SECTION 3

ENVIRONMENTAL LAW

A. THE STATUTORY REGIME: AN OVERVIEW

Today, transit agencies are subject to a myriad of environmental laws and regulations.¹ Principally, these include environmental quality control measures under the National Environmental Policy Act of 1969,² Section 4(f) of the Department of Transportation Act,³ the Clean Air Act,⁴ the Federal Water Pollution Control Act (commonly referred to as the "Clean Water Act"),⁵ the Resource Conservation and Recovery Act,⁶ and the Comprehensive Environmental Response, Compensation, and Liability Act.⁷ Additional requirements are imposed on contractors using federal transit funds.⁸

³ 49 U.S.C. § 303 (2000) (Section 4(f) of the DOT Act). Protections for a park, recreation area, or wildlife or waterfowl refuge of national, state, or local significance or any land from a historic site of national, state, or local significance used in a transit project is required by 49 U.S.C. § 303 (2000).

 4 Clean Air Act, 42 U.S.C. \$ 7401 $et\ seq.$ (2000) and scattered sections of 29 U.S.C (2000).

 5 Federal Water Pollution Control Act, 33 U.S.C. §§ 1251 et seq. (2000).

 $^{\rm 6}$ Solid Waste Disposal Act, 42 U.S.C. §§ 6901 et seq. (2000).

⁷ Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. §§ 9601 *et seq.* (2000). Additional requirements include Executive Order No. 11514, 35 F.R. 4247 (Mar. 7, 1970) as amended, "Protection and Enhancement of Environmental Quality," 42 U.S.C. § 4321 note; 49 U.S.C. § 5324(b); Council on Environmental Quality Regulations, 40 C.F.R. pt. 1500 *et seq.*; joint FHWA/FTA regulations, "Environmental Impact and Related Procedures," 23 C.F.R. pt. 771 and 49 C.F.R. pt. 622. Executive Order No. 11738, "Administration of the Clean Air Act and the Federal Water Pollution Control Act with Respect to Federal Contracts, Grants, or Loans," 42 U.S.C. § 7606 note. Recipients of FTA funds are required to comply with the following:

1. Institution of environmental quality control measures under the National Environmental Policy Act of 1969, as amended, 42 U.S.C. 4321 *et seq.* and Executive Order No. 11514, as amended, 42 U.S.C. 4321 note;

2. Notification of violating facilities pursuant to Executive Order No. 11738, 42 U.S.C. 7606 note;

3. Protection of wetlands pursuant to Executive Order No. 11990, 42 U.S.C. 4321 note;

4. Evaluation of flood hazards in floodplains in accordance with Executive Order 11988, 42 U.S.C. 4321 note;

5. Assurance of project consistency with the approved State management program developed pursuant to the requirements of the Coastal Zone Management Act of 1972, as amended, 16 U.S.C. 1451 *et seq.*;

6. Conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended, 42 U.S.C. 7401 *et seq.*;

Environmental law is highly regulatory in nature, and therefore includes more acronyms than most. To assist the reader, a list of the principal acronyms used in this Section follows:

AAQS-ambient air quality standards

CERCLA—Comprehensive Environmental Response, Compensation, and Liability Act

CEQ-Council on Environmental Quality

CMAQ—Congestion Mitigation and Air Quality Improvement

CMS-congestion management system

DFP—Dredge or Fill Program

DOJ—Department of Justice

DOT-Department of Transportation

EA-environmental assessment

EIS—environmental impact statement

EPA—Environmental Protection Agency

ESA—Endangered Species Act of 1973

FIP-federal implementation plan

FERC—Federal Energy Regulatory Commission

FHWA—Federal Highway Administration

FONSI-finding of no significant impact

FTA—Federal Transit Administration

HOV—high-occupancy vehicle

HRS—Hazard Ranking System

HWM—Hazardous Waste Management Program

ISTEA—Intermodal Surface Transportation Efficiency Act

MPO—Metropolitan Planning Organization

NAAQS—National Ambient Air Quality Standards

NCP-National Consistency Plan

NEPA-National Environmental Policy Act of 1969

NHRP-National Hazardous Response Plan

NPDES—National Pollutant Discharge Elimination System

PCB—polychlorinated biphenyl

PSD-prevention of significant deterioration

RI/FS—Remedial Investigation and Feasibility Study

RCRA—Resource Conservation and Recovery Act of 1976

ROD—Record of Decision

7. Protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended, 42 U.S.C. 300h *et seq.*; and

8. Protection of Endangered Species Act of 1973, as amended, 16 U.S.C. 1531 *et seq*.

⁸ Third Party Contracts, and Subgrants exceeding \$100,000, must have provision requiring compliance with the following acts and have requirements to report the use of facilities considered to be placed on EPA's "List of Violating Facilities," must refrain from using violating facilities, report violations to FTA and the Regional EPA Office, and comply with the inspection and other requirements of:

1. Section 114 of the Clean Air Act, as amended, 42 U.S.C. § 7414 (2000); and

2. Section 308 of the Federal Water Pollution Control Act, as amended, 33 U.S.C. § 1318 (2000).

¹ Executive Order No. 11738, 38 F.R. 25161 (Sept. 10, 1973), "Administration of the Clean Air Act and the Federal Water Pollution Control Act with Respect to Federal Contracts, Grants, or Loans," 42 U.S.C. § 7606 note.

² National Environmental Policy Act, 42 U.S.C. §§ 4321 *et seq.* (2000).

NPL—National Priorities List

NRC-National Response Center

PRP-potentially responsible party

SARA—Superfund Amendments and Reauthorization Act

SHPO—State Historic Preservation Officer

SIP-state implementation plan

SOV—single-occupancy vehicle

STP—Surface Transportation Program

STIP-state transportation improvement program

TEA-21—Transportation Equity Act for the 21st Century

TIP—Transportation Improvement Program

TCM—transportation control measure

TSCA—Toxic Substances Control Act

TSD-treatment, storage, and disposal facilities

UAO-the Unilateral Administrative Order

UIC-Underground Injection Control Program

Environmental law is sometimes best understood in factual context. Also, to assist the reader, two case studies in the areas of transportation impacts on air and surface pollution are presented below—metropolitan Atanta's failure to comply with air quality obligations, and ground contamination at Paoli Rail Yards.

B. The National Environmental Policy Act (NEPA)

Comprehensive federal environmental regulation began with the National Environmental Policy Act of 1969 (NEPA)⁹ (signed into law on January 1, 1970), which required that an environmental assessment (EA)¹⁰ or an environmental impact statement (EIS)¹¹ be prepared, the latter for any "major federal action significantly affecting the quality of the human environment."¹² The EA determines whether potential impacts are significant, explores alternatives and mitigation measures, and provides essential information as to whether an EIS must be prepared. The EA focuses attention on potential mitigation measures during the planning process, at a time when they can be incorporated without significant disruption and at lower cost.¹³ If the agency concludes that there are no significant adverse environmental impacts, or that with appropriate prevention or mitigation efforts they will be minimized, it issues a "finding of no significant impact" (FONSI).14 If, however, the agency concludes the impacts are significant,

14 23 C.F.R. § 771.131 (1999).

it prepares an EIS.¹⁵ The EIS must include an assessment of the environmental impacts, evaluate reasonable alternatives, and suggest appropriate mitigation measures.¹⁶ The environmental impacts must be recognized, summarized, and where appropriate, monitored.¹⁷ The EIS must review such issues as the impact of the project on noise, air quality, water quality, endangered species, wetlands, and flood plains. It must also be prepared with the required engineering design studies necessary to complete the document.¹⁸

¹⁶ 42 U.S.C. § 4332(c) (2000). The environmental effects of proposed transit projects must be documented and environmental protection must be considered before a decision can be made to proceed with a project. 42 U.S.C. 4321. Where adverse environmental effects are likely to result, alternatives must be considered to avoid those effects. If there is no feasible and prudent alternative, all reasonable steps must be taken to minimize those effects. 49 U.S.C. § 5324(b)(3)(iii), 23 C.F.R. pt. 771, Environmental Impact & Related Procedures, 49 U.S.C. § 5324(b), Economic, Social, and Environmental Interests (formerly § 14 of the Federal Transit Act). Mitigation of Adverse Environmental Effects—49 U.S.C. § 5324(b) (2000), 23 C.F.R. pt. 771, 49 C.F.R. pt. 622 (1999). However, the U.S. Supreme Court has held that

NEPA does not impose a substantive duty on agencies to mitigate adverse environmental effects or to include in each EIS a fully developed mitigation plan.... [I]t is well settled that NEPA itself does not impose substantive duties mandating particular results, but simply prescribes the necessary process for preventing uninformed—rather than unwise—agency action.... [I]t would be inconsistent with NEPA's reliance on procedural mechanisms—as opposed to substantive, result-based standards—to demand the presence of a fully developed mitigation plan before the agency can act.

Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 333 108 S. Ct. 1835, 104 L. Ed. 2d 351(1989).

¹⁷ FHWA/FTA regulations state "Management and Monitoring Systems," 23 C.F.R. pt. 500 (1999) and 49 C.F.R. pt. 614 (1999). RICHARD CHRISTOPHER & MARGARET HINES, ENFORCEMENT OF ENVIRONMENTAL MITIGATION COMMITMENTS IN TRANSPORTATION PROJECTS: A SURVEY OF FEDERAL AND STATE PRACTICE (National Cooperative Highway Research Program Legal Research Digest 3, 1999).

¹⁸ See, e.g., 64 Fed. Reg. 72139 (Dec. 23, 1999).

⁹ 49 U.S.C. § 4331 et seq.

¹⁰ See, e.g., 66 Fed. Reg. 37721 (July 19, 2001) for an example of how this arises in the transit context.

¹¹ See, e.g., 67 Fed. Reg. 10796 (Mar. 8, 2002).

¹² The EIS must include an assessment of the environmental impacts, evaluate reasonable alternatives, and suggest appropriate mitigation measures. 49 U.S.C. § 4332(c) (2000). It must review such issues as the impact of the project on noise, air quality, water quality, endangered species, wetlands, and flood plains. However, the thrust of the statute is process and not substantive regulation. *See* Stryckers Bay Neighborhood Council, Inc. v. Karlen, 444 U.S. 223, 227, 100 S. Ct. 497, 62 2 Ed. 2d 433 (1980). Joint FHWA/FTA regulations, "Environmental Impact and Related Procedures," 23 C.F.R. pt. 771 and 49 C.F.R. pt. 622 (1999).

 $^{^{\}mbox{\tiny 13}}$ 23 C.F.R. § 771.119(b) (1999).

 $^{^{\}scriptscriptstyle 15}$ 23 C.F.R. pt. 1420 (1999); 23 C.F.R. §§ 771.115, 771.125 (1999); 40 C.F.R. § 1508.27 (1999). See also 65 Fed. Reg. 33922 (May 25, 2000).



The thrust of the statute is process; there is no mandatory obligation to implement mitigation measures, even if they are feasible.¹⁹ However, the FHWA/FTA policy is that "measures necessary to mitigate adverse impacts be incorporated" into the project.²⁰ Mitigation is also important to gain public acceptance for building transit facilities. Moreover, as noted below (in § 3.030), Congress has explicitly mandated measures for protection of public parks, recreation areas, wildlife and waterfowl refuge, and historical sites.²¹ NEPA²² was among the first major environmental laws passed by Congress. In order to ensure that ap-

 $^{^{\}rm 19}$ See Strycker's Bay Neighborhood Council, Inc. v. Karlen, 444 U.S. 223, 227, 100 S. Ct. 498, 62 L. Ed 2d 433 (1980).

²⁰ 23 C.F.R. § 771.105(d) (1999).

²¹ 49 U.S.C. § 303 (2000); 23 C.F.R. § 771.135 (1999).

²² National Environmental Policy Act of 1969, codified at 42 U.S.C. §§ 4321–4370(e) (1994 & Supp. 2000); NEPA implementing regulations are at 40 C.F.R. § 1500.1 *et seq.* (2000). DOT regulations implementing NEPA are at 23 C.F.R. §§ 771.101 *et seq.* (2000) and 49 C.F.R. §§ 520.1 *et seq.* (2000).

As of this writing, the DOT is considering updating and revising its NEPA implementing regulations for projects funded or approved by the FHWA and the FTA. The current regulation was issued in 1987 and experience since that time, as well as changes in the legislation, most recently TEA-21 (Pub. L. 105-178, 112 Stat. 107), calls for an updated approach to the implementation of NEPA for FHWA and FTA projects and actions. Under the proposed rulemaking, the FHWA/FTA regula-

propriate consideration is given to the environmental impacts of major federal actions, NEPA mandates that all federal agencies (including the Department of Transportation) comply with certain procedures before taking actions that will affect the environment.²³ NEPA was enacted to

declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation....²⁴

Federal transportation projects must comply with NEPA requirements to receive federal transportation funds. NEPA review is the process by which federal transportation agencies consider the potential environmental effects of proposed transportation projects. Through the NEPA process, the FHWA and the FTA evaluate a transportation project's compliance with the many single-purpose federal environmental statutes, such as the Clean Water Act, the Endangered Species Act, and the National Historic Preservation Act. This 'one-stop' review process is part of the Department of Transportation's attempts to streamline environmental review.

NEPA has three main sections. The first sets forth a series of goals and establishes the policy of the Federal Government, "to use all practicable means and measures...to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans."²⁵

The second section of NEPA requires all federal agencies to prepare a detailed statement, commonly known as an EIS, for any proposed major federal action significantly affecting the quality of the human environment.²⁶ The EIS provides a thorough evaluation of potential environmental effects of a proposed project.²⁷ The EIS requirement allows the federal agencies to gather information on potential environmental impacts in a single document. The EIS constitutes a discussion of all relative environmental impacts of a proposed project,

tion for implementing NEPA would be revised to further emphasize using the NEPA process to facilitate effective and timely decision-making. *See* Proposed Rules, Department of Transportation, 65 Fed. Reg. 33960 (2000).

²³ See Associations Working for Aurora's Residential Env't v. Colo. Dep't of Transp., 153 F.3d 1122, 1126 (10th Cir. 1998).

 $^{\rm 24}$ 42 U.S.C. § 4321 (1994 & Supp. 2000).

 $^{\rm 25}$ 42 U.S.C. § 4331(a) (1994 & Supp. 2000).

²⁶ 42 U.S.C. § 4332 (1994 & Supp. 2000).

²⁷ Under NEPA regulations, "effects" includes both direct and indirect effects, including growth inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate, and related effects on air and water and other natural systems, including ecosystems. Effects include ecological, aesthetic, historic, cultural, economic, social, or health ones and may include beneficial and detrimental effects. 40 C.F.R. § 1508.8 (2000). which shows that the agency has given all pertinent environmental matters a "hard look" and has made a "good faith, objective, and reasonable presentation of the subject areas mandated by NEPA."²⁸

The EIS includes consideration of (i) the environmental impact of the proposed action, (ii) any adverse environmental affects that cannot be avoided should the proposal be implemented, (iii) alternatives to the proposed action (including a "no action" alternative),²⁹ (iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and (v) any irreversible and irretrievable commitments of resources that could be involved in the proposed action should it be implemented.³⁰

An EIS is only required when there is "major federal action" expected to have a significant effect on the environment. If it is not clear that a proposed project will have a significant effect, a less comprehensive environmental analysis known as an EA may be prepared.³¹ An EA can either provide a basis for a FONSI or it may lead to the conclusion that the project will have a significant effect on the environment, in which case an EIS needs to be prepared before the project goes forward.³²

The Council on Environmental Quality (CEQ) regulations that govern the preparation of EIS's require consideration and disclosure of "appropriate mitigation measures" and "means to mitigate the adverse environmental impacts."³³ In transportation projects, five methods may be used to avoid, reduce, or compensate

²⁹ A "no-action" Alternative typically serves as a baseline for environmental analysis, and includes the existing transit and highway infrastructure and all projects contained in the region's TIP. See 49 Fed. Reg. 72140 (Dec. 23, 1999). Though NEPA does not require consideration of any specific alternative other than "no action," the FHWA/FTA calls for evaluation of "alternative courses of action ... in the best overall public interest based upon a balanced consideration of the need for safe and efficient transportation...." 23 C.F.R. § 771.105(b) (1999). As a practical matter, FHWA and FTA carry out this rule by calling for a reasonable range of alternatives in NEPA documents with respect to both mode (e.g., highway or transit), and alignment. Moreover, insofar as major capital investment ("new starts") projects in the FTA capital program, the FTA new starts rule requires an examination of a "baseline alternative" in the NEPA document. A "baseline alternative" is one that features "transit improvements lower in cost than the new start [project] which results in a better ratio of measures of transit mobility compared to cost than the no build alternative." 49 C.F.R. §§ 611.5, 611.7 (2000). The "new starts" process is described in greater detail in Section 4.

³⁰ 42 U.S.C. § 4332(c) (1994 & Supp. 2000).

³¹ 40 C.F.R. § 1508.9 (2000); 23 C.F.R. § 771.119 (2000).

 $^{\rm 32}$ 23 C.F.R. § 771.119(a) (2000).

³³ 40 C.F.R. §§ 1502.14(f) and 1502.16(h) (1999). Specific mitigation findings are also required under Section 4(f) of the Department of Transportation Act, 49 U.S.C. § 303 (2000), and the Clean Air Act, 42 U.S.C. § 7410 (2000).

²⁸ See Environmental Defense Fund, Inc. v. Andrus, 619 F.2d 1368, 1375 (10th Cir. 1980), quoting from Manygoats v. Kleppe, 558 F.2d 556, 560 (10th Cir. 1977).

for the adverse environmental effects for the location, construction, or operation of transit facilities: (1) location modification; (2) design modification; (3) construction measures; (4) right-of-way measures; and (5) replacement land.³⁴

The third section of NEPA establishes a central agency, the CEQ, to coordinate agencies' compliance with NEPA.³⁵ The CEQ has developed guidelines to aid federal agencies in implementing NEPA.³⁶ The guidelines detail many of the steps in the NEPA process, including identifying when and how to prepare an EIS and describing the method of receiving comments on an EIS, as well as defining many of the terms used in NEPA. The CEQ guidelines also direct agencies to adopt specific guidelines for implementation of NEPA. The CEQ also assists the President of the United States in preparing an annual Environmental Quality Report,³⁷ gathering information on trends in environmental quality,38 and developing and recommending to the President national policies to foster and promote the improvement of environmental quality.³⁹

The DOT has developed regulations for implementing NEPA for highway and mass transit projects.⁴⁰ These regulations only apply to actions where the federal agency exercises sufficient control to condition the permit or project approval. Actions that do not require federal approval are not subject to these regulations. The regulations establish as the policy of the transportation agencies that:

(a) To the fullest extent possible, all environmental investigations, reviews, and consultations be coordinated as a single process, and compliance with all applicable environmental requirements be reflected in the environmental document required by [the] regulation; (b) Alternative courses of action be evaluated and decisions be made in the best overall public interest...; (c) Public involvement and a systematic interdisciplinary approach be essential parts of the development process for proposed action; [and] (d) measures necessary to mitigate adverse impacts be incorporated into the action....⁴¹

The regulations establish three classes of actions, which prescribe the level of documentation required in the NEPA process.⁴² Class I actions are those projects that significantly affect the environment, and thus require the preparation of an EIS.⁴³ The EIS is the "detailed statement" used to analyze environmental impacts and all reasonable alternatives and to evaluate measures necessary to mitigate adverse impacts where they are likely to result from the proposed action.⁴⁴ Examples of actions that normally require an EIS are:

(1) A new controlled access freeway, (2) A highway project of four or more lanes on a new location, (3) New construction or extension of fixed rail transit facilities...[and] (4) New construction or extension of a separate roadway for buses or high occupancy vehicles not located within an existing highway facility.⁴⁵

An EIS is only required when a "major federal action" significantly affects the quality of the human environment. The CEQ regulations define "major federal action" as "actions with effects that may be major and which are potentially subject to Federal control and responsibility," but really provide little guidance as to what constitutes a "major federal action."⁴⁶

The courts have been more helpful in determining what is or is not a major federal action." In Macht v. Skinner, the U.S. Court of Appeals for the District of Columbia held that federal funding for preliminary engineering studies and EIS's for proposed extensions to a light rail project, which was completely state funded, did not constitute "major federal action" within the meaning of NEPA.⁴⁷ The court also held that the issuance of a wetlands permit by the Army Corps of Engineers did not "federalize" the project, subjecting it to the requirements of NEPA, where the Corps had discretion over only a negligible portion of the project.⁴⁸ That the state planned to request a federal UMTA grant to build the extensions did not constitute major federal action because "there is a wide gulf between what a state may want and what the federal government is willing to provide."49 Also, in Save Barton Creek Ass'n. v. Federal Highway Administration, the court explained that federal involvement requires the "ability to influence or control the outcome in material respects."⁵⁰ That the state structures a project so as to preserve its eligibility for future federal funding does not render its project a major federal action, and an EIS will not be required until there is a "proposal" for federal funding.⁵¹

When preparing an EIS, an agency must consider alternatives to the proposed transit project. However, the agency is not required to evaluate any alternatives it in good faith rejects as too remote or impractical, but need

- ⁴⁶ 40 C.F.R. § 1508.18 (2000).
- 47 Macht v. Skinner, 916 F.2d 13, 17 (D.C. Cir. 1990).

