, 2004).

[16] E.O. 10485, § 1(a)(3).

[17] E.O. 11423, § 1(b)-(c).

[18] E.O. 11423, § 1(d)-(e)

[19] E.O. 11423, § 1(f).

[20] *See, e.g.*, Notice of Application for Presidential Permit, Houlton Water Company, 82 Fed. Reg. 16177 (Apr. 3, 2017) (noting that, to determine whether the proposed action is in the public interest, DOE "considers the environmental impacts of the proposed project pursuant to the National Environmental Policy Act of 1969, determines the project's impact on electric reliability by ascertaining whether the proposed project would adversely affect the operation of the U.S. electric power supply system under normal and contingency conditions, and any other factors that DOE may also consider relevant to the public interest").

[21] 10 C.F.R. § 205.322; Dept. of Energy, Interpretive Guidance on the Requirements of 10 C.F.R. § 205.322 (Jun. 2, 2011), *available at* http://media.northernpasseis.us/media/interpretive_guidance_final.pdf.

[22] For instance, DOE has established categorical exclusions for additions to transmission lines in previously-disturbed areas and for construction of power lines that extend approximately 10 miles or less. 10 C.F.R. Pt. 1021, Subpt. B, App. B.46, B.4.12.

[23] 10 C.F.R. § 1021.410(b)(1)-(3).

Because of overlapping mandates under E.O. 10485 and the Natural Gas Act ("NGA"), FERC's environmental review when issuing a Presidential Permit encompasses its review in accordance with the NGA.[24] For both NGA Section 3[25] and Presidential Permit applications, FERC requires that applications contain a statement demonstrating that the proposed project is "not inconsistent with the public interest."[26] Where applicable, FERC requires applicants to demonstrate that their proposal will improve natural gas access, serve new market demand, enhance the pipeline's reliability, security, and/or dependability, improve the dependability of international energy trade, or enhance competition in the U.S. for natural gas transportation or supply.[27] Applicants can also demonstrate that their proposal is not inconsistent with the public interest by showing the project will not impair the applicant's ability to transport natural gas in the U.S. at reasonable rates to existing customers and will not involve certain types of existing contracts that may restrict other U.S. companies from expanding into the area.[28] Consistent with FERC's NEPA rules, Presidential Permit applications must include as exhibits various environmental reports, including an evaluation of alternatives and those alternatives' environmental consequences.[29]

Unlike DOE and FERC, the State Department does not maintain separate rules pertaining to Presidential Permits. Consequently, it is more difficult to discern which factors the State Department considers as part of its "national interest" analysis and which factors fall under the general NEPA review. The State Department has noted that it considers "many factors" in evaluating "how the proposed Project would serve the national interest, taking into account the proposed Project's potential environmental, cultural, economic, and other impacts."[30] In a recent EIS, the Department listed several factors it had considered in past national interest determinations, including:

- "Impacts of the proposed Project on the diversity of supply and security of transport pathways for crude oil imported to the United States;
- Impact of a cross-border facility on the relations with the country to which it connects;
- Stability of various foreign suppliers of crude oil and the ability of the United States to work with those countries to meet overall environmental and energy security goals;

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[24] FERC's rules on applying for a Presidential Permit, 18 C.F.R. Part 153, Subpart C, expressly require that the applicant apply for simultaneous authorization under Section 3 of the NGA in accordance with 18 C.F.R. Part 153, Subpart B.

[25] Section 3 of the NGA directs FERC to approve the import or export of natural gas, unless "the proposed exportation or importation will not be consistent with the public interest." 15 U.S.C. § 717b(a). The party that owns the gas to be imported or exported (often not the same entity as the Presidential Permit applicant) must also obtain DOE permission to import or export. *See* 10 C.F.R. Part 590. To the extent a cross-border natural gas facility connects to or involves the construction of a pipeline to transport gas in interstate commerce, Presidential Permit applications to FERC may also implicate Section 7(c) of the NGA. *See, e.g.*, FERC, Order Issuing Presidential Permit and NGA Sections 3 and 7 Authorizations, Docket No. CP02-90-000 et al. (Jan. 29, 2004), *available at* https://www.ferc.gov/whats-new/comm-meet/012204/C-4.pdf.

[26] 18 C.F.R. § 153.7(c).

[27] 18 C.F.R. § 153.7(c)(i).

[28] 18 C.F.R. § 153.7(c)(ii)-(iii).

[29] 18 C.F.R. § 153.8(a)(7); 18 C.F.R. § 380.12.

[30] U.S. Department of State, Final Supplemental Environmental Impact Statement Keystone XL Project, at 1.3-2. (Jan. 2014), *available at* https://2012-keystonepipeline-xl.state.gov/documents/organization/221146.pdf.

- Impact of proposed projects on broader foreign policy objectives, including a comprehensive strategy to address climate change, bilateral relations with neighboring countries, and energy security;

- Economic benefits to the United States of constructing and operating the proposed Project; and

- Relationships between the proposed Project and goals to reduce reliance on fossil fuels and to increase use of alternative and renewable energy sources."[31]

The State Department's review of Presidential Permit applications tends to be highly fact-specific. Applications for projects that may appear similar, therefore, could still result in different analyses and outcomes.

Unusual Presidential Permits from the State Department

Under the State Department's NEPA rules, permits for cross-border petroleum or liquids pipelines "normally" trigger an EA, rather than an EIS.[32] Since 2006, however, the State Department has required EISs for three oil sands transmission projects: TransCanada's Keystone Mainline and Keystone XL[33] pipelines, and Enbridge Energy's Alberta Clipper (now "Line 67") pipeline.[34] These projects differ from prior Presidential Permit applications because all three projects convey Canadian oil sands into the United States. The development of Canadian oil sands in recent years has sparked widespread interest and concern over the environmental consequences of producing and transporting this material.[35] The Keystone applications also appear to differ in length from previous Presidential Permit applications. Prior to these projects, Presidential Permit applications generally requested authorization for pipelines that extended fewer than several hundred miles into the United States.[36] By contrast, the Keystone Mainline

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[31] U.S. Department of State, Final Supplemental Environmental Impact Statement Keystone XL Project, at 1.3-2 to 1.3-3 (Jan. 2014), *available at* https://2012-keystonepipeline-xl.state.gov/documents/organization/221146.pdf. Of course, the factors considered by the State Department will vary--sometimes significantly--depending on the nature of the project and the regulatory priorities of the administration.

[32] 22 C.F.R. § 161.7(c)(1).

[33] The 2008 Keystone XL proposal consisted of a northern portion and a southern portion. The southern "Gulf Coast Project" portion was proposed to extend approximately 485 miles. Following the State Department's denial of TransCanada's 2008 Presidential Permit in 2012, TransCanada constructed the Gulf Coast Pipeline (which did not require a Presidential Permit because it did not cross an international border). The Gulf Coast Pipeline became operational in January 2014. Jonathan L. Ramseur, et al., Congressional Research Service, Presidential Permit Review for Cross-Border Pipelines and Electric Transmission, R42611, at 13 (Apr. 14, 2014), *available at* https://fas.org/sgp/crs/misc/R42611.pdf

[34] Linda Luther and Paul W. Parfomak, Congressional Research Service, Presidential Permit Review for Cross-Border Pipelines and Electric Transmission, R44140, at 7 (Apr. 19, 2017, *available at* https://fas.org/sgp/crs/misc/R44140.pdf.

[35] *See generally*, Ramseur, et al., *supra* note 31.

[36] Luther and Parfomak, *supra* note 32 at 7. The Alberta Clipper pipeline proposed to extend approximately 330 miles from the U.S./Canada border, through portions of North Dakota, Minnesota, and Wisconsin. U.S. Department of State, Final Environmental Impact Statement Alberta Clipper Project, at 2-1 (2009), *available at* https://www.state.gov/documents/organization/202672.pdf.

proposed to extend over 1,080 miles into the country,[37] and Keystone XL proposed to extend 875 miles into the United States.[38]

In 2008, the State Department issued a Presidential Permit to TransCanada for the Keystone Mainline pipeline, noting that the Department "determined that issuance of the permit...is in the national interest, in part, because it increases U.S. market access to crude oil supplies from a stable and reliable trading partner, Canada, that is in close proximity to the United States."[39] In 2009, following an EIS, the State Department issued a Presidential Permit for the Alberta Clipper pipeline.[40]

Typically, the agencies use the "public interest" or "national interest" frameworks to guide the authorization of projects rather than as a basis for denying permits. Presidential Permits may be issued with conditions so the project satisfies the "public interest" or "national interest" standards, despite identified impacts.[41] However, the Keystone XL Presidential Permit application actually triggered two EISs and two denials before being granted. TransCanada's 2008 Presidential Permit application for Keystone XL was denied, following a final EIS, after the State Department determined that the project did not serve the national interest.[42] In 2012, TransCanada rerouted its proposed pipeline and reapplied for the Presidential Permit; this, too, was denied following an EIS.[43] Within the first week of the Trump Administration, however, President Trump invited TransCanada to reapply for a Presidential Permit.[44] The State Department issued a Presidential Permit for Keystone XL on March 23, 2017.[45]

What Comes Next for Cross-Border Permits

Federal district courts have split on the reviewability of Presidential Permits under the Administrative Procedure Act ("APA"). Two courts have held that Presidential Permits are not judicially reviewable under APA because the permits are a manifestation of the President's authority under the Constitution.[46] One federal district court, however, permitted a challenge to

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[37] U.S. Department of State, Final Environmental Impact Statement Keystone Pipeline Project, at 1-1 (Jan. 2008), *available at* https://energy.gov/sites/prod/files/2015/08/f25/EIS-0410-FEIS-2008-Sections_1-5.pdf

[38] U.S. Department of State, Final Supplemental Environmental Impact Statement Keystone XL Project, at 1.2-1 (Jan. 2014), *available at* https://2012-keystonepipeline-xl.state.gov/documents/organization/221145.pdf.

[39] U.S. Department of State (Archive) Office of the Spokesman, Keystone Pipeline Presidential Permit (Mar. 14, 2008), https://2001-2009.state.gov/r/pa/prs/ps/2008/mar/102254.htm.

[40] Notice of Issuance of a Presidential Permit for the Proposed Enbridge Energy Alberta Clipper Pipeline Project, 74 Fed. Reg. 43212 (Aug. 26, 2009). The State Department is currently evaluating an expansion to this pipeline (the "Enbridge Line 67 Expansion") and preparing a Final Supplemental EIS before making its national interest determination. U.S. Department of State, Draft Supplemental Environmental Impact Statement, https://www.state.gov/e/enr/applicant/applicants/environmentalreview/index.htm (last accessed Jul. 14, 2017).

[41] Luther and Parfomak, *supra* note 32 at 6.

[42] TransCanada, Application for Presidential Permit for Keystone XL Pipeline Project, at 3 (Jan. 26, 2017), *available at* https://keystonepipeline-xl.state.gov/documents/organization/267737.pdf.

[43] *Id.* at 4.

[44] Presidential Memorandum Regarding Construction of the Keystone XL Pipeline (Jan. 24, 2017), *available at* https://www.whitehouse.gov/the-press-office/2017/01/24/presidential-memorandum-regarding-construction-keystone-xl-pipeline.

[45] Notice of Issuance of a Presidential Permit to TransCanada Keystone Pipeline, L.P., 82 FR 16467 (Apr. 4, 2017).

[46] *Sisseton-Wahpeton Oyate v. U.S. Dept. of State*, 659 F. Supp. 2d 1071, 1078 (D.S.D. 2009) (finding plaintiff tribes lacked standing to challenge issuance of Keystone Presidential Permit under APA because issuance of Presidential Permit under E.O. 13337 is presidential action, not agency action); *Nat. Res. Def. Council, Inc. v. U.S. Dept. of*

the EIS and agency action under NEPA that supported the Presidential Permit.[47] That court acknowledged but distinguished the President's authority to issue a cross-border permit from the State Department's NEPA obligations, noting that just because the Presidential Permit "allows for the border crossing...does not insulate the State Department's analysis (or alleged lack thereof) of the environmental impacts of the entire pipeline project from judicial review under the APA. Nor does it convert the State Department's preparation of the FEIS into a presidential action."[48] Thus, even though courts have disallowed direct challenges to Presidential Permits, under at least one court's analysis, opponents of Presidential Permits may indirectly challenge cross-border authorizations by attacking their underlying NEPA determinations. No circuit courts have directly addressed this issue.

Environmental groups have already challenged the recently-issued Presidential Permit for Keystone XL under NEPA and the APA (as well as the Endangered Species Act ("ESA")).[49] In that lawsuit, filed in the U.S. District Court for the District of Montana, Plaintiffs are targeting the sufficiency of the NEPA review that accompanied the permit, alleging that the 2014 EIS was out of date, incomplete, arbitrary, and did not support the permit's issuance.[50] They also assert that the State Department's reversal on its "national interest" determination violates the APA. The federal defendants and defendant-intervenor TransCanada have filed motions to dismiss alleging that the court lacks jurisdiction to review Presidential Permits, citing *NRDC v. U.S. Dept. of State* and *Sisseton-Wahpeton Oyate v. U.S. Dept. of State*.[51] Plaintiffs have responded, citing *Sierra Club v. Clinton* and arguing that *NRDC* and *Sisseton-Wahpeton* are distinguishable.[52] As of July 14, 2017, the court had not yet ruled on the motions.

2) Evaluating Climate under NEPA

Neither NEPA nor CEQ's implementing regulations expressly require federal agencies to consider climate in their assessments of environmental impacts.[53] However, since at least 1997, CEQ has suggested including greenhouse gases ("GHGs") at least in an agency's cumulative

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State, 658 F. Supp. 2d 105, 109 (D.D.C. 2009) (agreeing with defendants that "agency action pursuant to a delegation of the President's inherent constitutional authority over foreign affairs is tantamount to an action by the President himself").

[47] *Sierra Club v. Clinton*, 689 F. Supp. 2d 1147, 1157 (D. Minn. 2010) (allowing a challenge to the Alberta Clipper pipeline Presidential Permit's NEPA analysis conducted by the State Department).

[48] *Id.*

[49] Second Amd. Compl. for Declaratory and Injunctive Relief, *Northern Plains Resource Council et al. v. Shannon et al.*, No. 4:17-cv-00031 (D. Mont., June 28, 2017).

[50] *Id.*

[51] Memo. in Support of Mot. to Dismiss, *Northern Plains Resource Council et al. v. Shannon et al.*, No. 4:17-cv-00031 (D. Mont., Jun. 9, 2017); Memo. in Support of Mot. by TransCanada et al. to Dismiss Compl., *Northern Plains Resource Council et al. v. Shannon et al.*, No. 4:17-cv-00031 (D. Mont., Jun. 16, 2017).

[52] Pl. Combined Opp. to Def. Mot. to Dismiss, *Northern Plains Resource Council et al. v. Shannon et al.*, No. 4:17-cv-00031 (D. Mont., Jul. 10, 2017).

[53] NEPA Section 102(2)(F) does require federal agencies, "where consistent with the foreign policy of the United States, [to] lend appropriate support to initiatives, resolutions, and programs designed to maximize international cooperation in anticipating and preventing a decline in the quality of mankind's world environment." 42 U.S.C. 4332(2)(F). Particularly to the extent the U.S. remains in the Paris Agreement, NEPA litigants could use this provision to argue for including GHG emissions in NEPA assessments.

impact assessments under NEPA.[54] Draft CEQ guidance issued in 2010 and revised in 2014,[55] and final CEQ guidance issued in August 2016, all explored how agencies might incorporate climate into NEPA assessments.[56] The 2014 draft guidance suggested using an annual emissions threshold of 25,000 metric tons CO_2-equivalent as a "reference point...below which a GHG emissions quantitative analysis is not warranted [under NEPA] unless quantification below that reference point is easily accomplished. This is an appropriate reference point that would allow agencies to focus their attention on proposed projects with potentially large GHG emissions."[57] The final 2016 CEQ guidance dropped the 25,000 metric ton reference point and did not recommend a level of GHG emissions that would be determined "significant" under NEPA. It did, however, suggest various approaches agencies could use in "disclosing and considering the effects of GHG emissions and climate change along with the other reasonably foreseeable environmental effects of their proposed actions."[58] On April 5, 2017, the Trump Administration withdrew the 2016 final CEQ guidance.[59]

The withdrawal of the final guidance, like its development, seems unlikely to alter the litigation trend of raising climate issues as part of NEPA challenges. As described below, the current trend focuses on *whether* NEPA requires an evaluation of a proposed project's impacts on climate and, if so, to what extent. Without answering these questions, the withdrawn 2016 guidance recommended *how* to include climate in NEPA reviews. Both before issuance of the final 2016 guidance and since its withdrawal, plaintiffs have continued to urge courts to find that NEPA assessments must include a thorough review of the project's projected climate impacts.

Several federal district courts have addressed the extent to which federal agencies should consider climate impacts during NEPA reviews. While noting that a cost-benefit analysis is not required under NEPA, the U.S. District Court for the District of Colorado nonetheless held that the Bureau of Land Management ("BLM") and the U.S. Forest Service acted arbitrarily and capriciously in quantifying only a proposed mining project's benefits while ignoring the project's

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[54] Council on Environmental Quality, Considering Cumulative Effects Under the National Environmental Policy Act, at 15 (Jan. 1997), *available at* https://energy.gov/sites/prod/files/nepapub/nepa_documents/RedDont/G-CEQ-ConsidCumulEffects.pdf (noting that the global atmosphere could be the possible geographic area for assessing a project's cumulative effects on air quality).

[55] Revised Draft Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in NEPA Reviews, 79 Fed. Reg. 77802 (Dec. 24, 2014).

[56] Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews, 81 Fed. Reg. 51866 (Aug. 5, 2016); Council on Environmental Quality, Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews (Aug. 1, 2016), *available at* https://obamawhitehouse.archives.gov/sites/whitehouse.gov/files/documents/nepa_final_ghg_guidance.pdf.

[57] 79 Fed. Reg. at 77827-28.

[58] Council on Environmental Quality, Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews, at 10 (Aug. 1, 2016), *available at* https://obamawhitehouse.archives.gov/sites/whitehouse.gov/files/documents/nepa_final_ghg_guidance.pdf.

[59] Withdrawal of Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews, 82 Fed. Reg. 16576 (Apr. 5, 2017).

costs in terms of its effect on climate and increased GHG emissions.[60] By contrast, a Wyoming federal district court found that BLM had not acted arbitrarily in issuing its EIS for certain coal mining operations because the agency disclosed the mines' effects on GHG emissions, discussed impacts of climate change, described factors of significance and the role of the mines in the open coal market, and identified "[o]ther unknown variables...which prevented more meaningful prediction of impacts of the projects on global climate change, including by way of example, unknown naturally occurring events such as volcanic eruptions and variations in solar activities, or transportation of coal by rail."[61] In a series of cases, the U.S. Court of Appeals for the D.C. Circuit held that FERC has no obligation, under NEPA, to assess the indirect, climate-related effects of the export of natural gas because DOE, not FERC, licenses natural gas exports through liquefied natural gas ("LNG") facilities.[62] The court also upheld FERC's decision not to use the social cost of carbon analysis or other tools to assess the GHG emissions from a proposed LNG facility, noting that FERC had articulated three reasoned bases for its decision.[63] As part of the Keystone XL litigation, the District of Montana is also poised to address the extent to which the State Department must address climate in its NEPA review. Plaintiffs in that case allege that the 2014 EIS underlying the Keystone XL Presidential Permit fails to satisfy NEPA, including by failing to properly address the cumulative effects of GHG emissions from oil sands development.[64]

In addition to divergent federal court treatment of climate under NEPA, federal agencies have also differed in their approach to assessing climate impacts under NEPA. For instance, FERC has generally found it has no obligation to consider the GHG impacts of future gas production, arguing that these impacts are either too speculative or are not caused by the action under FERC review.[65] By rule, the U.S. Army Corps of Engineers ("Corps") limits its NEPA review to areas over which the agency has "sufficient control and responsibility."[66] But the Corps has, on at least one occasion, addressed GHGs in an EIS for an intrastate pipeline.[67] The

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[60] *High Country Conservation Advocates v. United States Forest Serv.*, 52 F. Supp. 3d 1174, 1193 (D. Colo. 2014) (discussing social cost of carbon tool, which had been used in the project's draft, but not final, EIS, and noting that the requirement that agencies conduct "a 'hard look' has to include a 'hard look' at whether this tool, however imprecise it might be, would contribute to a more informed assessment of the impacts than if it were simply ignored").

[61] *Wild Earth Guardians v. United States Forest Serv.*, 120 F. Supp. 3d 1237, 1272 (D. Wyo. 2015).

[62] *See, e.g., Sierra Club v. Fed. Energy Regulatory Comm'n*, 827 F.3d 36, 47 (D.C. Cir. 2016).

[63] *EarthReports, Inc. v. Fed. Energy Regulatory Comm'n*, 828 F.3d 949, 956 (D.C. Cir. 2016) (FERC "acknowledged the availability of the 'social cost of carbon' tool, but, in its opinion concluded that, 'it would not be appropriate or informative to use for this project' for three reasons: the lack of consensus on the appropriate discount rate leads to 'significant variation in output[,]' the tool 'does not measure the actual incremental impacts of a project on the environment[,]' and 'there are no established criteria identifying the monetized values that are to be considered significant for NEPA purposes.'") (citations omitted).

[64] Second Amd. Compl. for Declaratory and Injunctive Relief, *Northern Plains Resource Council et al. v. Shannon et al.*, No. 4:17-cv-00031 (D. Mont., June 28, 2017).

[65] *See e.g.*, 151 FERC 61,651-54 (May 6, 2015); 151 FERC 61,671-73 (June 23, 2015).

[66] 33 C.F.R. Pt. 325 App. B § 7(b)(2).

[67] U.S. Army Corps of Engineers, Alaska District, Final Environmental Impact Statement, Alaska Stand Alone Gas Pipeline, at ES-22 (2012) *available at* http://www.arlis.org/docs/vol1/AlaskaGas/Report2/Report_USACE2/index.html.

State Department's NEPA rules do not address GHGs, but the Department's 2009 EIS for the Alberta Clipper pipeline discussed the project's impact on climate and the emission of GHGs.[68]

Organizations bringing NEPA challenges to infrastructure projects continue to urge courts to read NEPA to require federal agencies to thoroughly evaluate a project's climate impacts. Thus, notwithstanding the recent withdrawal of final CEQ guidance on *how* to incorporate GHGs into NEPA reviews, courts will likely continue to see arguments that NEPA does, in fact, require agencies to undertake this review.

Conclusion

Recent litigation and regulatory changes have revealed a tension in the current state of the law surrounding Presidential Permits and the intersection of NEPA and greenhouse gas emissions. In the near term, this tension seems most likely to play out in the courts. The pending litigation over the Keystone XL pipeline may provide yet another district court's view of whether Presidential Permits can be challenged indirectly by targeting a project's underlying NEPA determination. That litigation may also inform the ongoing debate over the extent to which NEPA requires an assessment of climate impacts. One thing remains certain: despite NEPA's age, it continues to play an important and changing role in the development of infrastructure projects.

[68] U.S. Department of State, Final Environmental Impact Statement, Alberta Clipper Project, at 4-400 - 4-403 (2009), *available at* https://www.state.gov/documents/organization/202688.pdf.

ASCE
AMERICAN SOCIETY OF CIVIL ENGINEERS

Thomas W. Smith III, ENV.SP., CAE, F.ASCE, was selected as the executive director of the American Society of Civil Engineers (ASCE), effective January 1, 2015.

A dedicated member of ASCE for more than 25 years and a civil engineer by training, Smith served as the association's deputy executive director since 2010 and general counsel since 1997. During his tenure at ASCE, he has provided leadership, direction and management oversight across a wide spectrum of ASCE's programs, operations and strategic initiatives, working closely with ASCE geographic and technical organizations and affiliates worldwide.

As general counsel, Smith has provided legal consultation in multiple areas vital to ASCE and also oversees ASCE's professional conduct and construction contract documents committees.

Prior to joining ASCE, Smith practiced law in Northern Virginia from 1990 to 1997 with the firm of Hazel & Thomas, P.C., now combined with Reed Smith, LLP. While in this position, Smith focused on commercial, construction and land use litigation in federal and state courts, and land use applications for commercial, industrial and residential development.

In addition to his master's degree in structural engineering and B.S. in civil engineering from the University of Virginia, Smith holds a law degree from Washington & Lee University. He is admitted to the bar in Virginia and the District of Columbia. He is also a Certified Association Executive (CAE) and an Envision Sustainability Professional (ENV-SP).

Outside of ASCE, Smith serves as a member of the board of directors of the National Institute for Engineering Ethics; is past chair of the Legal Section Council of the American Society of Association Executives (ASAE); and is a member of Chi Epsilon, Order of the Engineer, and the Association of Corporate Counsel.

In 2011, Smith received the William H. Wisely American Civil Engineer Award, which recognizes ASCE members for their continuing efforts to promote appreciation for the history, tradition, developments and technical and professional activities of the Society.

Actively involved in his community, Smith serves on the Fairfax County Board of Zoning Appeals, and previously chaired bar association committees providing legal services to local homeless shelters as well as coordinating national moot court competitions. Smith has published articles on engineering ethics and legal issues and is a frequent speaker on these subjects.

Sustainability: For ASCE, It's A Global Issue

The United Nations estimates that today, over half the world's population lives in urban locations, and by the year 2050, the number of urban dwellers is expected to approach 70 percent. It has also been said that as much as 60 percent of the infrastructure needed to accommodate this population shift has not yet been put in place.

This massive shift in the urban population will bring unprecedented demands in the world's cities for land, energy, transportation, waste disposal, and healthcare. Without innovative strategies for dealing with this demand, the world may expect to experience the harmful effects of inadequate infrastructure and the loss of our natural resources, as well as the grave economic and human costs caused by shortages in food, water, and other essential needs.

Yet for engineers, this explosion in our urban population should not be viewed as a problem or a threat, but rather as a call to action for engineering professionals—individually and collectively—to improve upon and expand sustainable practices.

The National Academy of Science has identified the year 1979 as the earth's "tipping point," that is, when the human consumption of natural resources began to exceed the earth's ability to replenish those resources. Now, almost forty years later, sustainable development offers humanity's best hope of reversing this "tipping point," by expanding the range of technical, administrative, and policy solutions that allow our generation to meet the needs of today without sacrificing the needs of the future.

ASCE's commitment to sustainable development starts at the top with its place among the Society's own strategic initiatives. Moreover, in recognition that sustainability is not only a professional obligation but an ethical one, sustainability has been an integral part of the ASCE Code of Ethics for the past 20 years. Canon 1 of ASCE's ethical code requires that civil engineers will "strive to comply with the principles of sustainable development in the performance of their professional duties," while guideline f under that canon recognizes the importance of "adherence to the principles of sustainable development so as to enhance the quality of life of the general public." Additionally, ASCE's code notes that "engineers should seek opportunities to … work for … the protection of the environment through the practice of sustainable development" and that "engineers whose professional judgment is overruled under circumstances where … the principles of sustainable development are ignored shall inform clients or employers of the possible consequences."