⁴⁹ *Id.* at 16 n.3, 22.

⁵⁰ 950 F.2d 1129, 1134 (5th Cir. 1992) (quoting from W. RODGERS, ENVIRONMENTAL LAW § 7.6, at 763 (1997)); see also Southwest Williamson County Community Ass'n v. Slater, 67 F. Supp. 2d 875, 884–86 (M.D. Tenn. 1999), where the court held that accepting federal funding for early transportation studies and complying with eligibility requirements for federal funding to maintain the possibility of receiving future funding did not convert a highway project into a major federal action.

⁵¹ *Id*. at 1135.

³⁴ CHRISTOPHER & HINES, *supra* note 17, at 3.

³⁵ 42 U.S.C. §§ 4341–4347 (1994 & Supp. 2000).

³⁶ 40 C.F.R. pts. 1500-1517 (1998).

³⁷ 42 U.S.C § 4344(1) (2000).

³⁸ *Id.* at § 4344(2).

³⁹ *Id.* at § 4344(4).

^{40 23} C.F.R. § 771.109(a)(1) (2000).

^{41 23} C.F.R. § 771.105 (2000).

^{42 23} C.F.R. § 771.115 (2000).

^{43 23} C.F.R. § 771.115(a) (2000).

 $^{^{\}rm 44}$ See 42 U.S.C. $\$ 4332(C) (1994 & Supp. 2000); 40 C.F.R. $\$ 1508.11 (2000).

 $^{^{\}scriptscriptstyle 45}$ 23 C.F.R. § 771.115 (2000).

⁴⁸ *Id.* at 18–19.

only evaluate alternatives that are feasible.52 A "no action" alternative must be considered in every EIS; but other than this, there are no specific alternatives that NEPA requires.⁵³ In Piedmont Heights Civic Club, Inc., v. Moreland, the court had to decide whether an agency must consider mass transit as an alternative to building a highway.⁵⁴ Piedmont Heights sought an injunction to halt projects to widen Interstate highways around Atlanta, Georgia, because the environmental analysis of the project did not consider the proposed Metropolitan Atlanta Rapid Transit Authority (MARTA) rail system as an alternative to highway expansion.⁵⁵ The court held that, where a mass transit system is already planned and approved, the highway agency need not consider mass transit as a formal alternative.⁵⁶ However, the agency should consider whether highway expansion is necessary in light of the existing mass transit system.⁵⁷

EIS's are prepared in two stages, a draft EIS and then a final EIS, and may be supplemented if conditions surrounding the proposed project change substantially.⁵⁸ Before preparing an EIS, the agency and the project sponsor conduct a scoping process, inviting appropriate federal, state, and local agencies to participate in the determination to be addressed in the EIS. A draft EIS is then prepared that encompasses the identified issues and evaluates all reasonable alternatives to the proposed project. The draft EIS is then circulated for at least 45 days for public comment and review.⁵⁹ After circulation of the draft EIS and consideration of comments received, a final EIS is prepared.⁶⁰ The final EIS discusses comments received and identifies the preferred alternative and evaluates all reasonable alternatives and Executive Orders.⁶¹ The final EIS should also document compliance with all applicable environmental laws.⁶² A final decision will be made no sooner than 30 days after publication of the final EIS in the Federal Register or 90 days after publication of a notice for the draft EIS, whichever is later.⁶³

A draft, final, or supplemental EIS may be supplemented at any time when it is determined that:

(1) Changes to the proposed action would result in significant environmental impacts that were not evaluated in the EIS; or (2) New information or circumstances relevant

⁵² 40 C.F.R. § 1502.14 (2000); *See also* Associations Working for Aurora's Residential Env't v. Colo. Dep't of Transp., 153 F.3d 1122, 1130 (10th Cir. 1998).

⁵⁴ 637 F.2d 430, 435–36 (5th Cir. 1981).

 55 Id.

⁵⁶ Id. at 436.

 57 Id.

⁵⁸ 40 C.F.R. § 1502.9 (2000).

⁵⁹ 23 C.F.R. § 771.123(i).

60 23 C.F.R. § 771.125(a)(1) (2000).

 $^{^{61}}Id.$

 62 Id.

63 23 C.F.R. § 771.127(a) (2000).

to the environmental concerns and bearings on the proposed action or its impacts would result in significant environmental impacts not evaluated in the EIS.⁶⁴

Class II actions are known as "categorical exclusions" (CE).⁶⁵ These are projects that do not individually or cumulatively have a significant environmental effect and are thus excluded from the requirement to prepare either an EA or EIS. The DOT regulations enumerate 20 CEs.⁶⁶ Additional actions that meet the criteria for a CE may be designated as CE's only after agency approval.⁶⁷

Class III actions are those in which the significance of the environmental impact is not clearly established.⁶⁸ Actions in this class require the preparation of an EA to determine whether the preparation of the more comprehensive EIS is required. If the agency determines at

⁶⁶ The following actions meet the criteria for CEs in the CEQ regulation...and normally do not require any further NEPA approvals by the Administration:

(1) Activities which do not involve or lead directly to construction, such as planning and technical studies; grants for training and research programs; research activities as defined in 23 U.S.C. 307; approval of a unified work program and any findings required in the planning process pursuant to 23 U.S.C. 134; approval of statewide programs under 23 C.F.R. part 630; approval of project concepts under 23 C.F.R. part 476; engineering to define the elements of a proposed action or alternatives so that social, economic, and environmental effects can be assessed: and Federal-aid system revisions which establish classes of highways on the Federal-aid highway system. (2) Approval of utility installations along or across a transportation facility. (3) Construction of bicycle and pedestrian lanes, paths, and facilities. (4) Activities included in the State's "highway safety plan" under 23 U S C § 402 (5) Transfer of Federal lands pursuant to 23 U.S.C. 317 when the subsequent action is not an FHWA action. (6) The installation of noise barriers or alteration to existing publicly owned buildings to provide for noise reduction. (7) Landscaping. (8) Installation of fencing, signs, pavement markings, small passenger shelters, traffic signals, and railroad warning devices where no substantial land acquisition or traffic disruption will occur. (9) Emergency repairs under 23 U.S.C. 125, (10) Acquisition of scenic easements, (11) Determination of payback under 23 C.F.R. part 480 for property previously acquired with Federal-aid participation. (12) Improvements to existing rest areas and truck weigh stations. (13) Ridesharing activities. (14) Bus and rail car rehabilitation. (15) Alterations to facilities or vehicles in order to make them accessible for elderly and handicapped persons. (16) Program administration, technical assistance activities, and operating assistance to transit authorities to continue existing service or increase service to meet routine changes in demand. (17) The purchase of vehicles by the applicant where the use of these vehicles can be accommodated by existing facilities or by new facilities which themselves are within a [categorical exclusion]. (18) Track and railhead maintenance and improvements when carried out within the existing right-of-way. (19) Purchase and installation of operating or maintenance equipment to be located within the transit facility and with no significant impacts off the site. (20) Promulgation of rules, regulations, and directives.

23 C.F.R. § 771.117(c) (2000).

 $^{\rm 67}$ 23 C.F.R. § 771.117(d) (2000).

⁶⁸ 23 C.F.R. § 771.115(c) (2000).

⁵³ 40 C.F.R. § 1502.14(d) (2000).

⁶⁴ 23 C.F.R. § 771.130(a) (2000); *See* 40 C.F.R. § 1502.9(c)(1) (2000); *see also* Airport Impact Relief, Inc. v. Wykle, 192 F.3d 197, 209–10 (1st Cir. 1999).

⁶⁵ See 23 C.F.R. § 771.115(b) (2000).

any time in the EA process that the action is likely to have a significant impact on the environment, the regulations direct that an EIS will be required.⁶⁹ If no significant impacts are identified, the administration will issue a revised EA and FONSI.⁷⁰ The FONSI will briefly present the reasons why an action will not have a significant impact on the human environment and for which preparation of an EIS therefore is not required.⁷¹

The Secretary of Transportation may only approve federal funding for projects that have adequately evaluated potential environmental effects.⁷² Thus, agency staff must review transcripts of hearings to ensure that all parties were given an opportunity to present their views and that the project application discusses the environmental impact and explores alternatives of the proposal. Before approving an application for financial assistance, the Secretary must make written findings that:

(i) an adequate opportunity to present views was given to all parties with a significant economic social or environmental interest; (ii) the preservation and enhancement of the environment, and the interest of the community in which a project is located, were considered; and (iii) no adverse environmental effect is likely to result from the project, or no feasible and prudent alternative to the effect exists and all reasonable steps have been taken to minimize the effect.⁷³

Agencies generally have a great deal of discretion to make decisions under NEPA. Courts will only overturn agency decisions in the most rare and extreme circumstances. In Township of Belleville v. Federal Transit Administration, citizens in Belleville, New Jersey, challenged the FTA's issuance of a FONSI for construction of a storage facility for light rail vehicles.⁷⁴ The Newark subway system was modernizing its light rail vehicles to comply with the Americans with Disabilities Act and needed a new facility to house the new vehicles and an extension of the subway line to reach it. The proposed action would be located in the municipalities of Belleville, Bloomfield, and Newark. An EA was prepared and a FONSI was subsequently issued for the project. While citizens of Bloomfield and Newark favored the project, a citizens group in Belleville filed suit arguing that the project would have substantial environmental impacts on the township, and that the FTA should have developed an EIS to evaluate these impacts.75 In its decision, the court recognized that the project would have impacts on the township, but that the FTA had analyzed the impacts through an EA, which concluded that the impacts were not significant enough to require an EIS, thus resulting in a FONSI.⁷⁶

"Although reasonable minds can disagree over the degree of 'significance' produced by the project, it would be an overreach for [a] Court to interject its own personal value system on the agencies charged with making the appropriate determinations."⁷⁷

Similarly, in *Council of Commuter Organizations v. Gorsuch*,⁷⁸ the Second Circuit upheld EPA's tardy approval of New York's undetailed transit improvement program, and the failure of New York to follow its transit improvement program's fare stabilization program. Some suits have also been filed to roll back transit fare increases on clean air grounds.⁷⁹ Injunctions have been sought against highway projects⁸⁰ and bridge construction.⁸¹ Citizen groups have objected to a variety of projects, including subways.⁸²

However, an agency may not divide a project into smaller parts, each with less significant impacts, in order to avoid compliance with NEPA.⁸³ A rule against 'segmentation' has been developed to ensure that interrelated projects, the overall effect of which is environmentally significant, not be fractionalized into smaller, less significant actions. In Taxpayers Watchdog, Inc. v. Stanley, a taxpayers' association sought to enjoin the FTA from disbursing federal funds for a construction of a 4-mile rail system in Los Angeles, claiming that the project had been improperly segmented.⁸⁴ An early proposal for the rail system had anticipated the construction of an 18-mile rail system, but plans for the more extensive system were set aside due to financial considerations. However, the agency decided to build the first 4 miles of the rail project, finding this would be preferable to not building a rail system at all. Certain taxpayers sought an injunction claiming that the 4-mile system was not an independent project but was part of the larger plan for a more extensive rail system and thus, the smaller system had been improperly segmented. The court articulated four factors that need to be considered when determining whether a project has been improperly segmented: whether the proposed segment (1) has logical termini, (2) has substantial independent utility, (3) does not foreclose the opportunity to consider alternatives, and (4) does not irretrievably commit fed-

⁸⁴ 819 F.2d 294, 297 (D.C. Cir. 1987).

^{69 23} C.F.R. § 771.119 (2000).

⁷⁰ Id. at § 771.121(a).

⁷¹ 40 C.F.R. § 1508.13 (2000); 23 C.F.R. § 771.121 (2000).

^{72 49} U.S.C.A. § 5324(b) (2000).

^{73 49} U.S.C. § 5324 (2000).

^{74 30} F. Supp. 2d 782 (D. N.J. 1998).

 $^{^{75}}$ *Id*.

 $^{^{^{76}}}Id.$ at 804.

⁷⁷ *Id.* at 804.

⁷⁸ 683 F.2d 648, 659 (2d Cir. 1982).

 $^{^{79}}$ See, e.g., Friends of the Earth v. Carey, 535 F.2d 165 (2d Cir. 1976).

⁸⁰ See, e.g., Southwest Williamson County Community Ass'n v. Slater, 67 F. Supp. 2d 875 (M.D. Tenn. 1999); Conservation Law Found. v. Federal Highway Admin., 827 F. Supp. 871 (D. R.I. 1993).

⁸¹ See, e.g., Citizens for Mass Transit, Inc. v. Adams, 492 F. Supp. 304 (E.D. La. 1980).

⁸² See, e.g., Phila. Council of Neighborhood Orgs. v. Coleman, 437 F. Supp. 1341 (E.D. Pa. 1977).

⁸³ The Clairton Sportsmen's Club v. Pa. Turnpike Comm'n, 882 F. Supp. 455, 470 (W.D. Pa. 1995); Town of Huntington v. Marsh, 859 F.2d 1134, 1140–43 (2d Cir. 1988).

eral funds for closely related projects.⁸⁵ After considering these factors, the court held that the project had not been improperly segmented and that the agency needed only to consider environmental impacts of the 4-mile rail system rather than potential impacts of the more extensive rail system that may be built in the future.⁸⁶

The federal agency (FHWA or FTA) and the applicant (state DOT or transit agency) manage preparation of the NEPA environmental review process.⁸⁷ MPOs have the primary responsibility for transportation planning, into which the NEPA process will be integrated.⁸⁸ MPOs are required to develop both a long-range transportation plan and a short-term TIP for metropolitan areas. The transportation plan is a 20-year plan, which identifies long- and short-term actions to be carried out by the MPO in the development of an efficient intermodal transportation system. The TIP is short-term, covering at least 3 years, which prioritizes projects to be carried out during the 3-year period. The TIP must be updated at least every 2 years. The NEPA process focuses on projects after they have been included in the transportation plan and TIP. The metropolitan and state transportation planning processes are discussed in greater detail in Section 2.

C. PUBLIC PARK AND RECREATION LANDS, WILDLIFE AND WATERFOWL REFUGES, AND HISTORICAL SITES

In response to the public's interest in preserving nature and history, Congress enacted Section 4(f) of the Department of Transportation Act.⁸⁹ Transportation projects that receive any form of federal approval or funding must comply with Section 4(f).⁹⁰ Section 4(f) requires that transportation plans and programs include measures to maintain or enhance public parks, recreation areas, wildlife and waterfowl refuges, and historical sites that will be crossed by transportation activities or facilities.⁹¹ However, the preservation goals

⁸⁸ MPOs have jurisdiction over transit and highway transportation projects, but not over airports, seaports, or interstate railroads. Environmental Defense Fund v. EPA, 82 F.3d 451, 461–62 (D.C. Cir. 1996).

⁸⁹ Barbara Miller, Department of Transportation's Section 4(f): Paving the Way Toward Preservation, 36 AM. U. L. REV. 633, 638–39 (1987).

⁹⁰ 49 U.S.C. § 303 (2000) (Section 4(f) of the DOT Act). Protections for a park, recreation area, or wildlife or waterfowl refuge of national, state, or local significance or any land from a historic site of national, state, or local significance used in a transit project is required by 49 U.S.C. § 303 (2000).

⁹¹ 49 U.S.C. § 303 (2000). Section 4(f) authorizes the use of land for a transportation project from a significant publiclyowned park, recreational area, wildlife or waterfowl refuge, or any significant historic site only when the Administration has determined (1) there is no feasible and prudent alternative to of Section 4(f) often conflict with the government's desire to build and maintain transportation infrastructure. 92

The trigger for Section 4(f) is when federally-funded projects "use" public or private historic sites or public parkland.⁹³ Once this threshold is met, the Secretary of Transportation may only approve transportation projects if certain conditions are met.⁹⁴ First, the Secretary must be satisfied that there is no prudent or feasible alternative to using that land. Second, the project must also include all possible planning to minimize harm to the land resulting from the use.⁹⁵ To determine whether an alternative site minimizes harm, the Secretary must balance and assess the harm to the historic site or park caused by each alternative and choose the least harmful alternative.⁹⁶

These requirements apply to the permanent use of land. Certain temporary uses do not fall within the ambit of 4(f), such as minor work not adverse to the statute's preservationist purposes. However, constructive uses trigger its requirements. A constructive use may occur when impacts due to proximity of the transportation project substantially impair the activities, features, or attributes of the protected resource.⁹⁷

such use, and (2) the project includes all possible planning to minimize harm to the property resulting from such use. *Id*.

⁹² See Miller, supra note 89, at 633.

⁹⁸ *Id.* at 639. The circuit courts have given "use" an expansive reading and held it to include land affected by "noise, pollution, visual intrusion, and increased traffic." *Id.* at 638.

94 49 U.S.C. § 303(c) (2000).

⁹⁵ Citizens to Preserve Overton Park v. Volpe, 401 U.S. 402, 411, 91 S. Ct. 814, 28 L. Ed. 2d 136 (1971); Adler v. Lewis, 675 F.2d 1085, 1093–94 (9th Cir. 1982). CHRISTOPHER & HINES, *supra* note 17, at 10–11.

 $^{\rm 96}$ Concerned Citizens Alliance, Inc. v. Slater, 176 F.3d 686, 694 (1999).

⁹⁷ Constructive use occurs when the transportation project does not incorporate land from a section 4(f) resource, but the project's proximity impacts are so severe that the protected activities, features, or attributes that qualify a resource for protection under section 4(f) are substantially impaired. Substantial impairment occurs only when the protected activities, features, or attributes of the resource are substantially diminished.

23 C.F.R. § 771.135(p)(2) (1999). A constructive use occurs when:

(i) The projected noise level increase attributable to the project substantially interferes with the use and enjoyment of a noise-sensitive facility of a resource protected by section 4(f)...;
(ii) The proximity of the proposed project substantially impairs esthetic features or attributes of a resource protected by section 4(f)...;

(iii) The project results in a restriction on access which substantially diminishes the utility of a significant publicly owned park, recreation area, or a historic site;

(iv) The vibration impact from operation of the project substantially impairs the use of a section 4(f) resource...; or

(v) The ecological intrusion of the project substantially diminishes the value of wildlife habitat in a wildlife or waterfowl refuge adjacent to the project....

23 C.F.R. § 771.135(p)(4) (1999). A constructive use does not occur when:

⁸⁵ Id. at 298–9.

⁸⁶ Id. at 300.

⁸⁷ 23 C.F.R. § 771.109(c) (1999).

Compliance with Section 4(f) can result in additional costs and time to transportation projects. However, it is a valuable means to achieve preservation and thoughtful consideration of transportation alternatives.⁹⁸

D. AIR QUALITY

1. Evolution of Federal Air Pollution Control

Statutes are sometimes like barnacles. Barnacles tend to grow on the legs of a pier within months after it is built. New barnacles eventually grow on top of the older, earlier layers, only partially covering them up. So it is with legislation, which tends to address a problem in an evolutionary, growing, and changing manner. This section provides a historical overview of federal air pollution legislation.

The Air Pollution Control Act of 1955 was an early attempt of the federal government to address the air pollution problem.⁹⁹ While recognizing that states have the primary responsibility for controlling air pollution, the Act gave the federal government responsibility for some research and technical assistance. The Act authorized the Secretary of Health, Education, and Welfare (HEW) to undertake research programs for air pollution control in an attempt to come to a better understanding of the causes and effects of air pollution. The Act also allowed the Surgeon General to investigate local pollution problems upon the request of any state or local government. The Clean Air Act of 1963 was the first federal regulatory program to control air pollution.¹⁰⁰ This Act expanded the research role of the federal government and authorized the Secretary of HEW to develop air quality criteria based on scientific studies. The Secretary was also authorized to convene conferences of government officials where interstate pollution threatened to endanger health or welfare. However, only a court order could lead to actual abatement and the issuance of a cease and desist order; thus the Act was not very effective in controlling air pollution.