ASCE's formal policy (Policy Statement 418) on the Role of the Civil Engineer in Sustainable Development defines sustainability as "a set of economic, environmental and social conditions in which all of society has the capacity and opportunity to maintain and improve its quality of life indefinitely without degrading the quantity, quality or the availability of economic, environmental and social resources."

This policy represents ASCE's ongoing commitment to play an active role in establishing a global culture of sustainability, through educational and professional development of our

members and by supporting innovation in the use and conservation of natural resources. ASCE seeks to achieve these objectives in a variety of ways.

In early 2016, ASCE hosted a summit that engaged civil engineering leaders with representatives from key stakeholders in government and industry in developing a strategy for transforming the civil engineer's role in building a sustainable future. ASCE 2016 President Mark Woodson, P.E., L.S., D.WRE, F.ASCE, laid out the challenge for summit attendees: "As civil engineers, we have the capacity to change the world. We are the builders of society's infrastructure. But our future prosperity and the world's future is at risk because the infrastructure, the foundation of our future, is dangerously deteriorating and not sustainable."

ASCE's Committee on Sustainability drew from the summit's conclusions to present the Society's board with a call to action. In answer to this challenge, the Board formally endorsed the committee's ambitious goal of ensuring that all civil engineering projects are sustainable.

To this end, the Board approved three key priorities as proposed by the committee:

- Build the capacity of civil engineers to achieve the visions and principles of sustainable development
- Develop new standards and protocols for life-cycle assessment, resilience, and sustainability
- Focus on community needs and purposes, beginning at the development stage of infrastructure projects and programs

To help educate civil engineers and other practitioners around the world on sustainable practices, ASCE created a new conference series, with the first International Conference on Sustainable Infrastructure – ICSI 2014 held in November 2014 in Long Beach, CA. Two years later, the International Conference on Sustainable Infrastructure 2016 (www.icsi2016.org) was held October 17-19 in Shenzhen, China. The conference, produced by the Chinese Academy of Engineering, National Academy of Engineering, Chinese Research Academy of Environmental Sciences, Division of Environmental & Light Textile Engineering, Division of Civil Hydraulic and Architecture Engineering, Human Settlements and Environment Commission of Shenzhen Municipality and ASCE, brought together leading academicians and practitioners from across the globe engaged in research and implementation of sustainable infrastructure.

Designing and delivering infrastructure systems that truly contribute to sustainability throughout their service life was an important theme of these conferences. Recognizing that infrastructure is an essential component of national competitiveness and social well-being, discussion focused on sustainability in the built environment, presenting relevant engineering research, and applications that contribute to competitiveness and well-being. Presentations and panel discussions covered sustainable infrastructure planning, financing, design, construction and operation: how practitioners are improving sustainable performance to meet the critical challenges of a changing operating environment.

The next International Conference on Sustainable Infrastructure 2017 will take place in New York City in October 2017. Following up on ICSI 2014 (www.ICSIConference.org) and ICSI 2016, ICSI 2017 will focus on sustainability in the built environment, presenting relevant engineering research, demonstrations and applications that contribute to competitiveness and well-being. It will also work to support the UN Sustainable Development Goals and the National Academy of Engineering's Grand Challenges, in particular, how to "restore and improve urban infrastructure." This conference will showcase the latest developments and advances in design, construction, technology, finance, policy and education related to nature-based solutions and sustainable infrastructure. It will also offer a forum to discuss and debate the creation of healthy and safe communities and future directions for the 21st century.

In March 2017, ASCE released its 2017 Report Card on America's Infrastructure defining the scope of the challenges we face in the United States, along with proposes solutions. (see https://www.infrastructurereportcard.org/). Issued every four years, the report card evaluates the condition and performance of American infrastructure in the familiar form of a school report card—assigning letter grades based on the physical condition and needed investments for improvement. Unfortunately, since its inception in 1998, the cumulative report card grade has not risen higher than the 2017 grade of a D+. ASCE has identified a number of key solutions to raise the grades, which will require the utilization of new approaches, materials, and technologies to ensure our infrastructure is resilient and sustainable, with a resulting improvement to the "triple bottom line," including clear economic, social, and environmental benefits.

ASCE's *Vision for Civil Engineering in 2025* presents an aspirational picture of the civil engineer of tomorrow, from the perspective of more than 60 experts from around the world. The *Vision* states that civil engineers in the coming decades should be "stewards of the natural environment and its resources" and that they will be expected to "serve as master builders…, innovators and integrators, managers of risk and uncertainty, and leaders in shaping public policy." To inaugurate this new world, *Vision 2025* seeks to guide the development of policies and programs within the civil engineering community. Achieving this *Vision* is a primary way that ASCE and its members can contribute to achievement of the Sustainable Development Goals adopted at the United Nations Sustainable Development Summit in September 2015.

The new Goals call on countries to endeavor to achieve 17 Sustainable Development Goals over the next 15 years. Achieving these goals will eliminate extreme poverty and improve the quality of people's lives around the world, and science and engineering must play a leading role in this effort.

ASCE, leveraging its Policy on the United Nations' Sustainable Development Goals (Policy Statement 517), works in collaboration with other domestic and international organizations to engage engineers in addressing the needs of under-served communities through capacity building and sustainable solutions. By helping to achieve the Sustainable Development Goals, the engineering profession contributes to a world where all people have the resources to meet their basic human needs and where the principles of sustainability are deeply rooted in all construction, energy, transportation, communication, and development activities.

In 2011, ASCE joined with the American Public Works Association and the American Council of Engineering Companies to launch the Institute for Sustainable Infrastructure (ISI). Within 18 months, ISI created an infrastructure rating system to assess the sustainability of civil engineering projects. Incorporating the triple bottom line approach that examines a project's social, economic and environmental impact, Envision® became the first comprehensive sustainability rating system for all types of non-building infrastructure projects in the United States. With application to projects ranging from transportation to water and wastewater, the Envision tool can be downloaded for free on ISI's website at https://sustainableinfrastructure.org/. Today, over 5000 professionals have become certified to apply the Envision sustainability rating system and have earned the designation ISI Envision Sustainability Professional (ENV SP).

Additionally, ASCE is an active member of the American Association of Engineering Societies, the International Activities Committee, and the Task Force on Global Sustainability. The Task Force is working with U.S.-based member engineering societies to advance the Sustainable Development Goals. In addition, the Task Force is leading the effort to encourage engineering societies around the world through the World Federation of Engineering Organizations to advance the role of engineering in the United Nations and to make achieving the goals more visible. The Formal Engineering Education Committee of the ASCE Committee on Sustainability is actively engaged in educating U.S. engineering faculty and creating educational modules to promote awareness in classrooms and encourage contributions towards achieving the goals.

Through its longstanding close affiliation with Engineers Without Borders-USA, ASCE offers opportunities for engineering students and practitioners to take part in humanitarian engineering projects, and to train citizens of developing communities throughout the world in how to implement sustainable solutions and become self-sufficient. Volunteers on EWB-USA projects work to improve the quality of life for communities that may be challenged even with providing for their residents' basic life necessities. Through our support of EWB-USA, ASCE has made a significant, long-term commitment to helping those in need.

To help those in need in the United States, ASCE collaborated to start the Community Engineering Corps in 2014. This alliance between ASCE, the American Water Works Association and EWB-USA connects volunteer engineers around the country with infrastructure projects to help underserved communities. One of the CE Corps' current projects is providing solutions to water-supply and sanitation problems in the Salinas River Valley in California.

Many of ASCE's specialty Institutes have already integrated sustainability into their programs and activities. For example, the Environmental & Water Resources Institute has hosted an annual International Perspectives on Water Resources and the Environment conference for the past eight years in nations including India, Thailand, Singapore, Morocco, Turkey, Ecuador, and Sri Lanka, with the goal of sharing knowledge to combat some of the world's toughest water-related problems.

ASCE encourages all civil engineers and related professionals to reflect upon the ideals that motivated them to take up the profession, and what they would like their legacy to be. For our generation, building a sustainable future is both possible and achievable. Now more than ever, we must work together to understand our present challenges, to harmonize the natural

and built environments, and to identify and implement sustainable solutions to improve the global quality of life for generations to come.

American Society of Civil Engineers
Thomas Smith, Executive Director

ASCE



2017 INFRASTRUCTURE REPORT CARD

Report Card Methodology

- CAPACITY
- OPERATION AND MAINTENANCE
- CONDITION
- PUBLIC SAFETY
- FUNDING
- RESILIENCE
- FUTURE NEED
- INNOVATION

2017 Infrastructure Grades

AVIATION	D	PARKS AND RECREATION	↓ D+
BRIDGES	C+	PORTS	↑ C+
DAMS	D	RAIL	↑ B
DRINKING WATER	D	ROADS	D
ENERGY	D+	SCHOOLS	↑ D+
HAZARDOUS WASTE	↑ D+	SOLID WASTE	↓ C+
INLAND WATERWAYS	↑ D	TRANSIT	↓ D-
LEVEES	↑ D	WASTEWATER	↑ D+

America's Cumulative Infrastructure Grade

D+

A	EXCEPTIONAL
B	GOOD
C	MEDIOCRE
D	POOR
F	FAILING

Investment Gap

2016–2025 (10 years)

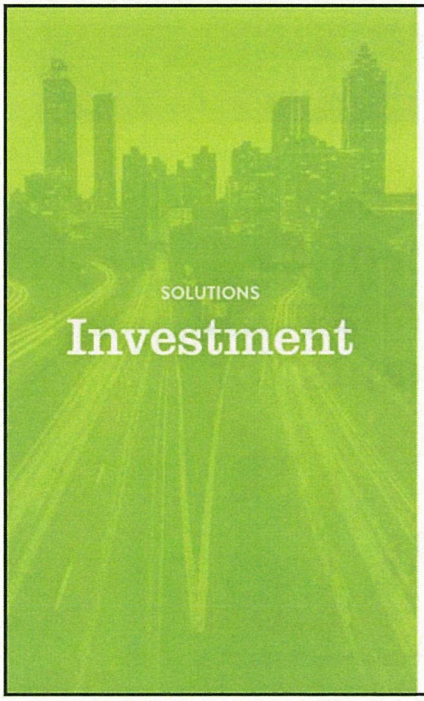
Infrastructure Systems	TOTAL NEEDS	ESTIMATED FUNDING	FUNDING GAP
SURFACE TRANSPORTATION	$2,042	$941	$1,101
WATER/WASTEWATER INFRASTRUCTURE	$150	$45	$105
ELECTRICITY	$934	$757	$177
AIRPORTS	$157	$115	$42
INLAND WATERWAYS & MARINE PORTS	$37	$22	$15
DAMS	$45	$5.6	$39.4
HAZARDOUS & SOLID WASTE	$7	$4	$3
LEVEES	$80	$10	$70
PUBLIC PARKS & RECREATION	$114.4	$12.1	$102.3
RAIL	$154.1	$124.7	$29.4
SCHOOLS	$870	$490	$380
TOTALS	$4,590	$2,526	$2,064

$2.0 trillion needed



FUNDING GAP | CURRENT FUNDING





SOLUTIONS

Investment

Increase investment from all levels of government and the private sector **from 2. 5 percent to 3.5 percent** of U.S. Gross Domestic Product (GDP) by 2025.

Put the **"trust"** back into **"trust funds."**

Fix the Highway Trust Fund by raising the federal motor fuel tax

Authorize programs to improve specific categories of deficient infrastructure

Infrastructure owners and operators must charge, and Americans must be willing to pay, rates and fees that reflect the **true cost of using, maintaining, and improving all infrastructure**

SOLUTIONS

Leadership & Planning

Leaders from all levels of government, business, labor, and nonprofit organizations must come together to ensure **all investments are spent wisely**

Require all projects greater than $5 million that receive federal funding use **life cycle cost analysis**

Create incentives for maintenance

Develop tools to prioritize projects

Streamline the **project permitting process**

Identify projects attractive to **private sector investment and public-private partnership**

ASCE

Grand Challenge

Reduce the life cycle cost of infrastructure by 50 percent by 2025 and foster the optimization of infrastructure investments for society.

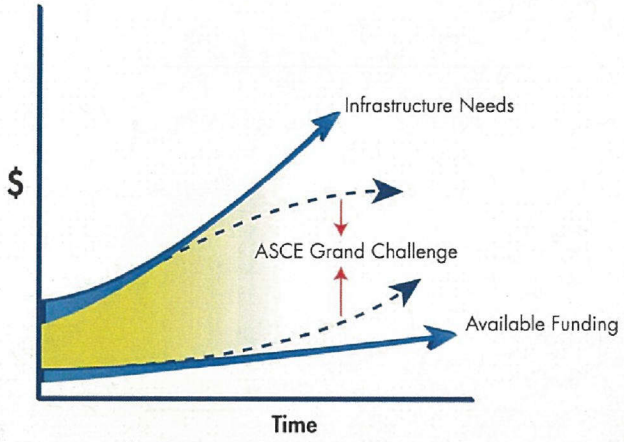
ASCE GRAND CHALLENGE

Rethink What's Possible

ASCE

Rethinking What's Possible

Closing Infrastructure Gap



SOLUTIONS

Preparation for the future

RE·SIL·IEN·CY *n.*
To more quickly recover from significant weather and other hazard events

SUS·TAIN·A·BIL·I·TY *n.*
Improving the "triple bottom line" with clear economic, social, and environmental benefits

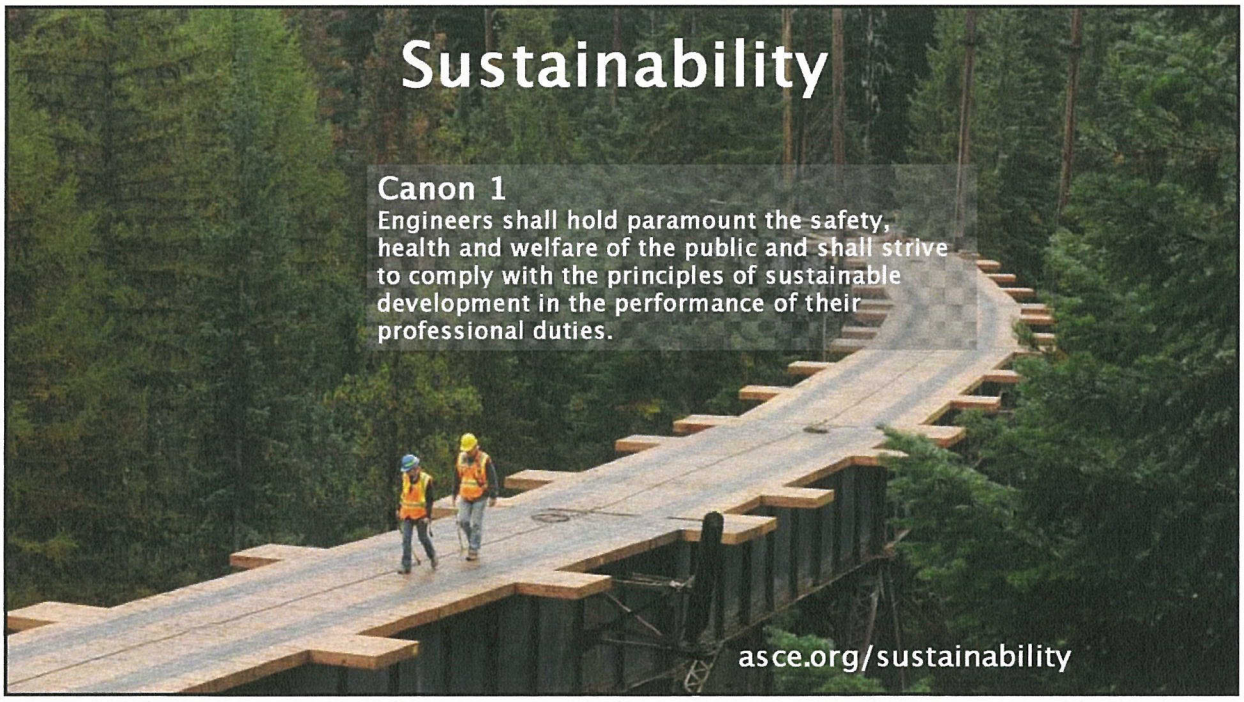
Develop active **community resilience programs**

Consider **emerging technologies and shifting social and economic trends** when building new infrastructure

Improve **land use planning** at the local level

Support **research and development** into innovative new materials, technologies, and processes


Sustainable Infrastructure


Sustainability
Canon 1
Engineers shall hold paramount the safety, health and welfare of the public and shall strive to comply with the principles of sustainable development in the performance of their professional duties.
asce.org/sustainability

ASCE Envision



Tarrant Regional Water District: Envision Silver

Trump Administration Infrastructure Plans



"To launch our national rebuilding, I will be asking the Congress to approve legislation that produces a $1 trillion investment in the infrastructure of the United States — financed through both public and private capital –- creating millions of new jobs."

Senate Democrats' Infrastructure Plan

"Senate Democrats have unveiled this blueprint because we need a wide-sweeping infrastructure plan — and we need it now."

Senate Minority Leader Chuck Schumer (D-NY), January 23, 2017



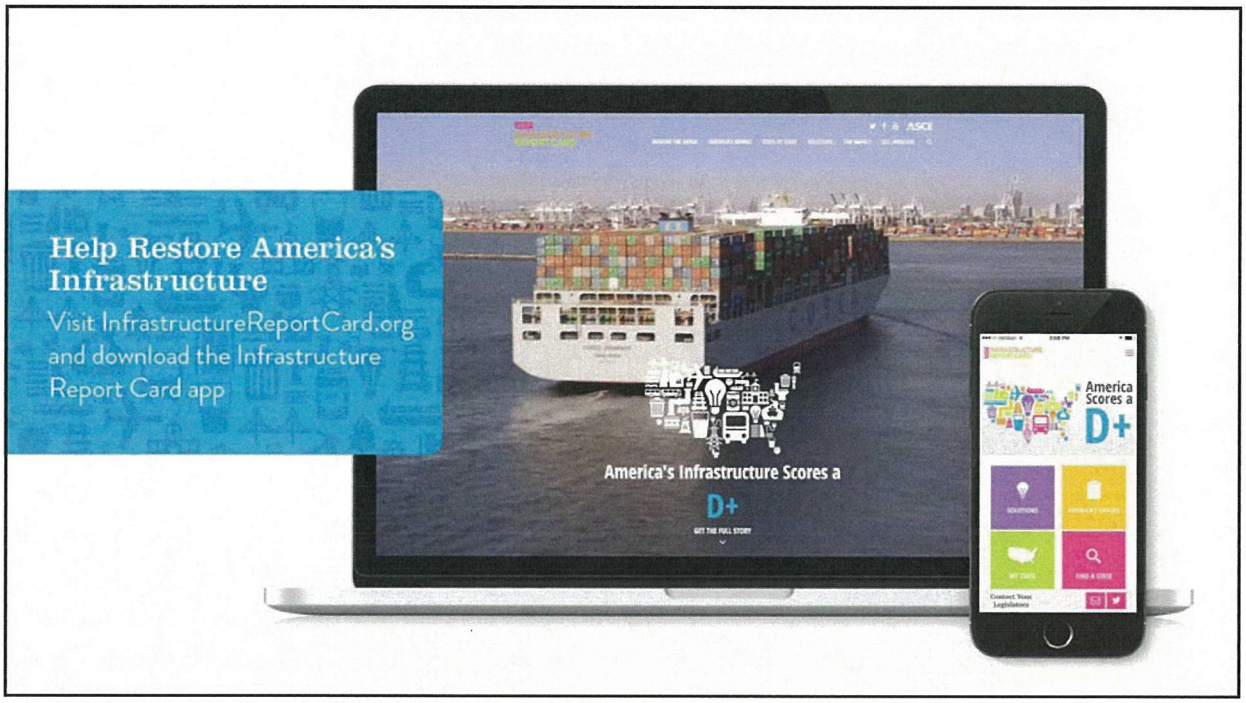
Principles for Infrastructure Investment

Investments must provide **substantial, long-term benefits** to the public and the economy

The cost of a project over its entire life span—including **designing, building, operating, and maintaining** the infrastructure—must be taken into account

Projects should be built **sustainably and resiliently**

Federal investment should leverage **state, local, and private investment**, not replace these other critical sources of infrastructure funding



Thank You

www.infrastructurereportcard.org | reportcard@asce.org

2017
INFRASTRUCTURE
REPORT CARD

Chris Smith Bio

Chris Smith helps clients solve problems arising under all aspects of environmental laws. He advocates for clients before regulatory agencies and state and federal courts, and counsels them on regulations, compliance, and risk avoidance. Chris enjoys the challenge of helping clients develop practical, cost-effective solutions to often complicated and technical environmental matters. He believes that effective legal representation is founded on trust and he values developing long-lasting relationships with clients, understanding their goals, and learning about their businesses.

A graduate of University of Maryland, Chris served as a Peace Corps volunteer in Jamaica, working with small farmers to develop sustainable agricultural products and practices. After the Peace Corps, Chris attended the University of Texas School of Law and the Lyndon B. Johnson School of Public Affairs.

Prior to co-founding Smith Jolin, Chris was a partner at Thompson & Knight LLP where he worked for 12 years representing a variety of clients, including real estate developers, refineries, chemical plants, steel mills, cement manufacturers, lime manufacturers, oil and gas operators, agricultural operations, local governments, and private citizens. His background includes experience both in the substantive aspects of environmental law and judicial and administrative trial practice.

Chris has been recognized in The Best Lawyers in America® by Woodward/White Inc. (Environmental) for 2016-2017, Chambers USA by Chambers & Partners (Environmental) for 2016, Texas Super Lawyers® by Thomson Reuters (Environmental) 2016, Texas Rising Stars® by Thomson Reuters (Environmental) for 2013-2015 , and as a "Recommended Attorney" The Legal 500 US by Legalease (Industry Focus: Energy: Regulatory) for 2015-2016. He serves on the law school committee of the Texas Bar Environmental and Natural Resources Law Section and the planning committee of the Texas Environmental Superconference.

Outside of his law practice, he serves on the Executive Committee of the Capitol Area Council of the Boy Scouts of America, is the proud parent of four children, and competes in ultramarathon running events.

Drew Darby biography for introduction at event

State Representative Drew Darby represents nine counties in West Texas spanning the Concho Valley and Permian Basin, an area larger than seven states. Drew is a product of San Angelo schools and received a business degree and a juris doctorate from the University of Texas at Austin. He also attended the Darden School for Emerging Leaders at the University of Virginia.

Drew was elected to the Texas House of Representatives in 2006. Drew is currently serving as Chairman of the Energy Resources Committee, Chairman of the Select Committee on State and Federal Power and Responsibility Committee, and as a member of the Ways and Means Committee and Redistricting Committee. In previous sessions, Representative Darby has served as a member of the Legislative Budget Board, the State Water Implementation Fund for Texas Advisory Committee and as a subcommittee chairman for the House Committee on Appropriations.

A successful businessman, Drew is the owner of Surety Title with offices throughout West Texas, and *Of Counsel* to the Energy and Real Estate practice group at the law firm of Jackson Walker, LLP.

He and his wife Clarisa have five children and four grandchildren.

Acting Regional Administrator for EPA's South Central Region (Region 6)

Samuel (Sam) Coleman is the Acting Regional Administrator for the U.S. Environmental Protection Agency (EPA) Region 6 in Dallas, Texas.
Samuel Coleman brings decades of EPA experience and leadership, from leading hazardous waste clean-ups and emergency response missions to directing Region 6 enforcement activities.

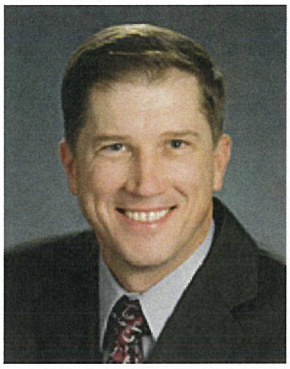
Mr. Coleman held several positions at EPA prior to his current position, including Deputy Regional Administrator in Region 6, Director of the Superfund Division in Region 6, Director of the Compliance Assurance and Enforcement Division in Region 6 and Deputy Director of the Office of Site Remediation Enforcement at EPA Headquarters in Washington, D.C.

He guided EPA's response to Hurricane Katrina as the agency's senior federal official in New Orleans, leading EPA's emergency response and recovery missions. For these efforts, Sam was awarded a Meritorious Presidential Rank Award in 2009.

Sam has provided extraordinary leadership in cleaning up contaminated sites, from massive, complex efforts such as Tar Creek in Picher, Oklahoma, which holds millions of cubic yards of hazardous mining waste, as well as dozens of brownfields redevelopment sites across Region 6. By working with local, state, and tribal partners to clean up hazardous waste, Sam and his teams have improved the quality of life and brought economic development to communities throughout Region 6.

Bryan W. Shaw, Ph.D., P.E.

Dr. Bryan W. Shaw of Elgin was appointed to the Texas Commission on Environmental Quality by Gov. Rick Perry on Nov. 1, 2007. The Texas Senate confirmed his appointment on May 5, 2009 and he was appointed chairman on Sept. 10, 2009.



Shaw is an associate professor in the Biological and Agricultural Engineering Department of Texas A&M University (TAMU) with many of his courses focused on air pollution engineering. The majority of his research at TAMU concentrates on air pollution, air pollution abatement, dispersion model development and emission factor development. Shaw was formerly associate director of the Center for Agricultural Air Quality Engineering and Science, and formerly served as Acting Lead Scientist for Air Quality and Special Assistant to the Chief of the U.S. Department of Agriculture Natural Resources Conservation Service.

Shaw served as a member of the U.S. Environmental Protection Agency (EPA) Science Advisory Board (SAB) Committee on Integrated Nitrogen, as well as the EPA SAB Environmental Engineering Committee and the Ad Hoc Panel for review of EPA's Risk and Technology Review Assessment Plan. Additionally, he is a member of the U.S. Department of Agriculture–Agricultural Air Quality Task Force. Since his appointment to the TCEQ, Shaw has served on the Texas Environmental Flows Advisory Group and as chair of the Texas Advisory Panel on Federal Environmental Regulations.

Shaw received a bachelor's and master's degree in agricultural engineering from TAMU and a doctorate degree in agricultural engineering from the University of Illinois at Urbana-Champaign.