In 1967, Congress introduced a more comprehensive scheme for controlling air pollution in the Air Quality Act.¹⁰¹ It required HEW to designate "air quality control regions." The statute also mandated that states adopt ambient air quality standards within the control regions and develop implementation plans, subject to HEW approval, to meet these standards. The program did not provide for any national air pollution control standards and the only enforcement mechanism remained the conference procedure introduced in the Clean Air Act of 1963. The Air Quality Act of 1967 required HEW to list air pollutants and publish air quality criteria for various regions. Under it, the EPA developed National Ambient Air Quality Standards (NAAQS) for six pollutants: CO, sulfur dioxide, NOx, ozone, PM10, and lead.¹⁰² But it left to individual states the requirement to establish specific emission goals by designating ambient air quality standards (AAQS).

In 1970, Congress enacted the first of what would be several major environmental bills, which would require transportation planning focused on arresting the problem of automobile air pollution.¹⁰³ Environmental issues became a strong focus of transportation planning. (To-day, in nonattainment areas, air quality issues have become among the dominant concerns of metropolitan transportation planning.) A long-term commitment of federal support to transit was also begun that year,¹⁰⁴

⁽i) Compliance with the requirements of section 106 of the National Historic Preservation Act and 36 C.F.R. part 800 for proximity impacts of the proposed action, on a site listed on or eligible for the National Register of Historic Places, results in an agreement of "no effect" or "no adverse effect";

⁽ii) The projected traffic noise levels of the proposed highway project do not exceed [applicable] noise abatement critieria...;(iii) The projected noise levels...when compared with the projected noise levels if the project is not built, is barely perceptible (3 dBA or less);

⁽iv)...[A] governmental agency's right-of-way acquisition, an applicant's adoption of project location, or the Administration approval of a final environmental document, established the location for a proposed transportation project before the designation, establishment, or change in the significance of the resource...; (v)...[T]he proposed transportation project and the resource are concurrently planned or developed...;

⁽vi) Overall (combined) proximity impacts caused by a proposed project do not substantially impair the activities, features, or attributes that qualify a resource for protection under section 4(f); (vii) Proximity impacts will be mitigated to a condition equivalent to, or better than, that which would occur under a no-build scenario;

⁽viii) Change in accessibility will not substantially diminish the utilization of the section 4(f) resource; or

⁽ix) Vibration levels from project construction activities are mitigated, through advance planning and monitoring of the activities, to levels that do not cause a substantial impairment of the section 4(f) resource.

²³ C.F.R. § 771.135(p)(5) (1999). See 56 Fed. Reg. 13269 (Apr. 1, 1991).

⁹⁸ Miller, *supra* note 89, at 633, 667.

⁹⁹ Air Pollution Control Act of 1955, 69 Pub. L. 84-159 Stat. 322 (1955).

¹⁰⁰ Clean Air Act of 1963, 42 U.S.C. §§ 1857–1857l (1964).

¹⁰¹ Air Quality Act of 1967, Pub. L. No. 90-148, 81 Stat. 485 (1967).

¹⁰² The Lead-Based Paint Poisoning Prevention Act, 42 U.S.C. §§ 4821 *et seq.* (2000), prohibits the use of lead-based paint in construction or rehabilitation of residence structures.

¹⁰³ Various regulations have been promulgated to deal with the problem. These include U.S. EPA regulations: "Control of Air Pollution from Mobile Services," 40 C.F.R. pt. 85; "Control of Emissions from New and In Use Highway Vehicles and Engines," "In-Use Motor Vehicle Engines: Certification and Test Procedures," 40 C.F.R. pt. 86; and "Fuel Economy of Motor Vehicles," 40 C.F.R. pt. 600. U.S. EPA regulations—"Control of Air Pollution from Mobile Services," 40 C.F.R. pt. 85.

¹⁰⁴ The Federal Transit Assistance Act was passed in 1970. Some might argue that the first long-term federal commitment to transit was the Urban Mass Transportation Act of 1964, while others might argue it didn't begin until promulgation of the National Mass Transportation Assistance Act of 1974, or UMTA's incorporation into the nascent DOT with the Department of Transportation Act of 1966. These statutes, and the

and subsequently expanded with both an increase in the federal share for transit construction as well as opening the Highway Trust Fund for transit, HOV lanes, bus shelters, and parking facilities.

In 1970, the federal government overhauled the air pollution control program that was in place and adopted major amendments to the 1963 Clean Air Act, in part to address the lack of TCMs in earlier legislation.¹⁰⁵ For the first time, Congress acknowledged that transportation was a major contributor to the air pollution problem that must be addressed in order to effectively control air pollution. The 1970 Clean Air Amendments required the states to: (1) develop an inspection and maintenance program for motor vehicles in affected Air Quality Control Regions; (2) develop a retrofit program applicable to several classes of older vehicles to minimize certain emissions; (3) designate and enforce preferential bus and carpool lanes; and (4) develop a program to monitor actual emissions as affected by the foregoing programs.¹⁰⁶ The failure of a state to meet these requirements led to the filing of a citizens' enforcement action in which the federal courts were asked to impose an injunction upon the DOT to refrain from approving any projects or awarding highway grants except for projects for purposes of safety, mass transit, or air quality improvement.¹⁰⁷ Citizen complaint litigation enforcing air quality laws has become more and more prevalent against federal, state, and local environmental and transportation agencies.¹⁰⁸

In the 1970 Amendments, the federal government developed national standards for regulating air pollution, thus replacing the state air quality standards mandated in the Air Quality Act. NAAQS's were promulgated by the EPA in an effort to restrict concentrations of six common air pollutants: sulphur dioxide, ozone, CO, lead, nitrogen dioxide, and PM10. The NAAQS's are numerical standards that specify the maximum permissible concentration of the pollutant in the ambient air. The states then were responsible for developing implementation plans that detailed how they intended to meet or attain the NAAQS's, including programs for periodic inspection and testing of motor vehicles.¹⁰⁹ The

 107 Delaware Valley Citizens' Council for Clean Air v. Pa., 755 F.2d 38, 41 106 S. Ct. 3088, 92 L. Ed. 2d 439 (3d Cir. 1985); Pa. v. Delaware Valley Citizens' Council for Clean Air, 478 U.S. 546, 551 (1986).

¹⁰⁸ See, e.g., Council of Commuter Orgs. v. Metropolitan Transp. Auth., 683 F.2d 663 (2d Cir. 1982).

¹⁰⁹ U.S. EPA regulations, "Conformity to State or Federal Implementation Plans of Transportation Plans, Programs, and Projects Developed, Funded or Approved Under Title 23 U.S.C. or the Federal Transit Laws," 40 C.F.R. pt. 51, § 51.390 subpt. Amendments also strengthened enforcement and articulated deadlines by which NAAQS's were to be met in order for states to be in compliance with the Act.

When deadlines for meeting NAAQS's went unmet, Congress extended them and implemented new measures to reach attainment by passing the Clean Air Act Amendments of 1977.¹¹⁰ The 1977 Amendments introduced the conformity requirement mandating that federal agencies not support any activities, including transportation programs, that do not conform to an SIP. Conformity is a determination made by the MPO and DOT that the transportation plan and program in air quality nonattainment and maintenance areas meet the purpose of the SIP-reducing pollution emissions to meet the NAAQS.¹¹¹ The transportation plan and program must contribute to reducing motor vehicle emissions, and may not create new NAAQS violations, increase the frequency or severity of existing NAAQS violations, or delay attainment of NAAQS.¹¹² These amendments also introduced the prevention of significant deterioration (PSD) program, which prevents areas with air quality better than mandated by the NAAQS's from causing further deterioration to the air quality in the area until it reached the maximum allowed by the NAAQS's.

Further amendments were introduced in 1990 that were intended to correct deficiencies in earlier federal clean air legislation.¹¹³ The 1990 Amendments imposed new requirements for areas that were not in compliance with the NAAQS's.¹¹⁴ Six categories of "nonattainment"

¹¹⁰ Clean Air Act Amendments of 1977, Pub. L. No. 95-95, 91 Stat. 685 (1977).

¹¹¹ Conformity determinations must be made at least every 3 vears, or as changes are made to plans, TIPs, and projects, SIP revisions that establish or revise a transportation related budget or add or delete TCMs also require a new conformity determination. 40 C.F.R. pts. 51 and 93 (1999). U.S. DEP'T OF TRANSPORTATION, Α GUIDE то METROPOLITAN TRANSPORTATION PLANNING UNDER ISTEA - HOW THE PIECES FIT TOGETHER (1993). "Conformity to State or Federal Implementation Plans of Transportation Plans, Programs, and Projects Developed, Funded or Approved Under Title 23 U.S.C. or the Federal Transit Laws," 40 C.F.R. pt. 51, § 51.390 subpt. T (1999); and "Determining Conformity of Federal Actions to State or Federal Implementation Plans," 40 C.F.R. pt. 93 (1999).

¹¹² U.S. DEP'T OF TRANSP., *supra* note 111, at 24.

¹¹³ Clean Air Act Amendments of 1990, Pub. L. No. 101-549, 104 Stat. 2399 (1990) (codified as amended at 42 U.S.C. §§ 7401-7671q) (1995 & Supp. 2000).

¹¹⁴ The Clean Air Act Amendments of 1990 made air pollution policy an overriding factor in transportation policy. Inter-

historical development of transit in the United States, are discussed in Section 1.

¹⁰⁵ Clean Air Act Amendments of 1970, Pub. L. No. 91-604, 84 Stat. 1676 (1970).

¹⁰⁶ EPA v. Brown, 431 U.S. 99, 100-01, 975 S. Ct. 1635, 52 L. Ed. 2d 166 (1977); Delaware Valley Citizens' Council for Clean Air v. Pa., 755 F.2d 38, 40-2 (3d Cir. 1985).

T; "Determining Conformity of Federal Actions to State or Federal Implementation Plans," 40 C.F.R. pt. 93.

When setting NAAQS's, the EPA may not consider the costs of implementing air quality standards because there is no explicit authorization to do so in the Clean Air Act. Under the Act, the EPA is only required to set air quality standards at levels "requisite to protect public health." See Whitman v. American Trucking Assocs., 531 U.S. 457, 465, 121 S. Ct. 903, 149 L. Ed. 2d 1 (2001).

areas were introduced with additional control measures required for each classification and new compliance deadlines.¹¹⁵ The new amendments maintained the conformity requirement for transportation plans and also implemented more stringent federal emissions standards for new motor vehicles, with new controls on motor vehicle fuels.¹¹⁶

2. The Clean Air Act

The Clean Air Act¹¹⁷ was developed to "protect and enhance the quality of the Nation's air resource so as to promote the public health and welfare and the productive capacity of its population."¹¹⁸ With this purpose in mind, the Act requires the EPA to establish air quality

¹¹⁵ Supra note 139.

¹¹⁶ See Clean Fuels Formula Grant Program, 49 U.S.C. § 5308 (2000). The 1990 Amendments also required employers in areas experiencing serious air quality problems to encourage their employees to car pool during heavy traffic periods. Five years after this mandate, Congress repealed it due to pressure from states and disgruntled employers. See generally Craig N. Oren, Detail and Implementation: The Example of Employee Trip Reduction, 17 VA. ENVTL. L.J. 123 (1998); Craig N. Oren, How a Mandate Came From Hell: The Making of the Federal Employee Trip Reduction Program, 28 ENVTL. L. 267 (1998); Patricia A. Leonard, The Clean Air Act's Mandate of Employer Trip-Reduction Programs: Is This a Workable Solution to the Country's Air Pollution Problems, 49 U. MIAMI L. REV. 827 (1995).

¹¹⁷ 42 U.S.C. §§ 7401 et seq. (1995 & Supp. 2000).

¹¹⁸ 42 U.S.C. § 7401(b)(1) (1995 & Supp. 2000).

standards for pollutants that may reasonably be anticipated to endanger public health or welfare.¹¹⁹ Primary responsibility for attaining these standards was left to the states. States may adopt stricter standards than those required by the Act.¹²⁰ Each state must promulgate a SIP that details the measures, including TCMs, the state intends to implement in order to attain national air quality standards.¹²¹ TCMs are strategies designed to reduce pollution by limiting or controlling motor vehicle use. Public transportation improvement measures are strategies designed to improve or expand the transit system. Public transportation improvement indirectly reduces motor vehicle usage and its pollution externalities.¹²² To assist the states, the EPA is required to publish information on various TCMs that may be used to reduce motor vehicle pollution.¹²³ States need

¹²⁰ See Exxon Mobil Corp. v. United States EPA, 217 F.3d 1246, 1250–51, 1256 (2000), where the Ninth Circuit U.S. Court of Appeals held that states may set stricter standards for oxygen content standards for fuels than that which is required by the Clean Air Act. In this case, Nevada required gasoline sold in the wintertime have a minimum oxygen content of 3.5 percent, though the Clean Air Act only required a 2.7 percent minimum oxygen standard.

¹²¹ 42 U.S.C. § 7410 (1995 & Supp. 2000).

¹²² Council of Commuter Organizations v. Gorsuch, 683 F.2d 648, 652 n. 3 (2d Cir. 1982). An externality is a positive or negative impact upon a person not a party to the transaction. Environmental pollution is an example of a negative externality. Paul S. Dempsey, *Market Failure and Regulatory Failure as Catalysts for Political Change: The Choice Between Imperfect Regulation and Imperfect Competition*, 46 WASH. & LEE L. REV. 1, 17–21 (1989).

 $^{\scriptscriptstyle 123}$ The Administrator shall publish...information prepared...regarding the formulation and emission reduction potential of [TCMs] related to criteria pollutants and their precursors, including, but not limited to-(i) programs for improved public transit; (ii) restriction of certain roads or lanes to, or construction of such roads or lanes for use by, passenger buses or high occupancy vehicles; (iii) employer-based transportation management plans, including incentives; (iv) trip-reduction ordinances; (v) traffic flow improvement programs that achieve emission reductions; (vi) fringe and transportation corridor parking facilities serving multiple occupancy vehicle programs or transit service; (vii) programs to limit or restrict vehicle use in downtown areas or other areas of emission concentration particularly during periods of peak use; (viii) programs for the provision of all forms of high-occupancy, shared-ride services; (ix) programs to limit portions of road surfaces or certain sections of the metropolitan area to the use of non-motorized vehicles or pedestrian use, both as to time and place; (x) programs for secure bicycle storage facilities and other facilities, including bicycle lanes, for the convenience and protection of bicyclists, in both public and private areas; (xi) programs to control extended idling of vehicles; (xii) programs to reduce motor vehicle emissions, consistent with Title II, which are caused by extreme cold start conditions; (xiii) employer-sponsored programs to permit flexible work schedules; (xiv) programs and ordinances to facilitate non-automobile travel, provision and utilization of mass transit, and to generally reduce the need for single-occupant vehicle travel, as part of transportation planning and development efforts of a locality, including programs and ordinances applicable to new shopping centers, special events, and other centers of vehicle activity; (xv) programs for new construction and major reconstructions of paths, tracks or areas solely for the use by

modal Surface Transportation Efficiency Act of 1991, Conference Report, 102d Cong., House Rep. No. 404 (Nov. 27, 1991). It imposed stricter automobile emission standards, and required transportation plans be designed to achieve clean air goals. If a region is not in compliance, it is designated a "nonattainment area," and the state must adopt measures to bring it into compliance. The amendments encourage federal investment in alternatives that reduce automobile use, and mandate employer-based transportation programs in nonattainment areas to reduce commuting. Robert Yuhnke, The Amendments To Reform Transportation Planning in the Clean Air Act Amendments of 1990, 5 TUL. ENVTL. L.J. 239, 240 (1991). Each state must submit a State Implementation Plan to the EPA, which sets forth its program to achieve or maintain national air quality standards. A state that fails to meet such goals risks losing billions of dollars in federal funding. Section 176 of the Act provides that no federal financial assistance of any kind may be provided if a transportation program fails to achieve conformity with the state's plan to achieve federal air quality standards. "Conformity" means that a plan or project advances a SIP's purpose of expeditiously eliminating or reducing violations of NAAQS. Citizens for a Better Env't v. Deukmejian, Nos. C89-2044 TEH, C89-2064 TEH, 1991 WL 424981 at *1 1990 U.S. Dist Lexis 17976 (N.D. Cal. 1990). A "conforming project" must not cause or contribute to any new violation, increase the frequency or severity of any violation, or delay attainment. Environmental Defense Fund v. Browner, No. C92 1636 TEH, 1995 WL 91324 at *1994 U.S. Dist. Lexis 20914 (N.D. Cal 1994). Moreover, federal highway funds for any project can be withheld if the EPA deems it appropriate and reasonable.

¹¹⁹ 42 U.S.C. § 7408 (1995 & Supp. 2000).

not include all of the EPA's recommended TCMs in their SIP,¹²⁴ but can tailor the measures to those that may be reasonably available in their area.¹²⁵ These plans must be approved by the EPA for a state to fulfill its obligations under the Act and become enforceable.¹²⁶ If a state does not develop an adequate implementation plan, the EPA may be forced to develop a federal implementation plan (FIP)¹²⁷ for the state or employ sanctions such as withholding federal transportation funding from the state.¹²⁸

States are subdivided into air quality regions.¹²⁹ These regions are designated as "attainment," "nonattainment," or "unclassifiable" for particular pollutants.¹³⁰ When the EPA designates an area as nonattainment, the state must modify its implementation plan to include stricter pollution controls to bring the area into compliance with federal standards.¹³¹ States that fail to submit new SIPs or fail to implement approved plans within 18 months risk having sanctions placed on them, including having federal transportation funds withheld.¹³² The Clean Air Act prohibits the federal government from providing assistance to programs that do not conform to an approved implementation plan.¹³³ The 1977 Clean Air Act Amendments established the NAAQS. The combined impact of this legislation, as well as the 1990 Clean Air Act Amendments and the 1991 ISTEA, is that nonattainment can result

 $^{\scriptscriptstyle 124}$ Clean Air Act of 1955, Section 176(c), 42 U.S.C. §§ 7401 et seq.

 125 See Ober v. United States EPA, 84 F.3d 304, 308 (1996), which held, "that local circumstances vary to such a degree from city-to-city that it is inappropriate to presume that all [transportation control measures] are reasonably available in all areas." However, states must address the reasonableness of all control measures based on local circumstances and then either implement them or provide a justification for their rejection.

¹³¹ Id. at § 7502(b).

133 42 U.S.C. § 7506.

in ineligibility to receive federal matching funds for new transportation projects.¹³⁴

3. Transportation Planning for Clean Air

Transportation planning begins with development of statewide and metropolitan long-range plans, which must conform to the relevant state SIP.¹³⁵ The transportation sector is responsible for "mobile source" emissions as one component of the determination of an entire SIP—the other, larger component being the emissions budget for a state's "stationary sources." The SIPs need to include "reasonably available" TCMs, such as programs to improve public transportation and programs to promote ride-sharing or increased bicycle use.¹³⁶

In Trustees for Alaska v. Fink, the city of Anchorage was classified as a nonattainment area for CO, largely due to vehicle emissions.¹³⁷ Alaska revised its SIP, as required, and included in its revised plan a proposal for the expansion of the Anchorage bus system to alleviate vehicle traffic and reduce CO emission. A citizen's group brought suit against the city, claiming it violated their commitment to TCMs in the SIP when they failed to fund the bus expansion. The court held that the city did not violate its obligation because the city had made a conditional commitment to the bus expansion program contingent on the availability of funding, which is allowable under the Clean Air Act.¹³⁸ Though the city was eligible for state and federal grants, the bus expansion would still have an operating deficit of \$25 million and voters had rejected proposals to raise funding for the bus expansion, and the city's charter barred the city from raising taxes to cover operating costs.¹³⁹ Thus, due to the lack of funding, the bus expansion was not a "reasonably available" TCM.¹⁴⁰ Though Anchorage was under a continuing obligation to seek out funding for the expansion, the city did not violate Alaska's SIP as a result of its failure to locate funding.