Patrick Traylor Biography

Patrick Traylor is the Deputy Assistant Administrator for EPA's Office of Enforcement and Compliance Assurance in Washington, DC. Patrick works with senior leadership at EPA, the Department of Justice, the enforcement offices at EPA headquarters and the regions, and tribal and state enforcement authorities to ensure compliance with environmental laws and to promote the cleanup of contaminated sites.

Prior to joining EPA, Patrick was a partner in the environmental practice at Hogan Lovells in Washington, DC and Houston. There he focused his practice for more than twenty years on air quality enforcement defense and obtaining air quality permits for complex, capital-intensive construction projects.

Patrick is a graduate of Texas A&M University, received his J.D. from South Texas College of Law Houston, and received his Master of Law and Letters degree in environmental law from The George Washington University School of Law.

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Mr. Brooke-Davidson is a shareholder in the Austin, Texas office of Guida, Slavich & Flores, P.C. He has practiced environmental law since 1985, when he received his law degree with honors from The University of Texas School of Law. After law school he was selected into the Honors Attorney Program of the United States Department of Justice in Washington, D.C., where he served in the Environmental Enforcement Section for twelve years, first as trial attorney and then as a supervising attorney, receiving three Special Achievement Awards and a Special Commendation. He has undergraduate and graduate degrees from the Massachusetts Institute of Technology, and worked as an air environmental consultant prior to entering law school.

His practice has included all facets of environmental law: he has experience with all the significant federal environmental laws and their state counterparts; his practice has involved litigation, arbitration, enforcement, permitting, transactions, and counseling; he has worked with various industries including chemicals, energy, oil and gas, agriculture, manufacturing, and real estate. He has practiced before numerous regulatory agencies, including the U.S. Environmental Protection Agency, the U.S. Occupational Safety and Health Administration, the Texas Commission on Environmental Quality, and the Texas Railroad Commission. He is listed in *Best Lawyers in America* in the fields of environmental law and environmental litigation.

Stephanie Bergeron Perdue

Deputy Executive Director, Texas Commission on Environmental Quality

Stephanie Bergeron Perdue became Deputy Executive Director for the Texas Commission on Environmental Quality on January 16, 2014. Prior to this current role, Bergeron Perdue served as Special Counsel to the Executive Director, and before that, she was the Deputy Director of the Office of Legal Services, serving from November 2005 until May 2012. Stephanie was also the Environmental Law Division Director from September 2001 until 2005.

Ms. Bergeron Perdue joined the Texas Commission on Environmental Quality (TCEQ) as an executive assistant to former Chairman Robert J. Huston in August 1999. In this capacity, she was afforded the opportunity to participate in the 2001 Sunset Review Process of what was then the Texas Natural Resource Conservation Commission. This experience allowed her to gain a comprehensive overview of the agency's multi-media programs, ranging from water and air quality to solid waste disposal.

Stephanie's current position focuses on agency administration, including supporting the Executive Director in development of the agency's biennial budget of approximately $800 million. Working on agency funding -- comprised primarily of statutory fees -- has integrated her knowledge of the various programs with the State's legislative budgeting process. In addition, Ms. Bergeron Perdue continues to be involved in various permitting and compliance priority issues, such as the State's Drinking Water Program.

She earned her Bachelor of Science degree in Radio-Television-Film from The University of Texas at Austin in 1990 and her Doctor of Jurisprudence degree from South Texas College of Law in 1995. In October 2015, Stephanie was inducted into the American College of Environmental Lawyers.

She and her husband, Rick, have one (very active!) eight-year old son.

John C. Cruden is the President- elect of the American College of Environmental Lawyers. Confirmed by the Senate in 2014, John served until January 2017 as the Assistant Attorney General for the Environment and Natural Resources Division, U.S. Department of Justice. As AAG he supervised 650 individuals, a budget of over $150 Million, and several thousand federal cases. During that period he personally led the settlement negotiations to resolve the BP/Deepwater Horizon and Volkswagen litigation, both of which resulted in settlements over $20 billion, the largest of their type in U.S. history. He also served as co-chair of the President's Task Force on Illegal Wildlife Trafficking and led the US delegations to both Botswana, Africa and Hanoi, Vietnam.

Mr Cruden is a graduate of the U.S. Military Academy and the Command and General Staff College with advanced degrees from the University of Virginia and Santa Clara Law School. After graduating from West Point, Mr. Cruden served in airborne, ranger, and special forces units in Germany and Vietnam before attending law school and clerking for Justice Stanley Mosk, California Supreme Court. He then attended the Army's Judge Advocate General's Graduate Course where he was named the outstanding graduate. His military legal assignments include serving as senior lawyer in Frankfurt, Germany, General Counsel of the Defense Nuclear Agency and the Department of the Army's Chief Legislative Counsel.

In the Department of Justice, Mr Cruden was Special Counsel to the Assistant Attorney General, Civil Division; Chief, Environmental Enforcement Section (1991-95) and the career Deputy Assistant Attorney General (1995-2011). Following that tenure, John served as President, Environmental Law Institute until 2015, one of the leading non partisan NGOs in the nation,

responsible for publishing, educating, and researching current environmental issues.

Mr. Cruden was the first government lawyer to be elected and serve as the President, DIstrict of Columbia Bar Association, the second largest bar in the nation and subsequently as the elected Chair of the American Bar Association Section of Environment, Energy, and Natural Resources.

He has received numerous awards, including the Bronze Star, the Vietnamese Cross of Gallantry with Silver Star, the Defense Meritorious Service Medal, the Legion of Merit with Oak Leaf Cluster, and the Air Medal as well as combat infantry badge, ranger, airborne, and special forces designations . At the Department of Justice he has received the prestigious President Rank Award from three different Presidents and the Muskie-Chaffee Award for environmental excellence.

In 2017 he received the environmental leadership award from the University of California (Berkley)Law School and the highest award from both the District of Columbia Bar Association and the American Bar Association Environmental Section.

Mr. Cruden is a swim coach for Special Olympics and a past recipient of Fairfax County's Volunteer of the year award for his work with handicapped children. He is married and has two daughters.



AVI GARBOW

Partner

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PRACTICE

- Environmental Litigation and Mass Tort
- Administrative Law and Regulatory Practice
- Crisis Management
- White Collar Defense and Investigations

EDUCATION

University of Virginia
1993 - Master of Arts

University of Virginia
1992 - Juris Doctor

University of Michigan
1988 - Bachelor of Arts

ADMISSIONS

District of Columbia Bar

Virginia Bar

BIOGRAPHY

Avi S. Garbow is a partner in the Washington, D.C. office of Gibson, Dunn & Crutcher. He is a Co-Chair of the Environmental Litigation and Mass Tort Practice Group, and a member of the White Collar Defense and Investigations, Administrative Law and Regulatory, and Crisis Management Practice Groups. He joined the firm after serving as General Counsel at the U.S. Environmental Protection Agency. Mr. Garbow was nominated by President Obama, confirmed with the unanimous consent of the Senate, and was EPA's longest-serving General Counsel, from 2013 through 2017. Before assuming that position, he served as EPA Deputy General Counsel, held positions in EPA's enforcement office, and was a distinguished federal prosecutor at the U.S. Department of Justice.

Honored by the National Law Journal as an Energy and Environmental Trailblazer in 2017, Mr. Garbow has extensive experience in the development, implementation and enforcement of environmental regulations under nearly all major environmental statutes. His practice focuses on environmental compliance, internal investigations and enforcement proceedings, litigation defense and crisis management. In addition, Mr. Garbow provides strategic counseling on matters relating to climate change and sustainability, helping clients in a wide range of industries identify and maximize business opportunities arising from changing environmental and regulatory landscapes.

Mr. Garbow's tenure as EPA's General Counsel occurred during the most advanced efforts of the federal government to address climate change, both domestically and internationally. While serving as EPA General Counsel, Mr. Garbow twice led the EPA delegation to the U.S.-China Strategic & Economic Dialogue and participated in the U.S.-China Climate Change Working Group.

Mr. Garbow successfully managed one of the most active regulatory and defensive litigation dockets among large federal agencies. Under his leadership, EPA's Office of General Counsel was recognized – for the first time ever – by *The Legal 500 U.S.* as the Best In-House Team for Environment in 2014 and in 2015, and was selected for its *GC Powerlist*, with *The Legal 500* remarking that "under the inspired leadership of Avi Garbow, the dedication that the team shows sets it apart from all others in the field." He also spearheaded significant engagement with State Attorneys General, and he helped to found the EPA/Environmental Council of States Legal Network.

Earlier in his career, Mr. Garbow served as a prosecutor in the Justice Department's Environmental Crimes Section, was appointed as a Special Assistant U.S. Attorney in the Eastern District of Virginia, and held positions in EPA's Office of Enforcement and Compliance Assurance.

Mr. Garbow received his Juris Doctor from the University of Virginia School of Law, where he received the Robert F. Kennedy Award for Public Service. He received a Masters Degree in Marine Affairs from the University of Virginia Graduate School of Arts & Sciences.

Patrick Traylor Biography

Patrick Traylor is the Deputy Assistant Administrator for EPA's Office of Enforcement and Compliance Assurance in Washington, DC. Patrick works with senior leadership at EPA, the Department of Justice, the enforcement offices at EPA headquarters and the regions, and tribal and state enforcement authorities to ensure compliance with environmental laws and to promote the cleanup of contaminated sites.

Prior to joining EPA, Patrick was a partner in the environmental practice at Hogan Lovells in Washington, DC and Houston. There he focused his practice for more than twenty years on air quality enforcement defense and obtaining air quality permits for complex, capital-intensive construction projects.

Patrick is a graduate of Texas A&M University, received his J.D. from South Texas College of Law Houston, and received his Master of Law and Letters degree in environmental law from The George Washington University School of Law.

JOHN D. WALKE

John D. Walke is a senior attorney and Director of Clean Air Programs with the Natural Resources Defense Council, where he has general responsibility for NRDC's clean air advocacy. His work focuses on the Clean Air Act's new source review (NSR) preconstruction review programs and a variety of State Implementation Plan measures under Title I of the Act; air toxics programs under Title III of the Act; Title IV's acid rain program; and the Title V operating permits program. Prior to joining NRDC in 2000, John worked for the United States Environmental Protection Agency, in the air and radiation law office of the Office of General Counsel, from 1997-2000. At EPA, John was the primary attorney responsible for the operating permits program under Title V of the Clean Air Act. He also worked extensively on issues relating to NSR programs, air toxics, monitoring, and enforcement under the Clean Air Act. Before working at EPA, John was an associate in the Washington, D.C. office of Beveridge & Diamond, P.C. from 1993-1997, where his practice concentrated on the Clean Air Act, the Clean Water Act, and the representation of individuals and corporations in criminal and administrative proceedings. John has a bachelor's degree in English from Duke University and a law degree from Harvard Law School.

Phillip Goodwin, P.G., joined the City of Houston's Legal Department in March, 2014 and is an Assistant City Attorney in the Real Estate Section, specializing in environmental law. He addresses diverse regulatory and compliance questions concerning air pollution enforcement, water quality and quantity (drinking water, wastewater, storm water, flooding), soil and groundwater contamination (Brownfields, municipal setting designations), recycling, and sustainability initiatives.

Prior to joining the City, Mr. Goodwin was an enforcement litigator at the Texas Commission on Environmental Quality. While at TCEQ he was handled more than 250 enforcement cases and provided counsel and regulatory assistance to the Enforcement and Field Operations Divisions. Prior to completing law school in 2008, he worked as an in-house consultant to the Environmental Remediation Division of a major energy company focused on natural gas production and transportation.

Mr. Goodwin graduated from Albion College, B.A., and from South Texas College of Law, J.D., where he was president of its Environmental Law Section. He is a past Chairman of the Environmental Law Section of the Austin Bar Association and is currently Vice Chair of the Environmental Law Section of the Houston Bar Association. In addition to being an attorney, Mr. Goodwin is also a Geologist licensed by the Texas Board of Professional Geoscientists.

Jeffrey H. Wood began serving as Acting Assistant Attorney General of the Environment and Natural Resources Division (ENRD) of the U.S. Department of Justice on January 20, 2017. He previously served as environmental counsel for U.S. Senator Jeff Sessions and as the Republican staff director for the U.S. Senate Subcommittees on Clean Air & Nuclear Safety and Water & Wildlife. In addition to his government service, Jeff's career has included time as a partner in the environmental and energy practice group of a private law firm and as in-house counsel for a transportation company. He earned his undergraduate and law degrees from Florida State University.

Professor Victor B. Flatt returned to the University of Houston in 2017 as the Dwight Olds Chair in Law and the Faculty Director of the Environment, Energy, and Natural Resources (EENR) Center. He also holds an appointment as a Distinguished Scholar of Carbon Markets at the University of Houston's Global Energy Management Institute. He was previously the inaugural O'Quinn Chair in Environmental Law at UHLC from 2002-2009.

Professor Flatt's teaching career began at the University of Washington's Evins School of Public Affairs, and he has previously taught at Georgia State University College of Law, and most recently at the University of North Carolina School of Law, where he was the inaugural Taft Distinguished Professor in Environmental Law and the Co-Director of the Center for Climate, Energy, Environment, and Economics (CE3).

Professor Flatt is a recognized expert on environmental law, climate law, and energy law. His research focuses on environmental legislation and enforcement, with particular expertise in the Clean Air Act and NEPA. He is co-author of a popular environmental law casebook, and has authored more than 40 law review articles, which have appeared in journals such as the Notre Dame Law Review, Ecology Law Quarterly, Washington Law Review, Houston Law Review and the Carolina Law Review. Six of his articles have been recognized as finalists or winner of the best environmental law review article of the year, and one was recognized by Vanderbilt University Law School and the Environmental Law Institute as one of the three best environmental articles of 2010, leading to a seminar and panel on the article in a Congressional staff briefing.

Professor Flatt has served on the AALS sub-committees on Natural Resources and Environmental Law, and was chair of the AALS Teaching Methods Section. He has served on many other board and committees in his career including the national board of Lambda Legal, and the Law School Admission Council's Gay and Lesbian Interests section. He is currently on the Advisory Board of CE3, a member of the ABA's Section on Environment, Energy, and Natural Resources Law Congressional Liaison Committee, and a member scholar of the Center for Progressive Reform.

Professor Flatt received his B.A. in Chemistry and Math from Vanderbilt University where he was a Harold Stirling Vanderbilt Scholar, and his J.D. from Northwestern University, where he was a John Henry Wigmore Scholar. After graduating from Northwestern, Professor Flatt clerked for the Honorable Danny J. Boggs of the United States Sixth Circuit Court of Appeals.

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EENRCENTER

The Center for Environment, Energy & Natural Resources Law
at the University of Houston Law Center



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Climate Change and the Ethical Responsibility of Attorneys

- Victor B. Flatt, Dwight Olds Chair in Law, and Faculty Director, EENR Center



The Center for Environment, Energy & Natural Resources Law at the University of Houston Law Center

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What are our responsibilities as people?

- "The climate is a common good, belonging to all and meant for all. We must regain the conviction that we need one another, that we have a shared responsibility for others and the world, and that being good and decent are worth it."
- Laudite Si, Pope Francis





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A Thought Experiment

- Can Attorney Actions related to climate change ever rise to the level of an ethical breach?
- Question is related to climate activism and concern



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What happens if you know your client is about to take an illegal or fraudulent action?

- Discourage
- Withdraw from Representation
- Anything Else?



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Attorney Must Disclose information IF:

- 1) client likely to commit a criminal or fraudulent act
- 2) act will likely result in death or substantial bodily injury
- 3) revelation reasonably anticipated to prevent client action



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- Texas Rule 1.05(e) – confidentiality of information:
- (e) When a lawyer has confidential information clearly establishing that a client is likely to commit a criminal or fraudulent act that is likely to result in death or substantial bodily harm to a person, the lawyer shall reveal confidential information to the extent revelation reasonably appears necessary to prevent the client from committing the criminal or fraudulent act.
- ABA MODEL RULE 1.6 is similar



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Key Phrases

- Criminal or Fraudulent
- Likely to Result
- Death or Substantial Bodily Harm
  - What if Specific Persons not identified?



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Can you imagine anything criminal or fraudulent that a client might do with respect to GHG?

- Emit without a permit or right to emit
- But who needs a permit?
  - RGGI
  - California +
  - EU
  - China



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Likely to Result in Death or Serious Bodily Harm

- Does not have to be a specific person at a specific time
- ABA Comment on Rule 1.6(b)1): Paragraph (b)(1) recognizes the overriding value of life and physical integrity and permits disclosure reasonably necessary to prevent reasonably certain death or substantial bodily harm. Such harm is reasonably certain to occur if it will be suffered imminently or if there is a present and substantial threat that a person will suffer such harm at a later date if the lawyer fails to take action necessary to eliminate the threat.



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Comment continued:

- "Thus, a lawyer who knows that a client has accidentally discharged toxic waste into a town's water supply may reveal this information to the authorities if there is a present and substantial risk that a person who drinks the water will contract a life-threatening or debilitating disease and the lawyer's disclosure is necessary to eliminate the threat or reduce the number of victims."
- Note the phrasing "accidentally discharged"
- Common in environmental law, where discharge itself is criminal act, even if "accidental"



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Facts about Climate Change

- Climate Change is Estimated to Kill over 100,000 persons annually in direct causes
- Including indirect causes (not directly attributable) raise the number to 400,000
  - Climate Vulnerability Index – Commissioned by Low Lying Island Nations
- UN Estimate – 5,000,000 harmed per annum



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GHGs are not like hazardous wastes

- Or are they?
- Cumulative nature
- Legal requirements – GHG permitting similar to RCRA permitting?



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Besides Needing Permit -- Additional GHG criminal or fraudulent acts resulting in release

- Failure to pay border tax adjustment
- Miscalculation of Border Adjustment
- Causation of Deforestation in Particular locations
- Failure to Correctly Inventory GHG emissions when required – or even when voluntary
- Is failure to disclose regulatory risk a possibility?



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Real? What could the future hold?

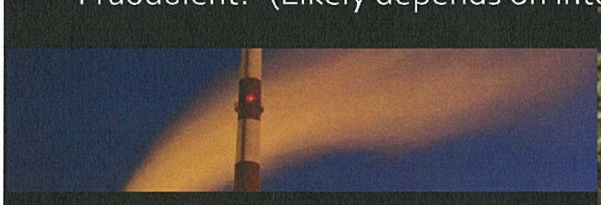
- Climate Activism
- Increased split with rest of world
- Border Adjustments
- Reminds us of need for awareness of rules



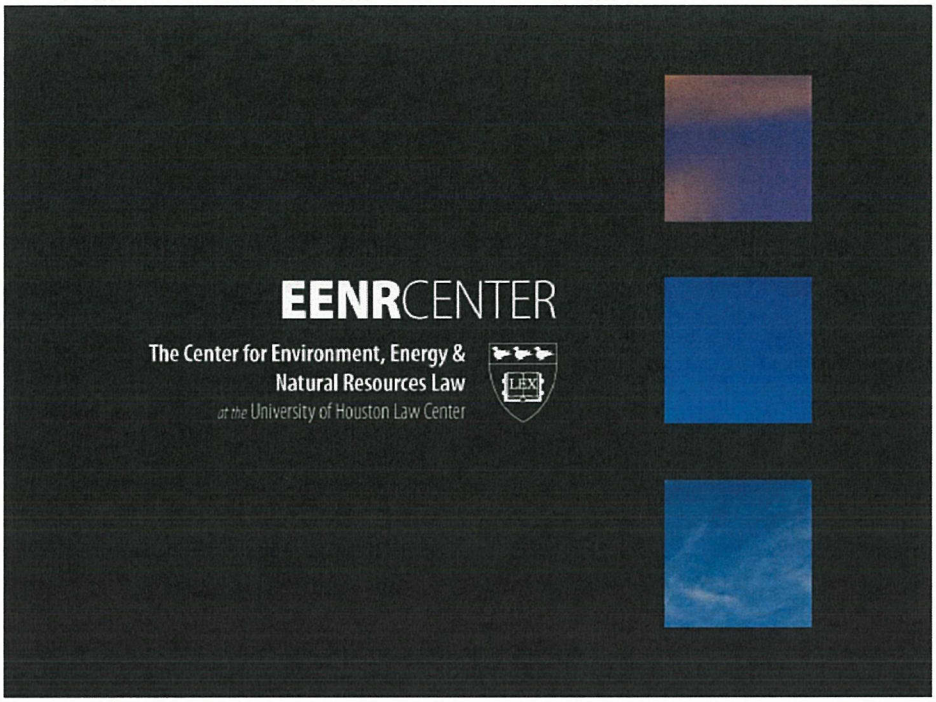
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Different Example: NEPA and the Social Cost of Carbon

- What happened with respect to the U.S. social cost of carbon in April?
- Still a cost – Bush Administration/ not zero for benefit cost analysis
- What if in NEPA analysis, private proponent "low-balls" carbon cost?
- Fraudulent? (Likely depends on intent)






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LEX

BEVERIDGE & DIAMOND PC



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PRACTICES
- White Collar and Environmental Crimes Practice

EDUCATION
- Rutgers University (B.S., Environmental Science and Policy, summa cum laude, 1986)
- University of Virginia (J.D., 1991; Member, Virginia Environmental Law Journal)

BAR ADMISSIONS & MEMBERSHIPS
- District of Columbia
- North Carolina
- U.S. Supreme Court
- U.S. Courts of Appeals: Fourth Circuit, Sixth Circuit
- U.S. District Courts: Western, Middle, and Eastern Districts of North Carolina

Mr. Anderson uses his experience as a former federal prosecutor to defend corporations and individuals against government investigations and prosecutions, primarily involving environmental and regulatory crimes. In addition to defense services, he provides corporate compliance counseling. He helps lead the Firm's White Collar and Environmental Crimes Practice Group. The legal services he offers clients include:

- Managing all matters to prepare the strongest possible case in anticipation of trial while also working to secure dismissal/closure of investigation.
- Negotiating favorable plea agreements.
- Conducting internal investigations.
- Preparing presentations to prosecutors to favorably influence their broad discretion and decline prosecutions.
- Overseeing responses to grand jury subpoenas and search warrants.
- Developing and assessing the effectiveness of corporate compliance programs.

EXPERIENCE[1]

Examples of Mr. Anderson's environmental crimes defense experience include:

- Representing a real estate development company and its executive in a federal criminal investigation of CWA and RCRA violations arising from on-site industrial demolition activities. Following an internal investigation, the federal prosecutor declined to prosecute.
- Defending a food grease recycling company and its executive charged with CWA felonies. Successfully negotiated a probationary sentence for the individual and a nominal fine for the company.
- Conducting an internal investigation following a pipeline rupture and release into a river. Felony charges were avoided, with a misdemeanor plea and fine.
- Representing a crew member/engineer of a cruise ship in an investigation relating to illegal bilge water discharges. No criminal charges were brought against this individual.

(continued)

Peter C. Anderson, *continued*

Examples of Mr. Anderson's more general, white collar defense experience include:

- Defending a hedge fund manager in a federal fraud and tax investigation.
- Defending a dentist accused of criminal tax evasion.
- Defended an executive accused of securities fraud involving a $2.9 billion loss, and a related obstruction of justice, in two separate, multi-week trials.
- Defended a tax lawyer accused of tax crimes arising from his counseling of off-shore trusts. After a lengthy trial, the jury acquitted the client of all charges.
- Defended various executives in various criminal antitrust investigations in the carbon graphite industry, the rubber belt manufacturing industry, and the shipping industry.
- Represented one of the Duke Lacrosse players in state criminal investigation and successfully avoided criminal charges to be brought, and helped manage and respond to the high-profile media campaign.

BACKGROUND

Mr. Anderson's two decades in the federal criminal arena – on both sides of the aisle - uniquely qualify him to counsel clients in a wide range of environmental and regulatory crimes matters. After completing his clerkship for the Hon. Graham Mullen, U.S. District Court Judge in W.D.N.C., he was selected into the Honors Program at the U.S. Department of Justice in Washington, D.C., and served as a federal prosecutor in the Environmental Crimes Section.

During his tenure, Mr. Anderson received the U.S. Attorney General's Special Achievement Award. In that specialized capacity, he gained trial experience in highly complex prosecutions; developed a deep understanding of all environmental criminal statutes; received invaluable insight into how prosecutors investigate and evaluate cases; and developed strong relationships with agencies and investigators.

Mr. Anderson also served as an Assistant United States Attorney in the Western District of North Carolina (Charlotte), where he gained additional trial experience in a variety of broader white collar crime matters.

(continued)

Peter C. Anderson, *continued*

Following his government service, Mr. Anderson has gained invaluable experience in a variety of national law firms, as well as his own boutique federal criminal trial practice. Aside from environmental and regulatory crimes, he has extensive experience defending charges involving all types of fraud (bank; mortgage; mail and wire; healthcare), as well as violations relating to tax, antitrust, securities.

Mr. Anderson is an adjunct faculty member at Charlotte School of Law, and regularly speaks and writes on a variety of topics including trial advocacy, federal criminal law, business crimes defense, and corporate compliance counseling.

PROFESSIONAL HIGHLIGHTS

- ABA White Collar Crime Section Environmental Crimes Subcommittee (2012-present)
- Board Certified in Corporate Compliance (CCEP) through the Society of Corporate Compliance and Ethics (SCCE)
- Selected as Top Criminal Defense Lawyer, Business North Carolina, Legal Elite (2013)
- One of three finalists for the U.S. Attorney post in the W.D.N.C. (2009)
- "AV" Rating in Martindale-Hubbell (since 2004)
- Permanent Member, Judicial Conference, U.S. Fourth Circuit
- Center for Professional and Applied Ethics, UNC-Charlotte, Advisor (2010 - Present)
- United Family Services, Board Member (2002 - 2009)
- Men for Change (Domestic Violence Victims' Advocacy Group), Chairman (2002)
- Mecklenburg County Bar, Vice President (1997 - 1999)
- Numerous Selections to "Legal Elite," "Super Lawyers," & "Best Lawyers in America"
- "40 Under 40" Award Winner, Charlotte Business Journal (2003)

(continued)

Peter C. Anderson, continued

- E. Randolph Williams Award for Outstanding Pro Bono Service (1996-1999)

[1] Experience listed here includes work done at prior law firms.