As did Alaska, Arizona included TCMs in its original SIP submitted to the EPA. $^{\rm 141}$ In 1978, the EPA desig-

¹³⁶ See generally Philip Weinberg, *Public Transportation and Clean Air: Natural Allies*, 21 ENVTL. L. 1527 (1991) (discussing how public transportation should be used to achieve the goals of the CAA).

¹³⁷ 17 F.3d 1209, 1218 (9th Cir. 1994).

¹⁴⁰ *Id*. at 1211–12.

pedestrian or other non-motorized means of transportation when economically feasible and in the public interest. For purposes of this clause, the Administrator shall also consult with the Secretary of the Interior; and (xvi) program to encourage the voluntary removal from use and the marketplace of pre-1980 model year light duty vehicles and pre-1980 model light duty trucks.

⁴² U.S.C. § 7408(f)(l)(A) (1995 & Supp. 2000).

¹²⁶ 42 U.S.C. § 7410 (1995 & Supp. 2000).

 $^{^{127}}$ Id. at § 7410(c).

 $^{^{^{128}}{\}it Id.}$ at § 7506()().

¹²⁹ Id. at § 7407.

¹³⁰ Id. at § 7407(d).

¹³² For examples of the types of sanctions that may be imposed, *see* the case study of Atlanta's environmental problems in Section 3.E.5 below. *See also* Bayview Hunters Point Community Advocates v. Metropolitan Transp. Comm'n, 177 F. Supp. 2d 1011, 1033 (N.D. Cal. 2001), in which the court ordered the parties to negotiate appropriate remedies.

¹³⁴ Federal funds may not be programmed in transportation management areas classified as nonattainment for ozone or carbon monoxide pursuant to the Clean Air Act for any highway project that will result in a significant increase in carrying capacity for SOVs unless the project is part of an approved congestion management system. Intermodal Surface Transportation Efficiency Act of 1991, 23 U.S.C § 134() (2000). Conservation Law Found. v. Federal Highway Admin., 827 F. Supp. 871, 885 (D. R.I. 1993).

¹³⁵ 42 U.S.C. § 7410. 23 C.F.R. pt. 450 (1999).

¹³⁸ Id. at 1212.

¹³⁹ Id. at 1212–13.

¹⁴¹ McCarthy v. Thomas, 27 F.3d 1363, 1365 (9th Cir. 1994).

nated portions of Pima and Maricopa Counties in Arizona as nonattainment areas for CO.¹⁴² The following year, Arizona responded by submitting proposed revisions to the state's SIP for both counties to comply with CO NAAQS for the state.¹⁴³ The SIP proposed an expansion of the mass transit systems in Pima and Maricopa Counties, including significant additions to both counties' bus fleets.¹⁴⁴ These mass transit provisions became a subject of contention between the EPA, Arizona, and private citizens, and were not resolved until 1994 by the Ninth Circuit United States Court of Appeals.¹⁴⁵

In 1982, the EPA conditionally approved the CO attainment provisions of the SIP for Pima and Maricopa Counties.¹⁴⁶ By 1986, Arizona had yet to correct the CO attainment deficiencies in the SIP, and the EPA formally disapproved the CO attainment provisions for both Pima and Maricopa Counties.¹⁴⁷ In 1987 and 1988, Arizona once again submitted CO attainment proposals for Pima and Maricopa Counties. The EPA approved the new attainment measures in the SIP. Notably, there was no mention in the new proposals of the previously approved measures.¹⁴⁸

In *Delaney v. EPA*, the Court of Appeals for the Ninth Circuit reviewed the EPA's approval of the SIP for Maricopa and Pima Counties.¹⁴⁹ Residents of both counties petitioned the court to vacate the EPA's approval because the approved SIP did not comply with the attainment timing requirements of NAAQS under the CAA.¹⁵⁰ The court held for the petitioners and directed the EPA to vacate the 1988 SIP for the two counties and to implement a FIP to achieve attainment NAAQS for CO.¹⁵¹

¹⁴⁴ *Id.* In 1979, the Tucson bus fleet consisted of 59 buses. The 1979 SIP proposed expanding the fleet to 199 buses, which would increase the number of riders to 14.5 million annually by 1986. In Phoenix, the 1979 SIP proposed 400 buses by 1982, with almost 4 million riders annually. *Id.*

¹⁴⁵ See generally McCarthy v. Thomas, 27 F.3d 1363 (9th Cir. 1994); Delaney v. EPA, 898 F.2d 687 (9th Cir. 1990), and cert. denied sub nom. Reilly v. Delaney, 498 U.S. 998 (1990).

 $^{\rm 146}$ McCarthy v. Thomas, 27 F.3d at 1365. The approvals were conditional due to deficiencies in the SIP that were not related to the mass transit provisions.

 $^{\rm 147}$ Id. at 1366. The EPA approved other portions of the SIP and recognized that portions approved prior to 1986 would remain intact.

Subsequent to the *Delaney* decision, citizens of Pima and Maricopa Counties sought an injunction in the Arizona federal district court to require both counties to implement the mass transit provisions from the approved 1982 SIP.¹⁵² The issue was whether a conditionally approved provision of a state's SIP is later binding as part of the final SIP.¹⁵³ The district court held that the conditionally approved portions were not enforceable as part of the final SIP or FIP because they were never mentioned or referenced for incorporation into the final document.¹⁵⁴ Therefore, the court held that the mass transit provisions were not enforceable and the injunction was denied.

On appeal, the court reversed the district court's decision and remanded the case to allow the injunction requiring implementation of the 1982 mass transit provisions.¹⁵⁵ The court rejected the district court's conclusion that no conditionally approved provision of a SIP or FIP is enforceable until the final document is ultimately approved.¹⁵⁶ The court held that all approvals prior to the EPA's 1988 decision were incorporated into the transforming SIP as enforceable provisions because they were never deleted and were left intact in the EPA's subsequent approvals.¹⁵⁷

Both *McCarthy* and *Fink* were decided by the Court of Appeals for the Ninth Circuit. The outcomes reached by the court may have muddled the area of SIP compliance and TCMs, but there are distinctions between the cases that explain the divergent results.¹⁵⁸ In *McCarthy*, the court required Arizona to comply with its previously approved TCMs. Arizona stated that it did not timely implement the mass transit provisions partially because of the uncertainty created by the *Delaney* decision. Arizona—and specifically the cities of Tucson and Phoenix—argued that the *Delaney* decision discharged the state's prior obligations under its SIP for CO attainment. However, Arizona never asserted that the mass transit measures were economically unfeasible or

¹⁴² *Id.* Tucson is located in Pima County and Phoenix is located in Maricopa County.

 $^{^{^{143}}}Id.$

 $^{^{^{148}}}Id.$

¹⁴⁹ Delaney v. EPA, 898 F.2d 687, 689 (9th Cir. 1990); Frank W. Moskowitz, *The Clean Air Act: Post-1987 Attainment Deadlines for the Carbon Monoxide Ambient Air Quality Standards in Arizona's Maricopa and Prima Counties: Delaney v. EPA*, 898 F.2d 687 (9th Cir), Cert. Denied, 111 S. Ct. 556 (1990), 23 ARIZ. ST. L.J. 675 (1991) (discussing Delaney and the implementation of a FIP by the EPA subsequent to the decision).

¹⁵⁰ Delaney, 898 F.2d at 689.

¹⁵¹ *Id*. at 695.

¹⁵² See Assoc. Press, Pollution Agency May Lose Funds, ARIZONA REPUBLIC, Oct. 31, 1992, at B5 (describing the EPA's belief that Maricopa County was not making serious efforts to improve air quality); Kathleen Ingley, Air-cleanup Plan Ignores Mass Transit, ARIZONA REPUBLIC, Sept. 2, 1993, at A1 (discussing the lack of mass transit in Maricopa Valley and the difficulties with reaching EPA attainment levels); H. Josef Hebert, States Face Sanctions Over Lack of Smog-Reduction Plans, July 22, 1994, available in 1994 WL 10131797 (identifying Arizona as one of the nine states facing federal sanctions, including the loss of federal highway construction funds, due to the state's noncompliance with the CAA).

¹⁵³ McCarthy, *supra* note 172 at 1373.

 $^{^{154}}$ Id. at 1367.

¹⁵⁵ *Id.* at 1373.

¹⁵⁶ *Id.* at 1370.

 $^{^{157}}$ Id.

¹⁵⁸ See Geoffrey E. Bishop, Are Mandatory Transportation Control Measures Mandatory? A Look at Ninth Circuit Judicial Enforcement of TCMs, 37 SANTA CLARA L. REV. 731 (1997) (discussing the possible rationales for the contrary decisions by the Ninth Circuit in Alaska v. Fink and McCarthy v. EPA.

would cause the state economic hardship to enforce, as was the case in *Fink*. In *Fink*, the court found that Alaska made a good faith claim that the lack of funding for the bus expansion made compliance with the SIP in Anchorage impracticable. Economic unfeasibility, according to the Ninth Circuit, is a valid reason for noncompliance with previously approved TCMs in the state's SIP.¹⁵⁹

Yet another case in this litany is Bayview Hunters Point Community Advocates v. Metropolitan Transportation Commission,¹⁶⁰ which held that the San Francisco MPO violated the SIP by failing to achieve a 15 percent increase in transit ridership over 5 years as contemplated by a TCM set forth in a 1982 Bay Area Quality Plan, a part of the SIP. The court dismissed defendant's argument that the TCM only requires adoption of a target increase, and not implementation of that increase, as "disingenuous."¹⁶¹ Though the court was sympathetic to defendants' arguments that outside forces (e.g., changing work patterns or individual preferences in choosing to use transit or not), might prevent them from achieving the 15 percent ridership increase goal, it found that "States have an unwavering obligation to carry out federally mandated SIPs; thus where a SIP is violated, liability attaches, regardless of the reasons for the violation."¹⁶²

When areas of the state are designated as nonattainment for ozone, CO, or small PM10, the Clean Air Act requires that certain additional TCMs be taken in order for the area to be in compliance with the Clean Air Act.¹⁶³ When an area is designated nonattainment, the SIP must be revised to include additional control measures.¹⁶⁴ For example, the Act mandates strict motor vehicle inspection and maintenance programs in areas that are nonattainment. The Act also requires that nonattainment areas implement clean fuels programsone for reformulated gasoline to aid areas in reaching attainment goals for ozone and one for oxygenated gasoline to assist areas in reaching attainment for CO. Nonattainment areas are classified based on the level of degradation in the area, with each classification having different requirements that need to be fulfilled to reach

¹⁵⁹ On April 25, 2000, the EPA announced that Tucson was now an attainment area for the NAAQS for carbon monoxide. Pima Association of Governments, *EPA Declares Tucson in Compliance with Clean Air Act Standards* (last modified July 26, 2001), http://www.pagenet.org/AQ/PressReleases/ epaairstandards2000-04-25.html. compliance with the Act.¹⁶⁵ Nonattainment areas may be redesignated to attainment when certain clean air criteria are met.¹⁶⁶ Areas that are designated nonattainment cannot receive federal transportation funds.

A state that does not conform to the statutory requirements of the Clean Air Act risks losing federal support for transportation programs. The conformity provision of the Act mandates that no agent of the federal government may in any way engage in, support, provide financial assistance for, license or permit, or approve, any activity that does not conform to an implementation plan.¹⁶⁷ Conformity to an implementation plan means:

(A) conformity to an implementation plan's purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of such standards; and (B) that such activities will not—
(i) cause or contribute to any new violation of any standard in any area; (ii) increase the frequency or severity of any existing violation of any standard in any area; or (iii) delay timely attainment of any standard or any required interim emission reductions or other milestones in any area.

The determination of conformity shall be based on the most recent estimates of emissions, and such estimates shall be determined from the most recent population, employment, travel, and congestion estimates as determined by the MPO or other agency authorized to make such estimates.

All federally-funded projects must come from a currently conforming plan or program.¹⁶⁹ Projects not from a currently conforming plan must be considered to-

¹⁶⁶ See Southwestern Pa. Growth Alliance v. Browner, 121 F.3d 106, 110 (3d Cir. 1997), which listed five criteria, all of which must be met, in order for a state to be redesignated from nonattainment to attainment.

EPA Administrator "may not promulgate a redesignation...unless" the following five criteria are met: (i) the Administrator determines that the area has attained the national ambient air quality standard; (ii) the Administrator has fully approved the applicable implementation plan for the area...; (iii) the Administrator determines that the improvement in air quality is due to permanent and enforceable reductions in emissions resulting from implementation of the applicable implementation plan and applicable Federal air pollutant control regulations and other permanent enforceable reductions; (iv) the Administrator has fully approved a maintenance plan for the area...; and (v) the State containing such area has met all requirements applicable to the area....

¹⁶⁹ See Environmental Defense Fund v. EPA, 167 F.3d 641, 647 (D.C. Cir. 1999), where the court held that a project that at one time appeared in a conforming plan did not satisfy the statute's requirement, because the CAA requires a project come from a *currently* conforming plan to be eligible for federal funding.

¹⁶⁰ 177 F. Supp. 2d 1011 (N.D. Cal. 2001).

¹⁶¹ 177 F. Supp. 2d at 1027.

¹⁶² 177 F. Supp. 2d at 1027–28, quoting from *Citizens for a Better Env't v. Deukmejian*, 731 F. Supp. 1448, 1458 (N.D. Cal. 1990).

¹⁶³ See 42 U.S.C. § 7511a (1995 & Supp. 2000) for ozone nonattainment measures; 42 U.S.C. § 7512a (1995 & Supp. 2000) for carbon monoxide nonattainment measures; 42 U.S.C. § 7513 (1995 & Supp. 2000) for PM10.

 $^{^{\}rm 164}$ 42 U.S.C. § 7502 (1995 & Supp. 2000).

 $^{^{165}}$ 42 U.S.C. § 7511 (1995 & Supp. 2000) for ozone, which has five classifications of nonattainment: marginal, moderate, serious, severe, and extreme; 42 U.S.C. § 7512(a) (1995 & Supp. 2000) for carbon monoxide, which has two classifications for nonattainment: moderate and serious.

¹⁶⁷ 42 U.S.C. § 7506(c)(l) (1995 & Supp. 2000).

¹⁶⁸ Id. at § 7506(c)(l)(A).

4. Nonattainment and Conformity

ISTEA established the CMAQ and STP programs, which allocate funds to states for use by TCMs to help them implement their transportation/air quality plans and attain national standards for CO, ozone, and small PM10.¹⁷⁸ Both the MPO long-range plan and the TIP must conform to the state's plan to achieve conformity with air quality standards. Conformity requires that no program may be included in the state or MPO transportation program if it causes new violations of the air quality standards, exacerbates existing violations, or delays attainment of air quality standards.¹⁷⁹ In urbanized areas with more than 200,000 in population (known as transportation management areas, or

gether with other transportation plans and programs and it must be determined that the plan would not cause such plans and programs to exceed emissions reduction projections.¹⁷⁰ When Congress amended the Act in 1990, it allowed some ongoing projects to be "grandfathered" and continue despite not coming from a currently conforming plan.¹⁷¹ However, certain conditions needed to be met for a project to be grandfathered, and it is very unlikely any of today's projects would fulfill any of the conditions.¹⁷²

Conformity determinations are primarily made by MPOs before they approve a transportation plan and before the DOT can distribute funds. MPOs are regional agencies in areas with populations of greater than 50,000 and are responsible for developing regional transportation plans that allow for "continuing, cooperative, and comprehensive" development.¹⁷³ To be eligible for federal funds, MPOs must develop a long-range transportation plan and a short-range TIP. Transportation plans are 20-year plans that describe the long-term goals and policies of the MPO for improving air quality.¹⁷⁴ TIPs identify transportation projects to be developed in the region for which the MPO will provide federal funds.¹⁷⁵ TIPs must conform to the SIP and give priority to TCMs included in the SIP.

At this writing, and as discussed in detail in Section 4, the primary source for federal transportation funding is TEA-21,¹⁷⁶ successor to ISTEA.¹⁷⁷ Under TEA-21, TCMs may be funded through the CMAQ program or the STP. CMAQ is the largest of the two, providing \$8.1 billion to promote clean air through fiscal year 2003. The funds are allocated to projects that comply with a SIP, are included in the TIP, and are likely to contribute to the attainment of NAAQS.

TMAs), MPOs develop TIPs in cooperation with state

 $^{179} Id.$

¹⁷⁰ 42 U.S.C. § 7506(c)(2) (1995 & Supp. 2000).

¹⁷¹ See City of L.A. v. Federal Aviation Admin., 138 F.3d 806, 808–9 (9th Cir. 1998).

¹⁷² Projects were allowed to be grandfathered where (1) NEPA was completed as evidenced by a final EA, EIS, or FONSI that was prepared prior to January 31, 1994; or (2)(i) Prior to January 31, 1994, an environmental analysis was commenced or a contract was awarded to develop the specific environmental analysis; (ii) Sufficient environmental analysis is completed by March 15, 1994, so that the federal agency may determine that the federal action is in conformity with the specific requirements and the purposes of the applicable SIP pursuant to the agency's affirmative obligation under Section 176(c) of the CAA (Act); and (iii) A written determination of conformity under Section 176(c) of the Act has been made by the federal agency responsible for the federal action by March 15, 1994. 40 C.F.R. § 93.150(c) (2000).

¹⁷³ 49 U.S.C. § 5303()() (1995 & Supp. 2000).

^{174 23} C.F.R. § 450.214 (2000).

 $^{^{\}scriptscriptstyle 175}$ 23 C.F.R. § 450.324 (2000).

¹⁷⁶ TEA-21, Pub. L. No. 105-178, 112 Stat. 107 (1998).

¹⁷⁷ ISTEA, Pub. L. No. 102-240, 105 Stat. 1914 (1991).

¹⁷⁸ Id. The Intermodal Surface Transportation Efficiency Act of 1991 established a Congestion Mitigation and Air Quality Improvement (CMAQ) Program, which allocates funds to states for use for TCMs in helping them implement their transportation/air quality plans and attain national standards for carbon monoxide, ozone, and small PM10. Both the MPO long-range plan and the TIP must conform to the state's plan to achieve conformity with air quality standards. Conformity requires that no project may be included in the state or MPO transportation program if it causes new violations of the air quality standards, exacerbates existing violations, or delays attainment of air quality standards. In urbanized areas with more than 200,000 in population (known as transportation management areas, or TMAs), MPOs devise and guide projects in cooperation with state governments. Theodore Taub & Katherine Castor, ISTEA-Too Soon To Evaluate Its Impact, ALI-ABA Land Use Institute (Aug. 16, 1995). For federallyfunded transportation projects, MPOs within TMAs must develop a congestion management system (CMS), which requires consideration of "travel demand reduction and operational management strategies." 23 U.S.C. § 134(i)(3) (2000). With respect to TMAs classified as nonattainment areas for ozone or carbon monoxide pursuant to the CAA, federal funds may not be allocated to any highway project that will result in a significant increase in carrying capacity for single occupancy vehicles unless the project is part of an approved CMS. Clairton Sportsman's Club v. Pa. Turnpike Comm'n, 882 F. Supp. 455, 478 (W.D. Pa. 1995); U.S. FEDERAL HIGHWAY ADMINISTRATION: A SUMMARY: AIR QUALITY PROGRAMS AND PROVISIONS OF THE INTERMODAL SURFACE TRANSPORTATION EFFICIENCY ACT OF 1991, at 13 (1992). In nonattainment areas for transportationrelated pollutants, the MPO must coordinate the development of its long-range transportation plan with the process for development of transportation measures in the SIP required by the CAA. Intermodal Surface Transportation Efficiency Act of 1991, Conference Report, H.R. No. 404, 102d Cong. (Nov. 27, 1991). The DOT may prescribe abbreviated requirements for development of transportation plans and programs for urbanized areas not designated as TMAs, unless they are designated as nonattainment for ozone or carbon monoxide under the CAA. The DOT must certify the process in each TMA at least every 3 years. Intermodal Surface Transportation Efficiency Act of 1991, Conference Report, H.R. No. 404, 102d Cong. (Nov. 27, 1991). See generally Paul Dempsey, The Law of Intermodal Transportation: What It Was, What It Is, What It Should Be, 27 TRANSP. L.J. 367 (2000).

governments.¹⁸⁰ For federally-funded transportation projects, MPOs within TMAs must develop a congestion management system (CMS) that requires consideration of "travel demand reduction and operational management strategies."181 For TMAs classified as nonattainment areas for ozone or CO pursuant to the Clean Air Act, federal funds may not be allocated to any highway or transit project that will result in a significant increase in carrying capacity for single occupancy vehicles unless the project is part of an approved CMS.¹⁸² In nonattainment areas for transportation-related pollutants, the MPO must coordinate the development of its long-range transportation plan with the process for development of transportation measures in the SIP required by the Clean Air Act.¹⁸³ The DOT may approve a proposal for abbreviated requirements for development of transportation plans and programs for urbanized areas not designated as TMAs, unless they are designated as nonattainment for ozone or CO under the Clean Air Act. The DOT must certify the process in each TMA at least every 3 years.¹⁸⁴

An MPO has an affirmative responsibility to reject any project, program, or plan that does not conform to an approved implementation plan¹⁸⁵ and that is in a nonattainment area as defined in the Clean Air Act.¹⁸⁶ Conformity means that the purpose of eliminating or reducing the severity and number of violations of the NAAQS, and achieving expeditious attainment of such standards, is not compromised.¹⁸⁷ Specifically, it means that activities will not

(i) cause or contribute to any new violation of any standard in any area; (ii) increase the frequency or severity of any existing violation of any standard in any area; or (iii) delay timely attainment of any standard or any required interim emission reduction or other milestones in any area.¹⁸⁸

Conformity is determined by reviewing recent estimates of emissions. Those estimates are determined from recent population, employment, travel, and congestion estimates as determined by the MPO or other agency authorized to make such estimates.¹⁸⁹

An MPO may not adopt a TIP or other transportation plan until a final determination has been made that such plan meets this definition of conformity.¹⁹⁰ Addi-

¹⁸¹ 23 U.S.C. § 134(i)(3).