PRESENTATIONS

Defending the White Collar Case In and Out of Court (NACDL's 9th Annual Conference, October 2013)

Keeping Disagreements Civil – How to Avoid Criminal Charges in Product Regulatory Enforcement Cases (Beveridge & Diamond Products Law Webinar Series, July 2013)

Calling Balls & Strikes: Why Does the Government Go Criminal? (Beveridge & Diamond Texas Environmental Law Roundtable, June 2013)

PUBLICATIONS

Taking a Broader View of Compliance Risks and EnforcementReadiness: Tips on Maintaining Good Regulatory Relationships, and Preparing for Grand Jury Subpoenas and Search Warrants, *The Complete Compliance and Ethics Manual: 2016*, January 2016

Environmental Law and Compliance, *The Complete Compliance and Ethics Manual: 2016*, January 2016

Tips for Keeping Environmental Enforcement Actions Civil: Maintaining Good Relations With Regulators, *Bloomberg BNA Daily Environment Report*, October 31, 2014

LARRY W. NETTLES



LARRY W. NETTLES
PARTNER

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Recognition

- *Chambers USA*, Environment (Texas), 2004–2017
- *Legal 500 U.S.*, Energy, 2010; Environment: Transaction & Regulatory, 2012–2017; Environment: Litigation, 2016 and 2017
- *The Best Lawyers in America®* (Woodward/White, Inc.), Environmental Law, 2006–2017; Land Use and Zoning Law, 2011–2017; Energy Law, 2012–2017
- *United States Lawyer Rankings*, Number one lawyer in Environmental Law, 2008–2017
- *National Law Journal*, Energy & Environmental Trailblazer, May 2016

Larry, a partner in Vinson & Elkins' Houston office, has been practicing environmental law full-time since 1981 and has an exceptionally broad range of environmental law experience that makes him particularly well suited to advise clients with multi-faceted environmental problems, such as those frequently encountered in large business transactions. Larry currently serves as the Environmental and Natural Resources Practice Group Leader, Co-Chair of the firm's Energy and Infrastructure practice group and Chair of the Shale and Hydraulic Fracturing Task Force. He is also a member of the firm's Climate Change practice group.

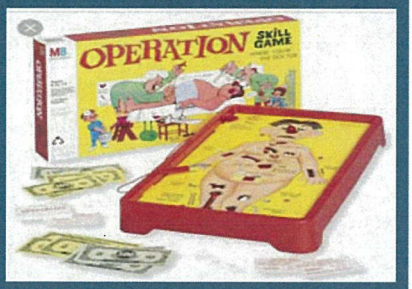
Larry has been recognized as the top environmental lawyer in the United States for the past ten years by *United States Lawyer Rankings*. He has also been recognized as one of the best environmental lawyers in the nation in the most recent edition of *Best Lawyers in America®*; one of the best environmental law attorneys in Texas on the "Texas Super Lawyers" list published in *Texas Monthly*, and by *Chambers & Partners* in its recent guidebook on *America's Leading Lawyers for Business*.

ANDREW STRONG:

Andrew Strong, a Pillsbury partner, has extensive experience in managing significant matters on behalf of the firm's clients including handling corporate and securities, private and public financing, legislative, judicial, regulatory and administrative matters. Andrew represents public- and private-sector clients in the emerging technology, life sciences, energy, and real estate industries; public and private academic institutions; and governmental bodies on a variety of diverse matters. His experience in the board room for private and public companies to his experience in a court room or before a legislative or administrative body has helped hone his skills in representing small to large clients. Andrew previously served as the General Counsel and Compliance Officer for the Texas A&M University System where he was responsible for, among other things, crisis management and internal investigations for the System's 11 public universities, 7 state agencies and health science center. He was the President and CEO of a start-up biotech company (Kalon Biotherapeutics) which he successfully grew and sold to Fujifilm and Mitsubishi. Andrew now serves on the boards of two publicly-traded companies.

Vinson&Elkins
Established 1917

ETHICAL ASPECTS OF INTERNAL INVESTIGATIONS



PRESENTED BY:

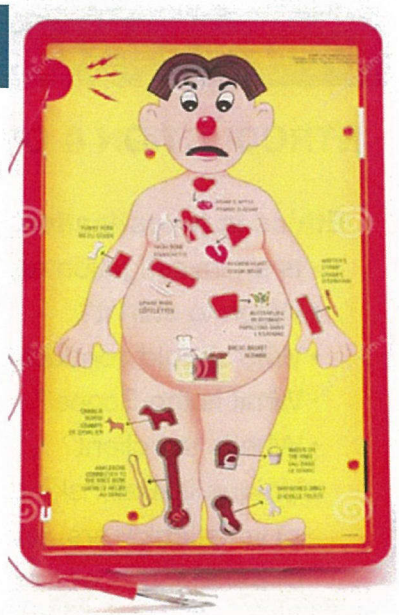
LARRY NETTLES
VINSON & ELKINS

PETER ANDERSON
BEVERIDGE & DIAMOND P.C.

ANDREW STRONG
PILSBURY WINTHROP SHAW PITTMAN LLP

THE GAME OF OPERATION
QUICK REMINDER & OVERVIEW

- Interesting Topic – Variety of Issues
- Many Analogies to Internal Investigations
  - High Stakes
  - Mistakes = "Buzzed" or "Zapped"
  - Various operations to perform
    - Adam's Apple
    - Wish Bone
    - Funny Bone
    - Broken Heart
    - Butterflies in Breadbasket
    - Writer's Cramp
    - Charlie Horse
    - Water on the Knee
    - Ankle Bone Connected to Knee Bone
    - Wrenched Ankle



Introduction of Panelists Respective Backgrounds

CONDUCTING INTERNAL INVESTIGATIONS

INTRODUCTION & OVERVIEW OF TOPICS:

Ethics in Investigation Planning

- Is an investigation required?
- When to start it?
- Who should conduct the investigation?
- What is the Scope?
- Who is the client?
- Unique issues/risks involving:

  a) whistleblowers; and

  b) parallel proceedings.

CONDUCTING INTERNAL INVESTIGATIONS

INTRODUCTION & OVERVIEW OF TOPICS:

Ethics in Fact Gathering

- *Upjohn* warnings for those who are not clients
- Witness preparation
- Response to witness questions regarding the need for individual representation
- Interviewing witnesses who may be targets
- Information preservation
- Other obstruction risks

CONDUCTING INTERNAL INVESTIGATIONS

INTRODUCTION & OVERVIEW OF TOPICS:

Ethics Related to Reporting & Disclosure

- What do you do with investigative findings?
- Who needs to know what, and when?
- How to avoid appearance of "retaliation"?
- Voluntary reporting?
- Corrective/remediation efforts?
  - What to do and when?

Let's Turn to our Hypothetical

INITIAL SET OF FACTS FOR HYPOTHETICAL
THE GAME OF "OPERATION"

- Greezy, Inc. is a nationwide chemical distributor company that handles many hazardous materials. Over the past 15 years, the company has incurred a number of civil enforcement actions and penalties.
- In light of this poor track record, Greezy's Board of Directors has always insisted on making improvements in compliance.
- However, due to increased competition and reduced revenue, and a belief that the enforcement climate is now more "business-friendly," Greezy's management has cut funding on compliance, and has reduced the legal department to one generalist lawyer – Mr. Clue Less.
- In a further effort to reduce operating costs and maintain profits, Greezy management has also made each distribution facility a separate cost center in order to incentivize each facility manager to find ways to reduce the cost of operations at that location.

INITIAL SET OF FACTS FOR HYPOTHETICAL
THE GAME OF "OPERATION"

- On February 1, the company's hotline receives a whistleblower complaint from an employee who works at Facility X, alleging that some Greezy facility managers have been instructing employees to blend hazardous wastes into non-hazardous wastes and to dispose of the resulting mixture as non-hazardous, and another set of managers have been instructing employees to simply flush their hazardous wastes down the drain to the local sanitary sewer system – all to save hazardous waste disposal costs.





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INITIAL SET OF FACTS FOR HYPOTHETICAL
THE GAME OF "OPERATION"

- The in-house lawyer (Mr. Less) is not confident that these allegations are accurate, and since he is very busy handling other things, he calls the plant manager at Facility X – Suzie Spill – and tells her about the complaint and names the whistleblower, and requests her to look into the problem and "handle it."
- Six months later, Lawyer Less gets a call from a state civil inspector that she has learned about certain regulatory violations.
- Lawyer Clue Less believes that this problem may deserve some attention so he calls outside counsel for some advice and guidance. Mr. Less stressed the need to keep costs to a minimum and is hoping that he can do this investigation himself. To the extent that outside counsel is needed, he insists that you represent the company and all of the employees.

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INITIAL PLANNING & RESPONSE

As outside counsel:

What advice do you give?

What factors do you need to consider?

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Internal Investigation Basics

TRIGGERING EVENTS

- **Emergency response to incidents**
- **Statutory mandates**
- **Reports of possible wrongdoing from:**
  - Employees
  - Agents
  - Customers
- **Civil claims or litigation**
- **Government investigations by EPA or state agencies**



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KEY STAGES OF INTERNAL INVESTIGATIONS



- **Engagement**
- **Investigation Planning**
- **Information Gathering**
  - **Document Gathering and Review**
  - **Investigative interviews**
- **Concluding the Investigation and Reporting**

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Ethics of Investigation Initiation and Planning

WHO SHOULD CONDUCT THE INVESTIGATION?

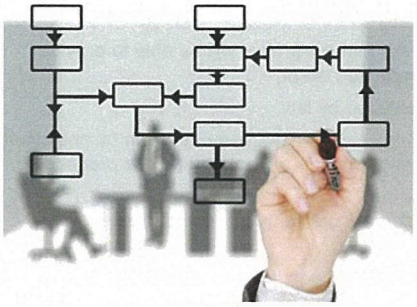
- **Outside Counsel vs. In-House?**
  - In-house counsel may have more knowledge of the situation
  - Outside counsel may be preferable to maintain independence and **objectivity/appearance of objectivity**
  - If the investigation involves previous legal advice, advising counsel should **not be investigating counsel**
- **Environmental Consultants**
  - Consultants need to be instructed on ethical issues involved in internal investigations
  - Must report directly to the supervising investigative counsel or **privilege could be waived**



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WHO IS THE CLIENT?
COMMON SOURCES OF ETHICAL DILEMMAS

- **Who is the client?**
  - The Company
  - The Board
  - Board Committee

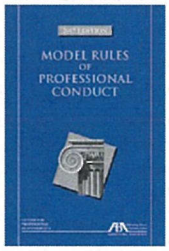


- Lack of clarity as to constituent's decision-making authority
- Lack of **informed consent** by client decision makers as to scope, objectives, resource requirements, and/or management of investigation
- Failure to identify in advance prior clients who are constituents or otherwise involved in matter to be investigated
- Client misperception of investigating counsel's **role, allegiance & obligations**
- Ambiguity as to recipients of ongoing status reports and findings
- Constituent **interference** with investigation

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WHO IS THE CLIENT?
RELEVANT PROFESSIONAL RULES

- **Rule 1.2:** Scope of Representation and Allocation of Authority
- **Rule 1.4:** Communication
- **Rule 1.6:** Confidentiality of Information
- **Rule 1.7 -1.9:** Conflicts of Interest & Duties to Former Clients
- **Rule 1.10:** Imputation of Conflicts of Interest
- **Rule 1.13:** Organization as Client



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WHO IS THE CLIENT?

(a) Except as provided in paragraph (b), a lawyer shall not represent a client if the representation involves a concurrent conflict of interest. A concurrent conflict of interest exists if:

(1) the representation of one client will be directly adverse to another client; or

(2) there is a significant risk that the representation of one or more clients will be materially limited by the lawyer's responsibilities to another client, a former client or a third person or by a personal interest of the lawyer.

(b) Notwithstanding the existence of a concurrent conflict of interest under paragraph (a), a lawyer may represent a client if:

(1) the lawyer reasonably believes that the lawyer will be able to provide competent and diligent representation to each affected client;

(2) the representation is not prohibited by law;

(3) the representation does not involve the assertion of a claim by one client against another client represented by the lawyer in the same litigation or other proceeding before a tribunal; and

(4) each affected client gives informed consent, confirmed in writing.

Texas Rule 1.6 (similar to ABA Rule 1.7) applies a substantial relationship test, allowing a lawyer to represent a client adverse to a current client, as long as the matters are not substantially related.

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WHO IS THE CLIENT?

Rule 1.7 Conflict of Interest: Current Clients cmt. 29 (Special Considerations in Common Representations).

Comment 29 notes the right of clients, in civil matters, to choose joint representation.

"A lawyer should consult with each client concerning the implications of the common representation, including the advantages and the risks involved, and the effect on the attorney-client privilege, and obtain each client's informed consent, confirmed in writing, to the common representation." Rule 1.7 cmt. 29

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WHO IS THE CLIENT?
PRACTICAL MEASURES TO AVOID PROBLEMS

- **Consult General Counsel** and other appropriate senior client counsel
- Identify decision-making authority—seek senior management or board authorization **in all major matters**
- Agree with client decision makers on objectives, scope and management
- Determine client-counsel liaisons
- Clearly communicate **counsel's role, allegiance and ethical obligations**
- Anticipate possible conflicts of interest



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CONFLICT CHECKING SYSTEMS

At a minimum, conflict checking systems should capture the following information:

- The names of all clients represented by the firm, and names of all the lawyers/professionals were are responsible for the relationship with the client.
- The names of all adverse parties.
- For lateral lawyers/professionals, the names of all clients that the person has represented and the adverse parties in the 2 years (and preferably 5 years) period before joining the firm.
- Provide for updating of information as new clients and new adverse parties are added to a matter.
- An indication of whether the clients are a current or former clients – such as when the last work was performed for the clients.
- The names of potential clients and potential adverse parties from whom confidential information has been obtained in connection with discussions whether to hire the law firm.
- If the firm does IP work, the subject matter of the IP work for the client.
- Pending conflicts checks and the names being checked.

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CONFLICT CHECKING SYSTEMS, *CONT.*

Other helpful information to include in the conflict system is:

The name of other law firms involved in each matter.