¹⁸² Clairton Sportsman's Club v. Pa. Turnpike Comm'n, 882 F. Supp. 455, 478 (W.D. Pa. 1995); U.S. FEDERAL HIGHWAY ADMINISTRATION, *supra* note 178.

¹⁸³ Intermodal Surface Transportation Efficiency Act of 1991, Conference Report, H.R. No. 404, 102d Cong. (Nov. 27, 1991).

 $^{^{184}}Id.$

¹⁸⁶ 42 U.S.C. § 7506(c)(5) (2000).

 $^{\rm 187}$ 42 U.S.C. § 7506(c)(1)(A) (2000).

¹⁸⁸ 42 U.S.C. § 7506(c)(1)(B) (2000).

¹⁹⁰ 42 U.S.C. §§ 7506(c)(1), (c)(2)(A) (2000).

tionally, emissions expected from implementation of a project, program, or plan must be consistent with estimates of emissions from motor vehicles and necessary emissions reductions contained in the applicable implementation plan.¹⁹¹ Further, an MPO may not adopt a TIP until it determines that the program provides for timely implementation of TCMs that are consistent with schedules in the applicable implementation plan.¹⁹²

An MPO may only adopt a transportation project if it meets the following criteria: (1) the project is from a conforming plan and program; (2) the design concept and scope of the project has not changed significantly since the conformity finding regarding the plan and program from which the project was derived; and (3) the design concept and scope of the project at the time of the conformity determination for the program was adequate to determine emissions.¹⁹³

Any project failing to meet the above criteria may still be treated as conforming if it is demonstrated that the projected project emissions will not cause accepted plans and programs under an approved implementation plan to exceed their assigned emission reduction projections and schedules.¹⁹⁴ In CO nonattainment areas, transportation projects may demonstrate conformity if the project eliminates or reduces the severity and number of such violations in the area substantially affected by the project.¹⁹⁵

When an implementation plan revision is pending approval, conformity of its plans, programs, and projects may be demonstrated by showing the following: (1) consistency with the most recent estimates of mobile source emissions; (2) provisions for the expeditious implementation of TCMs in the applicable implementation plan; and (3) a reduction in annual emissions in ozone and CO nonattainment areas.

Conformity determinations for transportation plans, TIPs, and projects are based on EPA transportation conformity regulations, and are summarized as follows:

TRANSPORTATION PLANS AND PROGRAMS

• The transportation plan and program must be fiscally constrained.

• The transportation plan and program must use the most recent estimates of mobile source emissions and latest planning assumptions.

• The transportation plan and program must provide for expeditious implementation of TCMs in the SIP.

• The transportation plans and programs of MPOs for areas designated as nonattainment and maintenance areas for ozone or CO must contribute to annual emissions reductions and/or meet emission budgets.

• The transportation plan and programs for MPOs for areas designated nonattainment or maintenance areas

- $^{\rm 192}$ 42 U.S.C. § 7506(c)(2)(B) (2000).
- ¹⁹³ 42 U.S.C. § 7506(c)(2)(C) (2000).
- ¹⁹⁴ 42 U.S.C. § 7506(c)(2)(D) (2000).
- ¹⁹⁵ 42 U.S.C. § 7506(c)(3)(B) (2000).

 $^{^{\}rm 180}$ ISTEA, Pub. L. No 105-178, 112 Stat. 107 (1998). Taub & Castor, supra note 178.

¹⁸⁵ 42 U.S.C. § 7506(c)(1) (2000).

¹⁸⁹ 42 U.S.C. § 7506(c)(1) (2000).

 $^{^{\}rm 191}$ 42 U.S.C. § 7506(c)(2)(A) (2000).

for PM10 and NOx must contribute to emission reductions or must not increase emissions.

TRANSPORTATION PROJECTS

• Transportation projects must come from the conforming transportation plan and TIP.

• The design concept and scope of the project that was in place at the time of the conformity finding must be maintained throughout implementation.

• Project design and scope must be sufficiently defined to determine emissions at the time of the conformity determination for the TIP.

• A project in CO nonattainment areas must show a reduction in the number and severity of CO violations in the area substantially affected by the project.¹⁹⁶

If the transportation plan, TIP, or project do not meet the conformity requirements, the transportation officials must either modify it to offset the emissions, or work with the state to modify the SIP to offset the plan, TIP, or project emissions. If neither can be accomplished, the plan, the TIP, or project may not move forward.¹⁹⁷ In other words, federally-funded projects may not proceed unless there is a currently conforming transportation plan and program at the time of project approval.¹⁹⁸ The projected emissions of a project, when considered with emissions projected from the applicable plan and program within the nonattainment area, must not cause such plan and program to exceed the emission reduction projections and schedules delineated in the SIP.¹⁹⁹

Citizen suits are permitted under the Clean Air Act.²⁰⁰ Commuter organizations have turned to the courts to force states to give transit a higher priority and enhanced financial support in the preparation of SIPs,²⁰¹ or to comply with their SIPs.²⁰² Clean air conformity

¹⁹⁷ Id. at 36.

¹⁹⁸ Environmental Defense Fund v. EPA, 167 F.3d 641, 647 (D.C. Cir. 1999),

²⁰⁰ 42 U.S.C. § 7604 (2000).

determinations have also been challenged.²⁰³ Some courts have ordered governmental institutions to take such TCMs as will bring their region into conformity with its environmental obligations, and often they do include enhanced transit support.²⁰⁴ For example, serious PM10 problems in Phoenix led the courts to force the government to adhere to its original plan and purchase more buses.²⁰⁵

5. Gridlock in Atlanta: A Case Study

Atlanta's environmental problems were the first of any major American metropolitan area to have triggered the loss of federal transportation funds under the Clean Air Act. It is for that reason that it is addressed here as a case study, as an example of how transportation planning can go awry, and how the state and local governmental institutions addressed the crisis.

Atlanta began to grow in the 1960s. Several of the nation's fastest growing counties have been suburban Atlanta counties. As it grew, Atlanta became regional headquarters of everything, and national headquarters to several of the Fortune 500 firms. As the metropolitan area grew in population, more and wider roads were laid, penetrating deep into north Georgia, which was transformed from rural countryside into the suburban megalopolis of Atlanta.

As in many states, the Georgia DOT was in reality a Georgia Highway Department. A beltway surrounding Atlanta was completed in the late 1960s, with development at the interchanges transforming I-285 from a transportation corridor into a destination point of shopping, manufacturing, and office facilities.²⁰⁶ Residents and businesses moved farther and farther from the central business district. Lax zoning allowed strip malls, gasoline stations, and fast food restaurants to be built along nearly every linear foot of the major transportation arteries.

Two million additional people were added to the Atlanta metropolitan region after 1970, spread across 21 counties.²⁰⁷ Sprawl, pollution, and congestion were the inevitable result. By the end of the 20th century, metropolitan residents were driving an average of 33 miles a day, surpassed by only Nashville, Birmingham, and Houston. Atlanta's drivers were delayed 53 hours by traffic annually, second only to Los Angeles's 56 hours. It was not uncommon for Atlanta's expressways to grind to 10 lanes of gridlock during rush hours.²⁰⁸ Geor-

²⁰³ See, e.g., Environmental Council of Sacramento v. Slater, 184 F. Supp. 2d 1016 (E.D. Cal. 2000).

²⁰⁵ See Ober v. Whitman, 243 F.3d 1190 (9th Cir. 1991); Ober v. EPA, 84 F.3d 304 (9th Cir. 1996).

²⁰⁶ Christine Kreyling, *Getting the Runaround*, PLANNING MAGAZINE, Nov. 2000, at 4, and primary source/statute.

²⁰⁷ Leon Eplan, *Atlanta Airs Its Options*, PLANNING MAGAZINE, Nov. 1999, at p. 14.

²⁰⁸ Lee Anderson, *Shutting Down Atlanta?*, CHATTANOOGA TIMES FREE PRESS, June 7, 2001, at B7.

¹⁹⁶ U.S. DEP'T OF TRANSP., A GUIDE TO METROPOLITAN TRANSPORTATION PLANNING UNDER ISTEA—HOW THE PIECES FIT TOGETHER at 35 (1993), available at http://ntl.bts.gov/docs/424mtp.html. If these criteria cannot be met, it must be demonstrated "that the project emissions, when considered with the emissions projected for the conforming transportation plan and TIP, do not cause the plans and programs to exceed the emissions budget in the SIP." *Id.* at 35.

¹⁹⁹ 42 U.S.C. § 7506(c)(2)(D) (2000).

²⁰¹ See, e.g., Council of Commuter Organizations v. Thomas, 799 F.2d 879 (2d Cir. 1986); Action for Rational Transit v. West Side Highway Project, 699 F.2d 614 (2d Cir. 1983); Action for Rational Transit v. West Side Highway Project, 536 F. Supp. 1225, 1232–33 (S.D. N.Y. 1982); Council of Commuter Organizations v. Metropolitan Transp. Auth., 683 F.2d 663 (2d Cir. 1982).

²⁰² See, e.g., American Lung Ass'n v. Kean, 670 F. Supp. 1285 (D. N.J. 1987); Coalition Against Columbus Center v. N.Y., 967 F.2d 764 (2d Cir. 1992).

²⁰⁴ See, e.g., Citizens for a Better Env't v. Deukmejian, 731 F. Supp. 1448 (N.D. Cal. 1990).

gians consumed 24 percent more gasoline than the national average, and this figure was growing at twice the national rate.²⁰⁹ Atlanta had the nation's sixth worst ozone pollution (created when tailpipe NOx and other VOCs absorb sunlight),²¹⁰ surpassed only by five Cali-fornia cities and Houston.²¹¹ The amount of NOx and VOCs in Atlanta's air weighed as much as six Boeing 747 aircraft. Motor vehicles were responsible for more than 60 percent of the air pollution in the region. Before 1998, the state DOT's response to congestion was to build and widen highways.²¹² According to Catheryn McCue of the Southern Environmental Law Center, "Atlanta is the poster child for sprawl, polluted air and poor land-use planning."²¹³ The Wall Street Journal ran a front page story with the headline, "Is Traffic-Clogged Atlanta the New Los Angeles?," while Newsweek made Atlanta the lead story on an issue devoted to sprawl.²¹⁴

Yet there were a few positive signs. Highway gridlock had improved transit ridership. MARTA experienced a 5.3 percent improvement in rail ridership, and a 3.5 percent growth in bus ridership between 1999 and 2000.²¹⁵ MARTA had been born in the 1960s in the two counties in which the city of Atlanta lays partial claim—Fulton and DeKalb Counties. An expanded rail network was one of the major means of handling the influx of visitors during the 1996 Atlanta Olympic Games. MARTA's rail network also serves Hartsfield International, the world's busiest airport.

But concerns over Atlanta's air quality and automobile dependence have been long-standing. As early as 1975, citizens and environmental groups were filing litigation against the Atlanta Regional Commission (ARC) (the regional MPO), the DOT, and MARTA alleging that their transportation plans failed to fulfill

²¹¹ Georgia Wins Road Program Lawsuit, CHATTANOOGA TIMES FREE PRESS, June 7, 2001, at B2. Machine engines and industrial smokestacks also produce NOx. Kelly Simmons, *Smog Season*, ATLANTA JOURNAL AND CONSTITUTION, Apr. 30, 2001, at 1C; The Clean Air Campaign, *Air Quality & Health* (visited Sept. 14, 2001),

http://www.cleanaircampaign.com/sec04_a.asp.

²¹² Eplan, *supra* note 207.

²¹³ Betty Liu, *Lawsuit On Atlanta Road Plans*, FINANCIAL TIMES, June 6, 2001, at 6; Southern Environmental Law Center, *Citizens Sue EPA in Ongoing Effort to Clean Up Air*, Jan. 17, 2001, http://www.selcga.org/res_news2001-01-17.shtml.

²¹⁵ Simmons, *supra* note 211.

federal environmental obligations.²¹⁶ By and large, such lawsuits were unsuccessful until the 1990s.

Atlanta fell out of compliance with federal ozone standards in 1995, and was designated in "serious" nonattainment.²¹⁷ The ARC failed to submit an updated plan conforming to the air quality requirements by the December 31, 1997, deadline, and lost federal funding for new transportation projects.²¹⁸ In 1998, the federal government cut off highway money to 13 counties in the Atlanta nonattainment area.²¹⁹ The freeze on federal funding cost the area \$153 million per year.²²⁰ The region would remain in noncompliance and ineligible for new federal transportation funds for more than 2 years.

In November 1998, Roy Barnes, a suburban Atlanta state Senator, was elected Governor of Georgia, declaring Atlanta's air pollution problems his highest priority.²²¹ In January 1999, newly elected Governor Barnes proposed creation of a super-agency to keep the region mobile while restricting asphalt-intensive sprawl, and rein in local development.²²² In response, in April, both houses of the state legislature overwhelmingly passed legislation creating the Georgia Regional Transportation Authority [GRTA], giving it broad powers to manage transportation projects, air quality, and land use in nonattainment areas.²²³ Effectively controlled by the Governor, GRTA was given authority to deny funds for infrastructure and enjoin access from private property to state and local highways.²²⁴ It was given power to

²¹⁷ James Pilcher, *Environmental Groups Settle Georgia Road Suit*, CHATTANOOGA TIMES FREE PRESS, June 22, 1999, at B5.

²¹⁸ Federal Appeals Court Strikes Down EPA Grandfathering of Road Projects, 10 GA. ENVTL. L. LETTER (Mar. 1999).

²¹⁹ David Firestone, Collapse of Atlanta Talks Keeps Road Builders Idle, N.Y. TIMES, Jan. 4, 2001, at 18A.

²²⁰ Flawed ARC Plan Will Haunt Us All, ATLANTA JOURNAL AND CONSTITUTION, July 28, 2000, at 22A.

²²¹ Eplan, *supra* note 207.

²²² Environmentalist Plaintiffs Are Only Hope for Clean Air, ATLANTA JOURNAL AND CONSTITUTION, Apr. 9, 2001, at 8A.

²²³ Testimony of DOT Secretary Rodney Slater Before the U.S. Senate Committee on Commerce, Science and Transportation (Dec. 2000); Tom Arrandale, Smart Air, GOVERNING MAGAZINE 88 (July 2000).

 $^{\scriptscriptstyle 224}$ Kreyling, supra note 206, at 8; Eplan, supra note 207, at 16.

 $^{^{209}}$ Georgia's fuel tax was only 7.5 cents per gallon, compared to a national average of 19 cents. Russell Grantham, *Atlanta's Gas Habit*, ATLANTA JOURNAL AND CONSTITUTION, May 10, 2001, at 1E.

²¹⁰ Combustion from fuel in cars, coal-fired plants, and other gas-powered engines are primarily responsible for the nitrogen oxide in the environment. Combustion engines in various vehicles and vapors from paint, dry cleaning, and lawn chemicals contribute to the VOCs in the environment. The Clean Air Campaign, *Air Quality & Health* (visited Sept. 14, 2001), http://www.cleanaircampaign.com/sec04_a2.asp.

²¹⁴ Eplan, *supra* note 207, at 14–15.

²¹⁶ See, e.g., Piedmond Heights Civic Club, Inc. v. Moreland, 637 F.2d 430, 433 (5th Cir. 1981) (affirming the district court's denial of the plaintiffs' motion for preliminary injunction to enjoin highway construction around Atlanta for failure to comply with NEPA); Atlanta Coalition on the Transp. Crisis, Inc. v. Atlanta Reg'l Comm'n, 599 F.2d 1333, 1347–49 (5th Cir. 1979) (holding that the state planning process is not a major federal action within NEPA); Hatmaker v. Ga. Dep't of Transp., 973 F. Supp. 1047, 1058 (M.D. Ga. 1995) (granting the plaintiffs' preliminary injunction to prohibit the Georgia DOT from constructing a roadway that would destroy a historic oak tree); Inman Park Restoration, Inc. v. Urban Mass Transp. Admin., 414 F. Supp. 99 (N.D. Ga. 1976) (denying plaintiffs' motion for declaratory and injunctive relief based on the various transportation agencies' failure to comply with NEPA).

resolve disputes between state DOT and regional agencies, approve or disapprove transportation plans, establish targets for air quality improvements, exercise eminent domain, issue bonds, control access to state and local roads, and overrule commuter rail projects recommended by the Georgia Rail Passenger Authority.²²⁵ The 15 GRTA members also sit on the Governor's Development Council, which has jurisdiction to formulate a systematic land use plan.²²⁶ The Act also included a provision dividing the state's federal and state transportation funds equally among the state's congressional districts.²²⁷

John Hankinson, Jr., of the EPA's regional office wanted to prohibit the use of federal funds for highway construction in the region until the state adopted an acceptable plan for cleaning up the air. However, FHWA urged leniency, allowing the metro area to proceed simultaneously with the implementation of several "grandfathered" road projects, despite little progress in reducing smog, while the tardy plan for cleaning up the air was being completed. The CEQ intervened, trying to resolve the differences on how many regional transportation projects should proceed while the region was in violation of air pollution laws. The EPA compromised by allowing a number of highway projects to go forward as the plan was being completed and submitted for review and approval.²²⁸

In 1999, a coalition of environmental groups brought suit accusing state and federal transportation departments and the ARC of trying to slip through 61 Atlanta regional road and highway projects, totaling \$700 million, before the EPA's 1998 deadline. Plaintiffs claimed the grandfather provisions of the Clean Air Act were intended only for projects that had received environmental approval, let contracts, or begun construction, or if unsafe conditions required immediate construction.²²⁹ Plaintiffs also claimed that the projects violated the federal Clean Air Act by not conforming to the SIP.²³⁰ Meanwhile, in a lawsuit brought by the Sierra Club to block 81 grandfathered road projects, the D.C. Circuit U.S. Court of Appeals issued a decision striking down the EPA's "conformity" and "grandfather" rules on grounds that they violated the 1990 Amendments to the Clean Air Act prohibiting MPOs from approving and DOT from funding any transportation project unless it

emanates from a plan and program that conform to state-level air quality standards. $^{\rm 231}$

The Clinton Administration chose not to appeal the decision, and subsequently issued guidelines allowing only projects already funded and under construction to proceed.²³² Because of the chance of adverse precedent and the resounding implications for transportation in every nonattainment area throughout the land, the FTA was heavily involved in intense, comprehensive negotiations with the Atlanta parties. The lawsuit led to a settlement in June of 1999, under which the state agreed to forego all but 17 of the 61 "grandfathered" projects. Other terms of the settlement included (1) a comprehensive study of the north metro-Atlanta transportation needs, (2) a panel of experts appointed to oversee the ARC's use of computer models to assess the impact of its transportation plan on air quality, and (3) an analysis of the impact of transportation funds on minority and poor populations.²³³ The suit was predicated on the EPA's approval of the region's 25-year transportation plan, alleging it was based on flawed data and did little to clean up the air.234

On March 22, 2000, ARC approved a \$36 billion 25year regional transportation plan, and a \$1.9 billion 3year TIP. It would have to be approved by GRTA before being forwarded to DOT for approval.²³⁵ On July 18, 2000, the 11th Circuit granted a petition blocking federal approval of Atlanta's TIP and Regional Transportation Plan (RTP). Environmental groups had argued that the data upon which the state calculated its motor vehicle emissions budget was flawed and underestimated emissions from mobile sources. (Once the budget is established, the state uses computer models to estimate how much stationary source pollution it must reduce to achieve federal ozone standards).²²⁶

But on July 25, 2000, the FHWA and FTA, in consultation with EPA, approved Atlanta's RTP and TIP, lifting the ban on federal dollars for highway construction. DOT sidestepped the 11th Circuit decision on grounds that the transportation plan conformed to a motor vehicle emissions budget that the ARC had submitted in 1998 as part of the nonattainment area's rate of progress plan.²³⁷ DOT argued that the new "transportation conformity determination" for the Atlanta area was based on a more stringent air quality standard

²²⁵ Eplan, *supra* note 207, at 16.

²²⁶ GRTA Board Is Set to Tackle Atlanta's Sprawl, 11 GA. ENVTL. L. LETTER (Oct. 1999).

²²⁷ Donald Biola, *Georgia Regional Transportation Authority* Acts: Provide for a Regional Transportation Authority, 16 GA. ST. U. L. REV. 233, 236–38 (1999).

²²⁸ Charles Seabrook, EPA Regional Chief Leaving Many Irons In the Fire, ATLANTA CONSTITUTION, Jan. 22, 2001, at 1B.

²²⁹ Eplan, *supra* note 207, at 14–15.

²³⁰ Mark Murray, A Bumpy Ride for New Highways, 31 NATLJ. 1898 (June 26, 1999).

²³¹ Environmental Defense Fund v. E.P.A, 167 F.3d 641, 651 (D.C. Cir. 1999).

²³² Murray, supra note 230; Road Builders Seek Involvement In Lawsuit Challenging Atlanta Road Projects, 10 GA. ENVTL. L. LETTER (June 1999).

²³³ Environmental Groups and DOT Settle Lawsuit on Road Projects, 11 GA. ENVTL. L. LETTER (July 1999).

²³⁴ Seabrook, *supra* note 228.

²³⁵ ARC Approves 25-Year Transportation Plan, 11 GA. ENVTL. L. LETTER (Apr. 2000).

²³⁶ Federal Court Blocks Latest Motor Vehicle Emissions Budget, 12 GA. ENVTL. L. LETTER (Aug. 2000).

²³⁷ Federal DOT Approves Atlanta's Regional Transportation Plan, 12 GA. ENVTL. L. LETTER (Aug. 2000).

than that derailed by the 11th Circuit a week earlier.²³⁸ The TIP directed 40 percent of funds to transit, 10 percent to bicycle and pedestrian improvements, 21 percent to safety and bridge and intersection improvements, and 26 percent to highways, including HOV lanes.²³⁹ The Atlanta regional transportation plan had been in "conformity lapse" since January 1998. But the environmental groups claimed the plan would "not reduce tailpipe emissions, and [was] based on faulty data and land use assumptions."²⁴⁰ When several environmental groups threatened litigation, the state began to negotiate with them, holding all highway projects in abeyance during the negotiations.²⁴¹

After 2 months of negotiations, four environmental groups reached a tentative settlement with the state in December 2000, in which the state committed to requiring cleaner heavy-duty diesel engines and fuels and additional emissions controls, accelerating the building of HOV lanes and express bus service, and providing funding for a set of bikeways and walkways. "The state also agreed to make an increasing share percentage of jobs and activities accessible by mass transit by setting annual goals" and funding commitments to achieve them, and to offer rewards and penalties to encourage jurisdictions to reduce traffic.²⁴² Specifically, the state proposed to:

• Fully fund GRTA's regional bus program and pay part of the cost of MARTA's request for natural gas buses and paratransit vehicles, while committing up to \$120 million over 5 years to implement transit strategies to meet greater mobility goals;

- Make greater efforts to reduce SOV travel;
- Build more bike and pedestrian projects;

• Adopt a new mobility goal that "ensures equal access to all places of employment, housing, worship and public facilities, including access by populations that do not own or operate personal vehicles," and commit to annual progress in meeting the goal;

 \bullet Complete an HOV project on Interstate-75 between I-285 and I-575; and

²⁴⁰ Kelly Simmons, *Pact Delays Road Projects*, ATLANTA JOURNAL AND CONSTITUTION, Oct. 6, 2000, at 3B.

²⁴¹ Firestone, *supra* note 219; Charles Seabrook, *Suit Threatened on Transport Plan*, ATLANTA JOURNAL AND CONSTITUTION, Dec. 2, 2000, at 4G.

 \bullet Adopt criteria for land use planning and density around commuter rail stations. 243

In return for the ability to proceed with the \$36 billion, 25-year transportation plan, the state wanted the environmental groups to withdraw all pending suits against state and federal agencies challenging the transportation plan.²⁴⁴ Among the suits was one pending before the 11th Circuit Court of Appeals, which sought to declare illegal the EPA's extension from 1999 to 2003, the date by which Atlanta had to comply with NAAQS for ozone. Plaintiffs sought to have the EPA immediately declare Atlanta a "severe" ozone nonattainment area. Under Section 181 of the Clean Air Act, any area designated as a serious nonattainment area had until November 15, 1999, to demonstrate compliance or be elevated to the next highest nonattainment category, which in Atlanta's case is "severe."²⁴⁵

In negotiations with the state, the environmental groups sought the right to go back to federal court to enforce the agreement, while the state insisted that the Georgia courts should handle the enforcement.²⁴⁶ The environmental groups wanted the state to achieve ozone-reduction goals by 2003, while the state wanted a year longer.²⁴⁷ The state also wanted the right to terminate the agreement if any other group or individual filed suit. ²⁴⁸ The deal collapsed the following month when the state abruptly announced it would move forward on road projects in the \$36 billion transportation plan, which had been on hold during the negotiations.²⁴⁹ Governor Barnes insisted, "[t]he state has offered you far more than any previous administration ever did and far more than any court is likely to require...I urge you to accept our offer of Dec. 29. We will make no further changes to it...."250

The Atlanta Constitution weighed in on the side of the environmentalists, blaming Governor Barnes for keeping GRTA caged; for failing to keep promises to identify funds for expanding suburban bus service, commuter rail, and other transit lines; for championing a massive borrowing campaign to build "developmental' highways"; and for pulling "the plug on an eminently reasonable settlement that could have avoided the current legal action." According to the newspaper:

The agreement would have sped up construction of express lanes for commuter buses and required cleaner

²⁴³ Kathey Pruitt, *State Offers Settlement on Highways*, ATLANTA JOURNAL AND CONSTITUTION, Dec. 9, 2000, at 1G.

²⁴⁴ Kelly Simmons, *Environmental Groups Conditionally Accept State Plan on Roads*, ATLANTA JOURNAL AND CONSTITUTION, Dec. 12, 2000, at 3D.

²⁴⁵ Georgia SIP Still Up in the Air, 12 GA. ENVTL. L. LETTER (Oct. 2000).

²⁴⁶ Firestone, *supra* note 241.

 247 Id.

²⁴⁹ Kelly Simmons, *State Mulling Ideas From Failed Transportation Plan Talks*, ATLANTA JOURNAL AND CONSTITUTION, Jan. 8, 2001, at 5C.

²⁵⁰ Firestone, *supra* note 241.

²³⁸ U.S. Dep't of Transp., U.S. Transportation Secretary Slater Says Atlanta Can Move Forward, Presswire, July 27, 2000.

²³⁹ U.S. Dep't of Transp., *Transportation Secretary Slater Says Atlanta Can Move Forward*, PR Newswire, Jan. 26, 2000. Before the Congress, DOT Secretary Slater testified that nearly 55 percent of regional transportation funds would go to transit and commuter rail projects. *Testimony of DOT Secretary Rodney Slater Before the U.S. Senate Committee on Commerce, Science and Transportation* (Dec. 2000).

²⁴² Barnes Has Come Too Far To Scuttle Talks on Lawsuit, ATLANTA JOURNAL AND CONSTITUTION, Jan. 4, 2001, at 14A; *Kudos All Around on Clean-Air Pact*, ATLANTA JOURNAL AND CONSTITUTION, Dec. 14, 2000, at 26A.

 $^{^{248}}$ Id.

Time and again, government officials have demonstrated that they will revert to smog-and-sprawl business as usual the second the pressure is off.²⁵¹

tangle with the Clean Air Act in the first place.

A coalition of environmental groups responded by filing suit against state and federal agencies, including DOT and ARC.²⁵² It was a unique approach, seeking to freeze 137 highway projects (13 of which were under construction, 14 of which were approved for right-ofway acquisition, and the rest in planning or engineering stages),²⁵³ while allowing environmentally benign projects (including transit, rail, bicycle, and pedestrian projects) to move forward.²⁵⁴ Gov. Barnes testified that shutting off \$400 million in federal transportation funds would create traffic "chaos" that would "[stop] many projects that are absolutely necessary. This would be a disaster transportation-wise and a disaster politically."255 Southern Environmental Law Center attorney David Farren responded, "It's a little bit Chicken Little to say there will be dire consequences for the region" when the 2-year loss of federal funds resulted in no such chaos.²⁵⁶

The federal judge refused to issue an injunction shelving the state's highway projects. One issue was whether the court-if it concluded that the state still had not met federal environmental requirements-would engage in a Solomon-like dissection, eliminating 137 road projects from the plan while allowing the other projects to move forward, or instead reject the entire plan.²⁵⁷ Barnes testified that if the federal courts began to amend SIPs, "There would never be an end game. The courts should not be involved in the administrative weighing and balancing of a plan. There would be no end to it."²⁵⁸ The Sierra Club's Bryan Hager said, "just like in the 1950s and 1960s when we were dealing with segregation, we have to turn to the federal courts to get

- ²⁵² Betty Liu, *Lawsuit on Atlanta Road Plans*, FINANCIAL TIMES (London), June 6, 2001, at 6.
- ²⁵³ Group Asks Judge to Halt Atlanta Road Projects, CHATTANOOGA TIMES FREE PRESS, June 6, 2001, at B10.

²⁵⁴ Group Wants Road-Work Halt, ORLANDO SENTINEL, June 6, 2001, at A9; Kelly Simmons, *Anti-Road Suit Goes to Court Today*, ATLANTA JOURNAL AND CONSTITUTION, June 5, 2001, at 1B.

²⁵⁵ Legal Theatrics Get Activists Nowhere, ATLANTA JOURNAL AND CONSTITUTION, June 7, 2001, at 20A.

²⁵⁶ John McCosh, Judge Refuses to Halt Funding of Atlanta Transportation Plan, ATLANTA JOURNAL AND CONSTITUTION, June 7, 2001, at 1A.

²⁵⁷ Bryan Hager, *Transportation Litigation Update*, GTA TRANSPORTATION VOICE (Summer 2001).

²⁵⁸ Legal Theatrics Get Activists Nowhere, ATLANTA JOURNAL AND CONSTITUTION, June 7, 2001, at 20A.

our officials to comply with the law....We have a fundamental human right to breathe that's being threatened....We will continue to look to the courts."²⁵⁹ It was anticipated that the losing party would appeal to the 11th Circuit.²⁶⁰

In May 2001, the state Environmental Protection Division issued a revised SIP postponing to November 2004 the state's deadline for satisfying federal limits on ground-level ozone, the principal ingredient of smog. Originally the target was November 1999, and it was subsequently moved to November 2003. A federal court had given Georgia and 21 other states an additional year to reduce air pollution.²⁶¹ The environmental coalition appealed that decision as well.

At this writing, the courts are considering several suits brought by the environmental groups seeking to derail Georgia from proceeding with its highway projects.

E. THE ENDANGERED SPECIES ACT (ESA)

The Endangered Species Act of 1973³⁶² (ESA) is concerned with protecting species of plants and animals threatened with extinction.²⁶³ In this Act, Congress recognized the aesthetic, ecological, historical, and scientific value of various species of plants and animals and the importance of protecting biodiversity.²⁶⁴ To achieve its purpose, the Act provides for listing of species determined to be "endangered" or "threatened," requires federal agencies to carry out programs to conserve these identified species, and makes it unlawful to "take" an endangered animal species. The Act also has provisions for the protection of critical habitat of endangered species.

Under the ESA, the Secretary of Commerce or Secretary of the Interior is required to determine whether a species is "threatened" or "endangered" and to designate critical habitat of such species.²⁶⁵ A species is "endangered" if it is in danger of extinction throughout all or a significant portion of its range.²⁶⁶ A species is "threatened" if it is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.²⁶⁷ The Secretary is to determine whether to list a species as endangered because of any of the following factors: "(A) the present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial,

²⁶¹ Charles Seabrook, *State Eases Deadline to Limit Ozone*, ATLANTA JOURNAL AND CONSTITUTION, May 31, 2001, at 1A.

²⁶² 16 U.S.C. §§ 1531 et seq. (1985 & Supp. 2000).

²⁵¹ Environmentalist Plaintiffs Are Only Hope for Clean Air, ATLANTA JOURNAL AND CONSTITUTION, Apr. 9, 2001, at 8A.

²⁵⁹ Georgia Wins Road Program Lawsuit, CHATTANOOGA TIMES FREE PRESS, June 7, 2001, at B2.

²⁶⁰ John McCosh, *Roadwork Goes On, Foes Undaunted*, ATLANTA JOURNAL AND CONSTITUTION, June 18, 2001, at 1E.

 $^{^{263}}$ Id.

 $^{^{264}}$ Id. § 1531.

 $^{^{\}rm 265}$ Id. § 1533(a) (1995 & Supp. 2000).

²⁶⁶ Id. § 1532(6).

²⁶⁷ Id. § 1532(20).

recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its continued existence."²⁶⁸ Once a species is listed, it is protected under the Act and entitled to all the benefits of that protection.

An early case brought under the ESA is TVA v. Hill.²⁶⁹ The Tennessee Valley Authority (TVA) had begun constructing the Tellico Dam when a species of perch, called the snail darter, was discovered in the area where the dam was being built. The respondent in this case petitioned the Secretary of the Interior to list the snail darter as an endangered species. After receiving comments, the Secretary found that the snail darter habitat would be totally destroyed if the Tellico Dam project was completed and thus, the species was listed as endangered and the species critical habitat was designated for protection. The respondents filed for an injunction to halt the construction of the dam. The Court of Appeals issued the injunction and the U.S. Supreme Court affirmed. The Supreme Court found that the ESA was clear-the Act indicated beyond a doubt that Congress intended endangered species be afforded the highest of priorities.

All federal agencies are required to ensure that any action authorized, funded, or carried out by the agency is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of the critical habitat of such species.²⁷⁰ If an action is likely to violate the Act's jeopardy prohibition, the agency can apply for an exemption from the Endangered Species Committee [Committee], also known as the "God Squad" because of its control over the fate of a species.²⁷¹ Once an application for exemption is received, the Committee decides whether or not to grant an exemption from the jeopardy requirements.²⁷²

Under the "takings" provision of the Act, any person, whether public or private, is prohibited from "taking" any endangered animal species.²⁷³ "Take" is defined broadly to prohibit people "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."²⁷⁴ "Harm" includes any "act that actually kills or injures wildlife."²⁷⁵ 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."²⁷⁶ This provision also prohibits anyone from selling, importing, or exporting any protected species.²⁷⁷ In addition to protecting animal species, the takings provision also prohibits removal or damage of endangered plant species in knowing violation of any law.²⁷⁸

The takings provision was tested in Palila v. Hawaii Department of Land and Natural Resources.²⁷⁹ In Palila, the Ninth Circuit required the removal of sheep and goats from the critical habitat of an endangered bird, the Palila. The sheep and goats were harming trees that the Palila relied on for food. The court found that "harm" to a species under the ESA does not require death to individual members of the species, nor does it require a finding that habitat degradation is presently driving the species further toward extinction. Habitat destruction that prevents recovery of the species by affecting essential behavior patterns causes actual injury to the species and effects a taking under the Act. Thus, if an act causes habitat modification that would prevent an endangered population from recovering, it is a taking in violation of the ESA.

To provide some flexibility to the strict takings requirements, Congress added an "incidental takings" clause to the ESA.²⁸⁰ This clause authorizes the Secretary to issue permits that allow takings incidental to the carrying out of otherwise lawful activities.²⁸¹ A permit will not be issued unless the applicant submits a conservation plan that specifies the likely impact of the incidental taking and details steps the applicant will take to minimize and mitigate these impacts.²⁸² A taking must not appreciably reduce the likelihood of survival and recovery of the species in order to be considered incidental.²⁸³

F. WATER QUALITY

1. Introduction

Four major federal programs govern water pollution: (1) the National Pollutant Discharge Elimination System (NPDES), which regulates the discharge of pollutants into navigable streams;²⁸⁴ (2) the Dredge or Fill Program (DFP), which regulates the discharge of dredged or fill material into streams;²⁸⁵ (3) the Underground Injection Control Program (UIC), which regulates injection of fluids into the ground in order to pro-

²⁸³ Id. § 1539(a)(2)(B)(iv).

²⁶⁸ Id. § 1533(a).

²⁶⁹ 437 U.S. 153, 98 S. Ct. 2279, 57 L. Ed. 2d 117 (1978).

²⁷⁰ 16 U.S.C. § 1536(a)(2) (1985 & Supp. 2000).

²⁷¹ Id. § 1536(e).

²⁷² Id. § 1536(e)(2).

²⁷³ Id. § 1538(a)(1).

²⁷⁴ Id. § 1532(19).

²⁷⁵ 50 C.F.R. § 17.3 (1999).

 $^{^{\}scriptscriptstyle 276}$ Id.

 $^{^{\}rm 277}$ 16 U.S.C.A. § 1538(a)(1)(A) (1985 & Supp. 2000).

²⁷⁸ Id. § 1538(a)(2)(B).

 $^{^{\}rm 279}$ 639 F.2d 495, 497 (9th Cir. 1981); 852 F.2d 1106 (9th Cir. 1988).

 $^{^{280}}$ Id. § 1539.

²⁸¹ Id. § 1539(a)(1) (1985 & Supp. 2000).

²⁸² Id. § 1539(a)(2).

 $^{^{284}}$ See Federal Water Pollution Control Act (FWPCA or Clean Water Act), 33 U.S.C. \$ 1251–1387 (1986 & Supp. 2000); 40 C.F.R. \$ 124–25, 129, 133 (2000). See text accompanying notes 6-47 infra.

 $^{^{\}scriptscriptstyle 285}$ See Clean Water Act, 33 U.S.C. §§ 1251 et seq. (1986 & Supp. 2000); 40 C.F.R. §§ 230–233 (2000).

tect drinking water aquifers;²⁸⁶ and (4) the Hazardous Waste Management Program (HWM), which regulates the generation, transportation, treatment, storage, and disposal of hazardous waste.²⁸⁷ The permits required under each of these four programs are usually referred to as NPDES, Section 404, UIC, and RCRA, respectively.²⁸⁸

2. The NPDES Permit Program

The intent of Congress in promulgating the Federal Water Pollution Control Act (FWPCA)²⁸⁹ was to eliminate the discharge of pollutants into the navigable waters of this nation.²⁹⁰ Such pollution, originating from "point sources [of conventional pollutants and existing plants]...shall require the application of the best practicable control technology currently available" by July 1, 1977,²⁹¹ and the "best available technology economically

²⁸⁷ See Resource Conservation and Recovery Act, 42 U.S.C. §§ 6901–6992k (1995 & Supp. 2000); 40 C.F.R. §§ 260–265 (2000). RCRA is discussed below in § 3.070.