Whether a waiver is on file.

Whether an engagement letter has been sent to the client.

The nature of the work being performed for the clients.

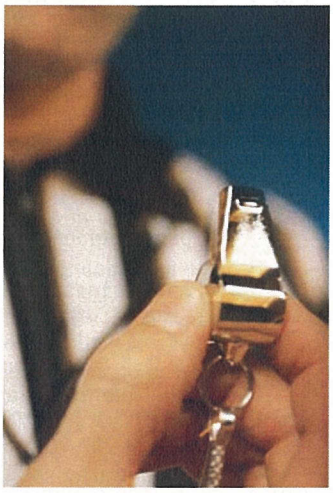
All the professional who have management responsibility for the client.

When the first work was undertaken for the client.

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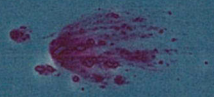
WHISTLEBLOWERS
STEPS TO RESOLVE ETHICAL ISSUES

- **Policies and Training:**
  - Review and update company policies to ensure policies are **not retaliatory** in any way
  - Train managers and supervisors
- **Response to a Complaint:**
  - **Do not make promises to the employee**
  - Do not make any decisions at all regarding the validity or good faith of the complaint
- **After the Initial Contact:**
  - **Do not disclose** complaint to anyone outside HR/Compliance/Legal
  - Do not deviate from business as usual without approval or consultation with HR/Compliance/Legal
  - **Do not destroy any documents**



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Ethics of Information Gathering/Preservation



ADDITIONAL FACTS FOR HYPOTHETICAL
THE GAME OF "OPERATION"

- Given the clear direction of Attorney Clue Less, the initial investigation interviews were conducted by one outside counsel (with no other witnesses). These interviews were not memorialized or summarized by the outside counsel – because the outside counsel has a great memory and needed to keep costs down to "help" the client.
- A month after these interviews took place, Greezy receives a federal grand jury target letter and subpoena that relates to the same alleged violations. The company also learns from 6 employees that they each received target letters, which explores whether they will agree to be interviewed.
- Mr. Less calls the outside counsel and asks him to re-interview these witnesses (and others), as well as to help gather information and respond to the document subpoenas.

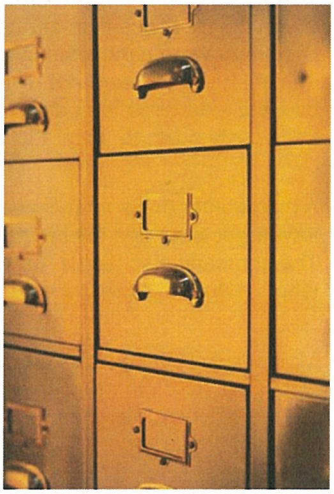
ADDITIONAL FACTS FOR HYPOTHETICAL
THE GAME OF "OPERATION"

- The outside counsel quickly learns the following interesting twists:
  - Many of the potentially responsive documents appear to have been deleted after the date of the initial call from the state regulator, as part of the company's document retention plan;
  - When the Plant Manager of Facility X – Suzie Spill – first learned about the complaint, she confronted the whistleblower and conveyed her "displeasure" for his going over her head, and suggested that he may need to find a new job.
  - Ms. Spill also gathered up a number of employees and told them that, since there may be an investigation coming, she wanted to check in with them on their loyalty to the company, and hoped that they would "do what was right."

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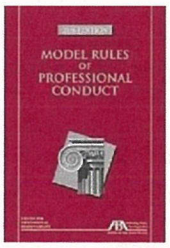
INFORMATION COLLECTION AND PRESERVATION
COMMON SOURCES OF ETHICAL DILEMMAS

- Insufficient client counseling before initiating investigation as to necessary resources, role of liaison, and steps necessary for **effective document gathering**
- **Penalties** for document destruction
- Ineffective invocation of attorney-client and work product **privilege protections**
- Mistaken disclosure of privileged materials or client business secrets
- **Lack of discretion** on part of consultants



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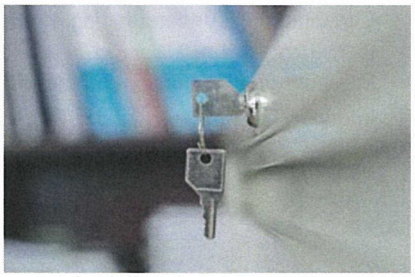
INFORMATION GATHERING
RELEVANT MODEL RULES OF PROFESSIONAL CONDUCT



- **Rule 1.2:** Scope of Representation and Allocation of Authority
- **Rule 1.3:** Diligence
- **Rule 1.6:** Confidentiality of Information

INFORMATION PRESERVATION AND GATHERING
PRACTICAL STEPS: DOCUMENT COLLECTION AND PRESERVATION

- **Immediately take steps to secure all potentially relevant documents**
- **Data preservation**
  - **Document** initial efforts at data preservation
  - Expand as the investigation changes and continue to document expanded efforts
  - Give **frequent reminders** to employees regarding preservation
- **Data collection**
  - Clarify and document **who is in charge** of collecting and preserving data



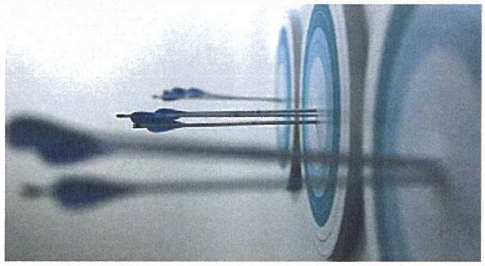
INFORMATION PRESERVATION AND GATHERING
PRACTICAL STEPS: PRESERVING PRIVILEGE



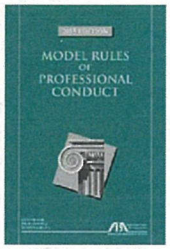
- Counsel client decision makers, liaisons and key constituents on **scope, process, confidentiality, and elements** of attorney-client and work product protections
- **Label** all attorney-client and work product materials appropriately
- Carefully instruct and **supervise consultants**
- Ensure highest client authorities **approve** any disclosure/waiver
- If relevant, **limit number of counsel** communicating with government

WITNESS INTERVIEWS
COMMON SOURCES OF ETHICAL DILEMMAS

- Tension between **diligent representation** of client entity and fairness and **candor** in dealing with constituents
- Unanticipated conflicts of interest
- Constituent misunderstanding of role/allegiance of investigating counsel (**possible creation of attorney-client relationship with constituent**)
- Pressure on client entity and constituents to **cooperate with government**
- Interviewing witnesses who **may be targets**



WITNESS INTERVIEWS
RELEVANT MODEL RULES OF PROFESSIONAL CONDUCT



- **Rule 1.13:** Organization as Client
- **Rule 1.3:** Diligence
- **Rule 1.7-1.9:** Conflicts of Interest & Duties to Former Clients
- **Rule 1.10:** Imputation of Conflicts of Interest
- **Rule 4.1:** Truthfulness in Statements to Others
- **Rule 4.2:** Communication with Person Represented by Counsel
- **Rule 4.3:** Dealing with Unrepresented Persons
- **Rule 4.4:** Respect for Rights of Third Persons

WITNESS INTERVIEWS
PRACTICAL STEPS

- **In all cases:**
  - Do not conduct interviews alone—**use 2 lawyers and document everything**
  - Counsel client regarding risks of excessive pressure on constituents to cooperate in investigation
- **In cases where interviewee is a target:**
  - Recommend retention of individual counsel
  - Any recommendation regarding retention of counsel should come **before the individual provides substantive information**



WITNESS INTERVIEWS
PRACTICAL STEPS: UPJOHN WARNING

- *Upjohn* Warning
  - You represent the company, not the witness
  - Interview is privileged and to assist in providing legal advice to the company
  - Witness should keep the substance of the interview confidential
  - But company may later decide to waive the privilege; witness will not be consulted
  - **Document the warning**



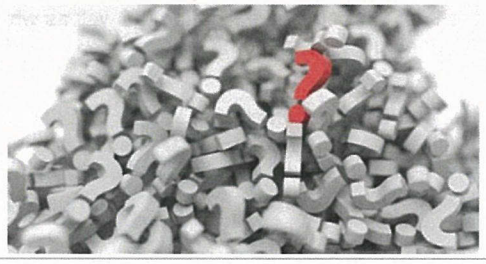
WITNESS INTERVIEWS
PRACTICAL STEPS: WITNESS PREPARATION



- Determine whether to explain that the employee has the right to refuse to be interviewed by government investigators
- In any case, explain that the company requests that the employee submit to the interview and **truthfully answer questions**
- Request that the witness:
  - Does not speculate
  - Does not answer questions that were not asked
- Explain that witnesses can ask whether they are targets of government investigation

WITNESS INTERVIEWS
PRACTICAL STEPS: QUESTIONS ABOUT INDIVIDUAL COUNSEL

- "Do I need a lawyer?" or "I want my lawyer present"
- Consider recommending retention of individual counsel where appropriate; **do not advise constituents against retention of individual counsel**
- Do not say anything that could be construed as an attempt to obstruct justice or to preclude constituents from consulting their own counsel
- Deal fairly and candidly with constituents
- **Document the questions and your answers**



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Ethical Issues in Reporting

FINAL SET OF FACTS FOR HYPOTHETICAL
THE GAME OF "OPERATION"

- Based upon the document review (and recovery), as well as the interviews, it appears that there were a number of substantial spills of hazardous materials, both on the ground, into the storm sewer, and into a nearby stream (indirectly from run-off). Some of these releases were above the regulatory reporting threshold, while others were not.
- In-house lawyer, Clue Less, is contacted by the Chairman of the Board and wants to know the latest from the investigation, as well as what corrective measures the company plans to implement.
- The CEO of Greezy hears about this Board inquiry and directs Lawyer Less to wait "for a while." Since the end of the year is approaching, the management wants to avoid any friction or do anything that would adversely impact potential bonuses.

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REPORTING
TO WHOM REPORT AND WHAT FORMAT?

- **To whom do you report?**
  - Client
  - Government agency
  - Auditor
- **Progress reports and final reports**
- **Format of the report**
  - Detailed written report
  - Executive summary
  - Powerpoint
  - Oral report
- **Substance of the report**
  - Facts only?
  - Conclusions based on facts?
  - Violations of company policy or relevant laws?
  - Recommendations?
- **Consider SEC disclosure obligations**



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REPORTING
COMMON ETHICAL ISSUES

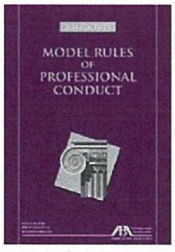


- Method of communication of investigative findings
- Lack of clarity as to authority for approval of responsive actions, especially disclosure decisions
- Dealing with auditors in the event of **troublesome investigative findings**
- Client refusal to address **serious problems** uncovered by investigation
- Jurisdictional differences pertaining to rules governing **required** reporting and **permissive** disclosure

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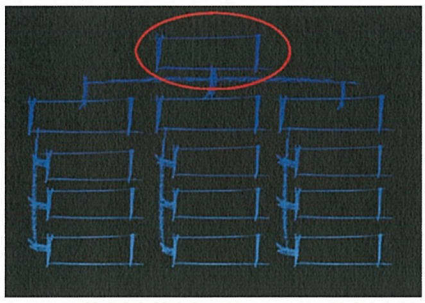
REPORTING
MODEL RULES OF PROFESSIONAL CONDUCT

- **Rule 1.4:** Communication
- **Rule 1.6:** Confidentiality of Information
- **Rule 1.13:** Organization as Client
- **Rule 2.1:** Advisor
- **SEC Standards of Professional Conduct for Attorneys, 17 C.F.R. § 205.3(b):** Duty to Report Evidence of a Material Violation (where applicable)



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REPORTING
PRACTICAL STEPS TO RESOLVE ETHICAL ISSUES

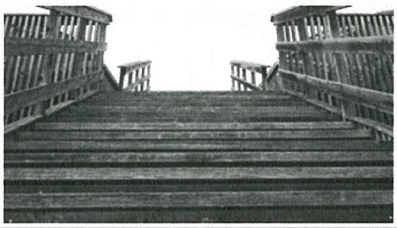


- Discuss method of communication of investigative findings at **outset** and **revisit decision** with client
- Counsel client on available options in addressing any problems uncovered as a result of investigative findings
- Seek **highest client authority** to approve significant actions/disclosures
- Consider necessity of **disclosure to auditors** and keep abreast of ongoing developments in this area

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REPORTING
PRACTICAL STEPS: CLIENT REFUSAL TO DISCLOSE

- **If client refuses to address serious problem:**
  - Advise client of counsel's reporting obligations
  - If necessary, **go up the ladder** to higher internal authority, including board or other ultimate decision maker
- **If client persists in refusing to address serious problem:**
  - Consider necessity of **withdrawing** from representation
  - Review applicable reporting obligations and permissive disclosure rules in jurisdiction
  - Seek ethics counsel prior to any external disclosure
  - Consider feasibility of advising client before **taking action**



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REPORTING
RISKS IF GOVERNMENT SUSPECTS UNDERREPORTING OR A POTENTIAL COVER-UP

- In March 2017, German officials **raided** the Munich office of Jones Day, the firm conducting an internal investigation of Volkswagen in the wake of the emissions scandal
- German officials suspected that
  - not all relevant documents had been turned over to prosecutors, and
  - the internal investigators may have been **seeking to protect certain executives**
- Foreign jurisdictions sometimes have different rules regarding attorney work product and attorney-client communication privilege



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WRAP-UP

- Any Questions?
- Thanks for your attention.

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