²⁸⁸ The requirements for such permits were consolidated in 40 C.F.R. §§ 122–125 (2000). Federal Water Pollution Control Act, as amended, 33 U.S.C. §§ 1251 *et seq*. Safe Drinking Water Act of 1974. 42 U.S.C. §§ 300h *et seq*. Protection of underground sources of drinking water. Executive Order No. 11738, 38 F.R. 25161 (Sept. 10, 1973), "Administration of the Clean Air Act and the Federal Water Pollution Control Act with Respect to Federal Contracts, Grants, or Loans," 42 U.S.C. § 7606 note. See generally Paul S. Dempsey, Oil Shale and Water Quality: The Colorado Prospectus Under Federal, State & International Law, 58 DENVER L.J. 715 (1981).

²⁸⁹ 33 U.S.C. §§ 1251–1387 (1986 & Supp. 2000).

 290 Id. § 1251(a)(1).

 291 Id. \$ 1311(b)(1)(A). In determining what constitutes the best practicable control technology, the EPA shall evaluate, inter alia,

the total cost of application of technology in relation to effluent reduction benefits to be achieved from such application...the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, non-water quality environmental impact (including energy requirements)....

Id. § 1314(b)(1)(B). See Hooker Chems. & Plastics Corp. v. Train, 537 F.2d 620, 630 (2d Cir. 1976). In making this determination, the EPA is not limited to an evaluation of the average technology employed in the involved industry, but may instead base its regulations on data collected from those members of industry using the best technology available. American Petr. Inst. v. EPA, 540 F.2d 1023, 1034 (10th Cir. 1976), cert. denied, 430 U.S. 922 (1977). Indeed, the technology required in the EPA regulations may be deemed "available" even though no plant in the industry has yet adopted it. Hooker Chems. & Plastics Corp. v. Train, 537 F.2d at 636.

The EPA also need not evaluate the competitive impact of its regulations. American Petr. Inst. v. EPA, 540 F.2d at 1036. The EPA regulations, which permitted consideration only of "technical and engineering factors, exclusive of cost," however, were held excessively restrictive in Appalachian Power Co. v. Train, 545 F.2d 1351, 1359 (4th Cir. 1976). Variance provisions must provide for consideration of the total cost of pollution achievable,"²⁹² under regulations established by the EPA.²⁹³ The legislation provides for a cooperative federal-state effort to eliminate water pollution, consisting of the EPA's promulgation of effluent limitations,²⁹⁴

control, Weyerhauser Co. v. Costle, 590 F.2d 1011, 1036 (D.C. Cir. 1978), and must compare the cost to the benefits of effluent reduction. BASF Wyandotte Corp. v. Costle, 598 F.2d 637, 658-9 (1st Cir. 1979). This principle is consistent with the intent of Congress that there "be a reasonable relationship between costs and benefits if there is to be an effective and workable program." American Petr. Inst. v. EPA, 540 F.2d at 1037 (quoting from Senate Committee History). Such benefits, however, need not be quantified in monetary terms. *Id*.

Once promulgated, such requirements may be modified by the Administrator of the EPA, with the concurrence of the involved state. See 33 U.S.C. A. § 1311(g) (1986 & Supp. 2000). See also id. § 1319(a)(5)(B).

²⁹² Id. § 1311(b)(2)(A). The factors to be evaluated by the Administrator in assessing what might constitute the "best available technology" include "the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, the cost of achieving such effluent reduction, [and] non-water quality environmental impact." Id. § 1314(b)(2)(B). See also id. § 1314(b)(4)(B). The Administrator also holds broad authority to promulgate regulations "to control plant site runoff, spillage or leaks, sludge or waste disposal, and drainage from raw material storage...." Id. § 1314(e).

²⁹³ Id. § 1314. See generally J.T. Begley & John P. Williams, Coal Mine Water Pollution: An Acid Problem With Murky Solutions, 64 KY. L.J. 507, 514–15 (1976); Comment, The Application of Effluent Limitations and Effluent Guidelines to Industrial Polluters: An Administrative Nightmare, 13 HOUS. L. REV. 348, 349–53 (1976) [hereinafter cited as Effluent Limitations and Guidelines].

²⁹⁴ Effluent limitations are defined as "any restriction...on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources...." 33 U.S.C. § 1362(11) (1986 & Supp. 2000). The EPA is required by the FWPCA to establish national effluent limitation guidelines for every major industry. Id. § 1311(b)(1)(A). Such guidelines restrict the amount of specified pollutants that may lawfully be discharged from a point source. Begley & Williams, supra note 293. The purpose of this requirement is to enable the EPA to apply effluent standards uniformly to classes and categories of enterprises rather than on an ad hoc basis. See Effluent Limitations and Guidelines, at 348, 354 (1976). Once promulgated, such regulations are presumed to be applicable and controlling unless the permit applicant convincingly rebuts such application. American Petr. Inst. v. EPA, 540 F.2d 1023, 1030 (10th Cir. 1976), cert. denied, 430 U.S. 922 (1977). A permit may nevertheless be issued on the basis of "sound engineering judgment as to appropriate limitations necessary to carry out the requirements of the Act." Hall, The Clean Water Act of 1977, 11 NAT. RESOURCES L. 343, 344 (1978). See also United States Steel Corp. v. Train, 556 F.2d 822, 844 (7th Cir. 1977); Natural Resources Defense Council, Inc. v. Train, 510 F.2d 692, 709-10 (D.C. Cir. 1974).

Although the EPA effluent limitations, which embrace variance clauses, have been disapproved for new sources, they have been approved for existing sources. *See, e.g.,* Natural Resources Defense Council, Inc. v. EPA, 537 F.2d 642 (2d Cir. 1976). Variance clauses allow the grantor of the permit (either the state or the EPA) to exempt individual point sources from the

²⁸⁶ See Safe Drinking Water Act, 42 U.S.C. §§ 300f–300j(26) (1991 & Supp. 2000); 40 C.F.R. § 146 (2000).

state development of water quality standards, 295 and initially federal (but ultimately state) administration of the NPDES permit program. 296

The legislation also distinguishes between effluent limitations for existing sources²⁹⁷ and those for new sources.²⁹⁸ The standard for new point sources is similar to that imposed on existing sources in that new sources must employ the "best available demonstrated control technology process, operating methods, or other alternatives, including, where practicable, a standard permitting no discharge of pollutants."²⁹⁹

The regulatory scheme requires that a point sources operator secure an NPDES permit as a condition precedent to discharging into a navigable stream.³⁰⁰ The courts have taken a strict view of the permit process, recognizing that it is the principal means of enforcing the legislative intent³⁰¹ and refusing to allow the EPA to exempt categories of point sources from the permit requirements of the FWPCA.³⁰²

²⁹⁵ 33 U.S.C.A. § 1313 (1986 & Supp. 2000).

 $^{\rm 296}$ Id. § 1342(b). States, however, may leave such regulation under exclusive federal administration, if they so choose, or if they fail to establish a regulatory program approved by the EPA.

 298 Id. § 1316(a)(2).

 299 Id. § 1316(a)(1). In promulgating regulations governing new sources, the EPA must consider the cost of achieving compliance thereunder, the nonwater environmental quality impact of the regulations, and the energy requirements of compliance. Id. at § 1316(b)(1)(B). See Hooker Chems. & Plastics Corp. v. Train, 537 F.2d 639, 641 (2d Cir. 1976). Once new point source regulations have been published, all affected industries are deemed to have constructive notice thereof, and such regulations are applicable to all construction commenced after such promulgation. Pennsylvania v. EPA, 618 F.2d 991, 1000 (3d Cir. 1980).

In contrast to the statutory standard governing existing sources, the provision concerning new point sources does not permit variances from the regulatory standards established by the EPA. The Supreme Court has emphasized that such a variance provision would be inconsistent with the congressional intent of "national uniformity and 'maximum feasible control of new source." E.I. duPont de Nemours & Co. v. Train, 430 U.S. 112, 138, 97 S. Ct. 965, 51 L. Ed. 2d 204 (1977). In promulgating regulatory standards, however, the EPA may "distinguish among classes, types, and sizes within categories of new sources." *Id.* at 137.

 $^{\rm 300}$ See 33 U.S.C. §§ 1251(a)(1), 1311(a), 1342(a) (1986 & Supp. 2000).

 $^{\scriptscriptstyle 301}$ See Natural Resources Defense Council, Inc. v. Train, 510 F.2d 692, 706-8 (D.C. Cir. 1975).

³⁰² Natural Resources Defense Council, Inc. v. Costle, 568 F.2d 1369, 1377 (D.C. Cir. 1977); American Iron & Steel Inst. v. EPA, 568 F.2d 284, 307-B (3d Cir. 1977). The District of *Point Source Discharges.* The threshold question of whether a particular pollutant originates from a point source is an important one in the determination of the jurisdictional limits of the FWPCA, as no NPDES permit is required for a nonpoint source discharge. Nonpoint sources, such as oil and gasoline runoff created by rainfall on highways, are difficult to ascribe to a single polluter; therefore, no permit system was deemed feasible for them.³⁰³

The FWPCA does not precisely define the term "point source," referring only to "discernable, confined and discrete conveyance...from which pollutants are or may be discharged."³⁰⁴ The federal courts have held that the EPA is vested with the authority to define point and nonpoint sources and the definition should be reviewed only after full agency examination.³⁰⁵ The EPA has taken quite a liberal view of point sources, insisting that they consist of any flow containing concentrated pollutants caused by man, regardless of whether the conveyance is man-made or natural.³⁰⁶

Other federal cases have construed the term "point source" more liberally. For example, the case of United States v. Oxford Royal Mushroom Products, Inc.,³⁰⁷ addressed the issue of whether a spray irrigation system, which had been designed to spray wastewater into fields in sufficiently small quantities so as to be absorbed into the ground, constituted a point source where, because of an inadvertent introduction of more water than the system was designed to accommodate, waste water ran into a nearby stream through a break in a berm around the fields. The court found itself unable to conclude as a matter of law that such a discharge did not originate from a point source.

Columbia circuit court has generally approved the use of a general permit to accomplish essentially the same result. See 568 F.2d at 1382–83. The court has also acknowledged that the "existence of uniform national effluent limitations is not a necessary precondition for incorporating into the NPDES program pollution from agricultural, silvicultural, and storm water runoff point sources." *Id.* at 1379. *But see* 33 U.S.C. § 1311(g) (1986 & Supp. 2000). The NPDES regulations may, however, include variance provisions for permits. Frank F. Skillern, *Environmental Law Issues in the Development of Energy Resources*, 29 BAYLOR L. REV. 739, 776 (1977).

³⁰³ United States v. Earth Sciences, Inc., 599 F.2d 368, 371 (10th Cir. 1979). The FWPCA, however, does establish some EPA responsibility over nonpoint sources. Each state must specify regions having "substantial water control problems," 33 U.S.C. § 1288(a)(2), and must operate an area wide "waste treatment management planning process," subject to EPA approval. *Id.* § 1288(b)(1). *See* Begley & Williams, *supra* note 293, at 507, 527–28.

³⁰⁴ 33 U.S.C. § 1362(14) (1986 & Supp. 2000).

 $^{\scriptscriptstyle 305}$ Natural Resources Defense Council, Inc. v. Costle, 568 F.2d 1369, 1382 (D.C. Cir. 1977).

³⁰⁶ Note, The Federal Water Pollution Control Act Amendments of 1972 As Applied to the Surface Mine in West Virginia — Pollutant Discharge Permit Requirements, 78 W. VA. L. REV. 213, 215 (1976) [hereinafter cited as FWPCA Discharge Requirements].

³⁰⁷ 487 F. Supp. 852 (E.D. Pa. 1980).

involved effluent limitations. In determining whether a particular point source is entitled to a variance from effluent limitations, such considerations as the promulgation by a state of water quality standards more stringent than those of the EPA have been held not to be a sufficient justification to support a variance. United States Steel Corp. v. Train, 556 F.2d at 847.

²⁹⁷ 33 U.S.C. § 1311() (1986 & Supp. 2000).

Similarly, the Tenth Circuit U.S. Court of Appeals, in United States v. Earth Sciences, Inc.,³⁰⁸ was confronted with a discharge from a 168,000-gallon reserve sump located in Colorado, which was designed to catch excess leachate or runoff in emergencies and to be a closed system without any pollutant discharge.³⁰⁹ The overflow arose when unusually warm spring temperatures melted snow that filled the reserve sumps to capacity. This overflow and the pollution that resulted from it were deemed by the court to have originated from a point source. Both Oxford Royal Mushrooms and Earth Sciences demonstrate that a standard of strict liability is applicable to such discharges, irrespective of intent or forseeability.³¹⁰ The EPA, however, has no jurisdiction to require the removal of pollutants that are already present in the water prior to its use. It may insist only that companies treat and reduce pollutants that have been added to the water by the plant processes.³¹¹

Navigable Waters. The FWPCA regulates discharges into "navigable" waters, which are defined as "the waters of the United States, including the territorial seas."³¹² Congress intended that the term "be given the broadest possible constitutional interpretation,"³¹³ and the courts have generously acceded to this request.³¹⁴ In *Earth Sciences*, for example, the pollution in question was discharged into the Rio Seco, a stream located wholly within Costilla County, Colorado, and neither navigable in fact nor used to transport commodities in either interstate or intrastate commerce.³¹⁵ The court concluded that the only characteristic essential to making a stream "navigable" within the meaning of the FWPCA is that "at least some interstate impact" result

³¹⁰ See United States v. Texas Pipe Line Co., 611 F.2d 345, 347 (10th Cir. 1979); United States v. Earth Sciences Inc., 599 F.2d 368, 374 (10th Cir. 1979). Willful or negligent violations are subject to criminal penalties under 33 U.S.C. § 1319(c)(1) (1976). In fact, the statute imposes penalties for each *day* of unlawful discharge. *Id. See* United States v. Oxford Royal Mushrooms Prods, Inc., 487 F. Supp. 852, 856 (E.D. Pa. 1980).

³¹¹ See Appalachian Power Co. v. Train, 545 F.2d 1351, 1377 (4th Cir. 1976). See also United States Steel Corp. v. Train, 556 F.2d 822, 842–43 (7th Cir. 1977); American Petr. Inst. v. EPA, 540 F.2d 1023, 1034–35 (10th Cir. 1976), cert. denied, 430 U.S. 922 (1977). But see Natural Resources Defense Council, Inc. v. Costle, 568 F.2d 1369 (D.C. Cir. 1977), where the court held that if precise effluent limitations are infeasible, the EPA may instead impose gross pollution discharge requirements. *Id.* at 1380.

 $^{\rm 312}$ 33 U.S.C. § 1362(7) (1986 & Supp. 2000). The EPA has expanded that definition to include waters, lakes, rivers, and streams that flow interstate or flow intrastate and are used in interstate commerce. 40 C.F.R. § 401.11(l) (2000).

³¹³ S. REP. NO. 1236, 92d Cong., 2d Sess. *reprinted in* [1972] U.S. CODE CONG. & AD. NEWS 3668, 3776, 3822. *See FWPCA Discharge Requirements*, at 213, 215–16.

³¹⁴ See United States v. Oxford Royal Mushroom Prods., Inc., 487 F. Supp. at 855, and cases cited therein.

³¹⁵ 599 F.2d at 374–75.

therefrom.³¹⁶ The stream need not be "navigable in fact."³¹⁷ The necessary impact was found in the fact that the water collected from the stream was used for agricultural irrigation, with the resulting products sold in interstate commerce.³¹⁸

In United States v. Texas Pipe Line Co.,³¹⁹ it was not even clear whether the polluted stream was, at the time of the spill, actually feeding a navigable river. The Tenth Circuit court, nevertheless, held that the polluted stream fell within the FWPCA's definition of "navigable waters." The court reasoned that the tributary was within the intended coverage of the FWPCA because, at least during periods of heavy rainfall, the flow would continue in the Red River.³²⁰ The court emphasized that it was the intent of Congress that the coverage of the FWPCA be extended "as far as permissible under the Commerce Clause."³²¹ Thus, presumably, any tributary that is a part of a major river basin would meet the FWPCA's notion of "navigable stream."

Acquisition of the NPDES Permit. The standard imposed under the FWPCA for an unauthorized discharge of pollutants into a navigable stream is one of strict liability regardless of whether, for example, a reserve sump unexpectedly overflows due to spring snow melting at an unusual rate,³²² or whether a third party inadvertently ruptures an oil pipeline.³²³ Moreover, willful or negligent violation of the Act can result in criminal fines ranging between \$2,500 and \$25,000 per day of violation or imprisonment for not more than 1 year, or both.³²⁴

The FWPCA provides that, after an opportunity for a public hearing, the EPA may issue such a permit for the discharge of any pollutant into navigable waters and include therein such conditions as are necessary to ensure compliance with the requirements of the legislation.³²⁵ The FWPCA also provides that administration of

³¹⁷ See United States v. Oxford Royal Mushroom Prods., Inc., 487 F. Supp. at 854–55.

³¹⁸ United States v. Earth Science, Inc. 2 ___, 599 F.2d 368 (10th Cir. 1976).

³¹⁹ 611 F.2d 345 (10th Cir. 1979).

³²² United States v. Earth Sciences, Inc., 599 F.2d at 374.

³²³ United States v. Texas Pipe Line Co., 611 F.2d at 346–7.

 324 33 U.S.C. § 1319(c) (1986 & Supp. 2000). A second conviction can result in fines of up to \$50,000 per day of violation, or 2 years imprisonment, or both. *Id.* Federal courts have been held to have broad powers to evaluate whether a defendant in a criminal prosecution has violated an "emission standard" in an analogous context. *See* Adamo Wrecking Co. v. United States, 434 U.S. 275, 285, 98 S. Ct. 566, 54 L. Ed. 2d 538 (1978).

³²⁵ 33 U.S.C. § 1342(a) (1986 & Supp. 2000). Exclusions from the NPDES permit requirements are set forth in 40 C.F.R. § 122.3 (2000). Ordinarily, the permit will specify maximum permissible levels of various pollutants. *Id.* at § 122.45 (2000). If the imposition in permits of numerical limitations of effluent discharges is not feasible, the EPA may prescribe gross reduc-

³⁰⁸ 599 F.2d 368 (10th Cir. 1979).

 $^{^{309}}$ Id. at 370.

 $^{^{\}scriptscriptstyle 316}$ Id. at 375.

³²⁰ Id. at 346–7.

 $^{^{^{321}}}Id.$ at 347.

the permit process may be assumed by the state for discharges into navigable streams within its jurisdiction.³²⁶ NPDES permits are effective for a fixed term of up to 5 years.³²⁷ Once a permit has been issued, "any facility changes, production increases, or changes in character of the discharge necessitate reapplication for a new permit."³²⁸ If the permit is violated, it can either be revoked or amended, ³²⁹ or the violator may be prohibited from continuing the discharge.

3. The Dredge or Fill Permit Program

The Clean Water Act is the primary authority for federal wetlands regulation.³³⁰ Under Section 404, a permit is required to discharge dredged or fill material into wetlands.³³¹ Section 404 of the Clean Water Act gives the U.S. Army Corps of Engineers jurisdiction over wetlands management.

The acquisition of a Section 404 permit is a condition precedent to the lawful discharge of dredged or fill material into waters of the United States.³³² The Section 404 permit process is simultaneously governed both by Army Corps of Engineers regulations³³³ and EPA regu-

³²⁶ 33 U.S.C. § 1342(b) (1986). In fact, the states are encouraged to assume administration of the NPDES program. See Effluent Limitations and Guidelines, at 348, 352; FWPCA Discharge Requirements, at 213. Prior to assuming such administration, however, the state must first create a water pollution control program, which satisfies the standards established by the FWPCA. 33 U.S.C. § 1342(b) (1986). See generally Frank F. Skillern, Environmental Law Issues in the Development of Energy Resources, 29 BAYLOR L. REV. 739, 772 (1977).

The state is prohibited from issuing an NPDES permit if certain specified circumstances exist. See 40 C.F.R. § 122.4 (2000). Among such conditions is the circumstance where a new discharger would cause or contribute to the violation of water quality standards. Id. at § 122.4(a) (2000). Additionally, the EPA may veto the issuance of any state NPDES permit if the EPA feels that the granting of such permit would be inconsistent with the FWPCA. If the state's water quality standards are more stringent than those standards that are specified in the EPA's applicable effluent limitations, then the more stringent state standards must be incorporated into the NPDES permit. 33 U.S.C. § 1341(a)(1) (1986 & Supp. 2000). Begley & Williams, supra note 293, at 507, 519. In fact, no NPDES permit may be issued without either the state's certification or its waiver thereof. 33 U.S.C. § 1341(d). FWPCA Discharge Requirements, at 213, 221.

³²⁷ 40 C.F.R. § 122.46(a) (2000).

³²⁸ Begley & Williams, *supra* note 293, at 507.

³²⁹ 33 U.S.C. §§ 1319, 1342(b)(1); 40 C.F.R. §§ 122.62, 122.64 (2000).

³³³ 33 C.F.R. pts. 320–29 (1999).

lations.³³⁴ The FWPCA prohibits discharge of dredged or fill material into navigable waters where the EPA concludes that such discharge will adversely affect municipal water supplies; shellfish beds; or fishery, wildlife, or recreational areas.³³⁵ Such discharges are prohibited if there is a practicable alternative that would have a less deleterious impact upon the ecosystem, taking into account the construction cost, technology, and logistics in light of the project's overall purposes.³³⁶

The term "dredged material" is defined as "material that is excavated or dredged from waters of the United States."³³⁷ The waters to which such legislation is applicable are broadly defined as "waters of the United States," which includes all waters that are currently or were in the past used for interstate or foreign commerce or may be susceptible to such use; all interstate waters; and all other waters, including, intrastate lakes, rivers, streams, and wetlands.³³⁸

Federal wetland protection has taken a number of forms. Since 1989, the U.S. government has embraced a "no-net-loss" policy toward wetlands, requiring wetland loss be mitigated by upgrading wetlands elsewhere. Executive Order 11990 directs federal agencies to avoid possible adverse impacts associated with the destruction or modification of wetlands and to avoid undertaking or providing assistance for new construction located in wetlands.³³⁹ The FHWA regulations have established a preference for wetland mitigation banking in mitigating wetlands impacts caused by federallyfunded highway transportation projects.³⁴⁰ In mitigation banking, wetlands are restored, created, or enhanced in order to provide compensatory mitigation for unavoidable impacts to wetlands caused by current or past federally-funded highway projects.³⁴¹

G. THE RESOURCE CONSERVATION AND RECOVERY ACT

The Resource Conservation and Recovery Act of 1976 (RCRA) is a waste management regime aimed at controlling hazardous and solid wastes from cradle to grave or from generation to disposal.³⁴² RCRA employs cradle-

³³⁶ Sylvester v. U.S. Army Corps of Eng'rs, 882 F.2d 407, 409–10 (9th Cir. 1989); La. Wildlife Fed'n v. York, 761 F.2d 1044, 1047–48 (5th Cir. 1985);

337 40 C.F.R. § 232.2 (2000).

 $^{\rm 338}$ 40 C.F.R. § 230.3(s) (2000).

- ³³⁹ 42 Fed. Reg. 26961 (May 24, 1977).
- ³⁴⁰ 65 Fed. Reg. 82913 (Dec. 29, 2000).
- ³⁴¹ *Id.* at 82915.

³⁴² 42 U.S.C.A. §§ 6901 *et seq.* (1995 & Supp. 2000). The implementing regulations are at 40 C.F.R. pts. 124, 260–272 (1999). RCRA was enacted as a replacement of the Solid Waste Disposal Act. In 1984, RCRA was comprehensively amended to

tions in pollution discharges. Natural Resources Defense Council, Inc. v. Costle, 568 F.2d 1369, 1380 (D.C. Cir. 1977). See generally Hall, The Clean Water Act of 1977, 11 NAT. RESOURCES L. 343, 365–69 (1978).

³³⁰ Conservation Law Found. v. Federal Highway Admin., 827 F. Supp. 871, 881, 885–86 (D. R.I. 1993).

 $^{^{\}scriptscriptstyle 331}$ 33 U.S.C. § 1344 (1986 & Supp. 2000).

³³² 40 C.F.R. § 232.3(a) & (b) (2000).

³³⁴ 40 C.F.R. pt. 230 (1999). Conservation Law Found. v. Federal Highway Admin., 827 F. Supp. 871, 885–86 (D. R.I. 1993).

 $^{^{\}rm 335}$ 33 U.S.C.A. § 1344(c) (1986 & Supp. 2000); see 40 C.F.R. §§ 230.10(b) & (c) (2000).

to-grave regulations that govern the generation, transportation, storage, and disposal of waste products and aim to prevent releases of waste into the environment. RCRA is particularly aimed at controlling land-based environmental contamination.

Congressional concern about unsound solid waste management practices led to the promulgation of the RCRA.³⁴³ The basic structure of RCRA was established in 1976 and continues to the present. The Act established a system for identifying and listing hazardous wastes; a cradle-to-grave tracking system; standards for generators and transporters of hazardous wastes and for operators of treatment, storage, and disposal facilities (TSD); a permit system to enforce these standards; and a procedure for delegating to states the administration of the permitting program.³⁴⁴ Under RCRA, waste may be controlled under one of two programs—the Hazardous Waste Management Program or the Solid (nonhazardous) Waste Disposal Program.³⁴⁵

1. The Hazardous Waste Management Program

The Hazardous Waste Management Program requires the EPA to promulgate regulations that establish criteria for identifying hazardous waste and to list particular wastes that are found to be hazardous based on characteristics such as toxicity, persistence, flammability, corrosiveness, and other characteristics.³⁴⁶ Once a waste is identified, anyone who generates, transports,

address the handling and disposal of hazardous waste. The Emergency Planning and Community Right to Know Act of 1986 requires that facilities report the storage of hazardous chemicals to various state and community agencies. MARTIN COLE & CHRISTINE BROOKBANK, STRATEGIES TO MINIMIZE LIABILITY UNDER FEDERAL AND STATE ENVIRONMENTAL LAWS (TCRP Legal Research Digest, 1998).

³⁴³ 42 U.S.C. §§ 6901 (1995 & Supp. 2000). Solid waste is defined by the RCRA as: "any garbage, refuse, sludge...and other discarded material...resulting from industrial, commercial, mining and agricultural operations, and from community activities, but does not include...domestic sewage,...irrigation return flows or industrial discharges which are point sources subject to permits under § 402 of the Federal Water Pollution Control Act...." *Id.* § 6903(27) (1998). Hazardous waste is defined as any solid waste that may: "(A) cause, or significantly contribute to an increase in mortality or an increase in serious, irreversible, or incapacitation reversible illness; or (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed." *Id.* at § 6903(5).

The EPA is directed to establish criteria for designating the characteristics of hazardous waste, "taking into account toxicity, persistence, and degradability in nature, potential for accumulation in tissue, and other related factors such as flammability, corrosiveness, and other hazardous characteristics." 42 U.S.C. § 6921(a) (1995 & Supp. 2000).

³⁴⁴ ROBERT PERCIVAL ET AL., ENVIRONMENTAL REGULATION 209 (2d. ed. 1996).

³⁴⁵ The Resource Conservation and Recovery Act of 1976. Pub. L. 94-580, 90 Stat. 2795 (Oct. 21, 1976); 40 C.F.R. pts. 124, 260–272.

³⁴⁶ 42 U.S.C.A. § 6921(a) (1995).

treats, stores, or disposes of that waste is subject to the requirements of the RCRA Hazardous Waste Management Program.

Generators are responsible for determining if their waste is hazardous.³⁴⁷ Any shipments of hazardous waste are given an identification number for the waste to ensure that the waste can be traced and that it reaches its intended destination.³⁴⁸ Generators are also subject to recordkeeping requirements to identify the quantities and constituents of hazardous waste that may be harmful to human health.³⁴⁹

Transporters are required to keep records of any shipments of hazardous waste they transport.³⁵⁰ Transporters must ensure that any wastes they transport are properly labeled.³⁵¹ Transporters of hazardous waste are not only subject to RCRA requirements but must also comply with the Hazardous Materials Transportation Act³⁵² and any regulations promulgated by the Secretary of Transportation.³⁵³

The EPA is required to set standards for TSD facilities.³⁵⁴ Such standards include recordkeeping requirements and provisions for reporting, monitoring, and inspection to ensure that proper steps are being taken to ensure the waste is handled safely.³⁵⁵ The Hazardous Materials Transportation Act also prohibits land disposal of certain specified hazardous wastes.³⁵⁶ Operators of TSD facilities must obtain a permit from the EPA.³⁵⁷

Certain reclaimable waste products are exempt from RCRA, including proper reclamation of several generated by transit providers, such as spent lead-acid batteries, industrial ethyl alcohol, and used motor oil.³⁵⁸ RCRA also allows states to operate and enforce their own hazardous waste management program. For example, many states regulate aboveground and underground storage tanks through registration requirements. Many transit providers use such tanks to store fuel and oil for their vehicles. Leaks can contaminate the soil or groundwater or surface water near the tank site.³⁵⁹

2. The Solid Waste Disposal Program

The objective of the Solid Waste Disposal Program is to assist in developing and encouraging methods for the disposal of solid (nonhazardous) waste that are envi-

³⁴⁷ Id. § 6922.

- ³⁴⁹ *Id.* § 6922(a)(1).
- ³⁵⁰ 42 U.S.C. § 6923 (1995).
- 42 0.5.0. 9 0923 (1995).
- 351 Id. at 36923(a)(2).
- ³⁵² Pub. L. 93-633, 88 Stat. 2156 (1975).
- 353 42 U.S.C. § 6923 (1995).
- ³⁵⁴ 42 U.S.C. § 6924 (1995 & Supp. 2000).
- ³⁵⁵ Id. § 6924(a)(1).
- $^{^{356}}Id.$ § 6924() ().
- ³⁵⁷ 42 U.S.C. § 6925 (1995 & Supp. 2000).

 $^{\scriptscriptstyle 358}$ 40 C.F.R. § 266.80 (1999). Cole & Brookbank, supra note 342, at 5.

³⁵⁹ Id. at 7.

³⁴⁸ Id. § 6922(a)(2).

ronmentally sound and maximize valuable resources.³⁶⁰ The Program requires the EPA to establish guidelines for the development of state waste disposal plans, including prohibiting open dumping, except in landfills, and establishing criteria for sanitary landfills to protect human health and the environment from potential adverse effects from disposal of solid waste.³⁶¹

3. Hazardous Materials Transportation

The Hazardous Materials Transportation Act³⁶² regulates the movement of hazardous materials, imposing specific requirements upon the classification, packaging, transportation, and handling of such materials, as well as incident reporting.³⁶³ Usually, transit providers are not engaged in the transportation of hazardous material, but they may be shippers or receivers of such material.

H. THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT

1. Overview of CERCLA

In 1980, Congress enacted the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)³⁶⁴ as a companion to RCRA. While RCRA is aimed at prospectively regulating the treatment, storage, and disposal of hazardous wastes, CERCLA is primarily a retroactive statute intended to impose strict liability on parties responsible for the release or threat of release of hazardous substances.³⁶⁵ Its purpose is to create a broad definition of parties strictly liable for

³⁶² 49 U.S.C. § 5101 et seq. (2000).

³⁶³ *Id.*, 49 C.F.R. subtit. B, ch. 1, subch. C, pts. 171–180 (1999).

³⁶⁴ 42 U.S.C. §§ 9601 et seq. (2000).

 $^{\scriptscriptstyle 365}$ Cole & Brookbank, supra note 342. Hazardous Substance is defined as:

(A) any substance designated pursuant to section 311(b)(2)(A) of the Federal Water Pollution Control Act [38 U.S.C. § 1321(b)(2)(A)], (B) any element, compound, mixture, solution, or substance designated pursuant to section 102 of this Act [42 U.S.C. § 9602], (C) any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the Solid Waste Disposal Act [42 U.S.C. § 6921] (D) any toxic pollutant listed under section 307(a) of the Federal Water Pollution Control Act [33 U.S.C. §1317], (E) any hazardous air pollutant listed under section 112 of the Clean Air Act [42 U.S.C. § 7412], and (F) any imminently hazardous chemical substance or mixture with respect to which the Administrator has taken action pursuant to Sections of the Toxic Substances Contract Act [15 U.S.C. § 2606]. The term does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (A) through (F) of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).

 $42 \; U.S.C.A. \; \S \; 9601(14) \; (2000).$

cleanup costs.³⁶⁶ The EPA has regulatory jurisdiction over CERCLA.³⁶⁷ The statute can be divided into four basic elements: information collection, federal authority to respond and clean up hazardous substances, the Hazardous Substance Response Trust Fund [Superfund], and liability for responsible parties.³⁶⁶

CERCLA requires any person in charge of a "facility" to notify the National Response Center (NRC) of any hazardous substance release in excess of those permitted by the statute.³⁶⁹ This notification requirement allows the EPA to monitor problem areas throughout the country and develop suitable response plans.³⁷⁰ CERCLA also gives the EPA broad authority to request and access information relevant to the release or threat of release of hazardous substances.³⁷¹ This authority allows the EPA to enter facilities and obtain samples of suspected hazardous substances or other pollutants.³⁷² The access and information provisions of CERCLA are the first steps leading to the removal and remediation of hazardous substances.

Response and cleanup of hazardous wastes begins with the authority Congress granted to the President, and subsequently delegated to the EPA, to remove or take remedial action in response to the release or threatened release of hazardous substances.³⁷³ Federal action to clean up hazardous substances must be consistent with the National Consistency Plan (NCP), the EPA's guide for cleanup activities.³⁷⁴ The NCP includes the National Hazardous Response Plan (NHRP), which establishes "procedures and standards for responding to releases of hazardous substances, pollutants, and contaminants...."³⁷⁵ The NCP also includes the Hazard Ranking System (HRS), which assesses the degree of

³⁶⁷ STEVEN FERREY, ENVIRONMENTAL LAW: EXAMPLES AND EXPLANATIONS 302 (Aspen 1997).

³⁶⁹ 42 U.S.C. § 9603(a) (2000). Facility is defined as:

(A) any building, structure, installation, equipment, pipe or pipeline...well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, or aircraft, or (B) any site or area where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located; but does not include any consumer product in consumer use or any vessel.

42 U.S.C. § 9601(9) (2000).

³⁷⁰ FERREY, *supra* note 367, at 303.

 $^{\scriptscriptstyle 371}$ 42 U.S.C. § 9604(e) (2000); FERREY, supra note 367, at 303.

372 42 U.S.C. § 9604(e)(4) (2000).

³⁷³ 42 U.S.C. § 9604(a) (2000).

³⁷⁴ 42 U.S.C. § 905 (2000); FERREY, *supra* note 367, at 307. The NCP is also referred to as the National Oil and Hazardous Substances Pollution Contingency Plan. The NCP was originally enacted to provide a guide to the federal government for responding to oil spills and releases of hazardous substances. The NCP has expanded over the years to include responsive strategies consistent with the Clean Water Act of 1972 and the Oil Pollution Act of 1990.

 $^{\rm 375}$ 42 U.S.C. § 9605(a) (2000).

³⁶⁰ 42 U.S.C. § 6941 (1995).

³⁶¹ 42 U.S.C. § 6944 (1995).

³⁶⁶ Cole & Brookbank, *supra* note 342, at 7.

 $^{^{368}}$ Id.

risk to the environment and human health at facilities and contaminated sites.³⁷⁶ The HRS screening process is the mechanism by which the EPA ultimately lists uncontrolled waste sites on the National Priorities List (NPL).³⁷⁷ The NPL is a listing of facilities posing health and environmental threats that may warrant the EPA's further examination.³⁷⁸ These provisions granting the EPA federal authority to address the releases or potential releases of hazardous substances lead to the mechanisms to fund cleanups and enforcement against liable parties.

CERCLA established the Superfund, which finances the costs of governmental response actions and the cleanup costs of private parties where the responsible party cannot be identified or is unable to act.³⁷⁹ The trust was originally funded primarily by direct taxes on sales from petroleum and some chemical companies.³⁸⁰ In 1986, Congress amended CERCLA through the Superfund Amendments and Reauthorization Act (SARA),³⁸¹ which:

• [S]tressed the importance of permanent remedies and innovative treatment technologies in cleaning up hazardous waste sites;

• [R]equired Superfund actions to consider the standards and requirements found in other state and federal environmental laws and regulations;

• likelihood that a site has released or has the potential to release hazardous substances into the environment;

• characteristics of the waste (e.g., toxicity and waste quantity); and

 \bullet people or sensitive environments (targets) affected by the release.

Id.

³⁷⁷ EPA, Introduction to the HRS, Superfund Program (last modified Mar. 28, 2001),

http://www.epa.gov/superfund/programs/npl_hrs/hrsint.htm. Id.

³⁷⁸ EPA, *NPL Site Listing Process* (Last updated on Tuesday, October 21, 2003),

 $^{\scriptscriptstyle 379}$ 42 U.S.C. § 9611–9612 (2000); FERREY, supra note 367, at 310.

 $^{\rm 380}$ John C. Cruden, CERCLA Overview, ALI-ABA 397, 399 (June 25–29, 2001); FERREY, supra note 367, at 310. Total funding was set at \$1.6 billion in 1981.

³⁸¹ EPA, *SARA Overview* (last modified Mar. 28, 2001), http://www.epa.gov/superfund/action/law/sara.htm. Congress also increased the trust to \$8.5 billion. • [P]rovided new enforcement authorities and settlement tools;

• [I]ncreased state involvement in every phase of the Superfund program;

• [I]ncreased the focus on human health problems posed by hazardous waste sites;

• [E]ncouraged greater citizen participation in making decisions on how sites should be cleaned up; and

 \bullet [I]ncreased the size of the trust fund to \$8.5 billion. $^{\scriptscriptstyle 382}$

CERCLA authorizes the EPA to use Superfund monies when there is a release or "substantial threat" of release of any hazardous substance into the environment.³⁸³ Monies may be spent to "remove" or "provide for remedial action" in response to the hazardous substance.³⁸⁴

Pursuant to the NCP, the EPA's process for cleaning up hazardous wastes initially requires that the contaminated site be listed on the NPL.³⁸⁵ Next, the EPA must follow a three-step process to determine the proper remedy for the listed site: (1) prepare a Remedial Investigation and Feasibility Study (RI/FS) to determine the degree of contamination and possible remedial alternatives;³⁸⁶ (2) develop a plan to remedy the contaminated site;³⁸⁷ and (3) review public comments and consult with affected state and other agencies.³⁸⁸ After complying with this process, the EPA makes its final decision entitled the Record of Decision (ROD), which is available for public comment prior to implementation of the decided remedial action.³⁸⁹

 $^{\scriptscriptstyle 382}$ Id. SARA also requires the EPA to adjust the HRS to more accurately reflect risk to the environment and human health. Id.

 $^{\scriptscriptstyle 383}$ 42 U.S.C. § 9604(a)(1) (2000).

³⁸⁴ *Id*. Removal actions are defined as:

the cleanup or removal of released hazardous substances from the environment, such actions as may be necessary taken in the event of the threat of release of hazardous substances into the environment, such actions as may be necessary to monitor, assess, and evaluate the release or threat of release of hazardous substances, the disposal of removed material, or the taking of such other actions as may be necessary to prevent, minimize, or mitigate damage to the public health or welfare or to the environment, which would otherwise result from a release or threat of release....

 $42 \; U.S.C. \; \S \; 9601(23) \; (2000).$

Remedial action is defined as:

Those actions consistent with permanent remedy taken instead of or in addition to removal actions in the event of a release or threatened release of a hazardous substance into the environment, to prevent or minimize the release of hazardous substances so they do not migrate to cause substantial danger to present or future public health or welfare or the environment....

42 U.S.C.A. § 9601(24) (2000).

 $^{\scriptscriptstyle 385}$ Cruden, supra note 380, at 397, 405.

 $^{\scriptscriptstyle 386}$ See 40 C.F.R. 300.430(a), (d), and (e), for a discussion of the purpose of the RI/FS.

³⁸⁷ 40 C.F.R. 300.430(a)(2).

³⁸⁸ Cruden, *supra* note 380, at 397,405.

389 42 U.S.C. § 9617(a); 40 C.F.R. 300.430(f)(1)(ii).

³⁷⁶ 42 U.S.C. § 9605(c) (2000); EPA, *Introduction to the HRS*, *Superfund Program* (last modified Mar. 28, 2001), http://www.epa.gov/superfund/programs/npl_hrs/hrsint.htm. The HRS uses a scoring system to rank potentially harmful sites. Numerical values are assigned to a site based upon factors in three categories:

http://www.epa.gov/superfund/sites/npl/npl_hrs.htm. Listing on the NPL does not necessarily mean the EPA will order a cleanup response at the site. Rather, the NPL is primarily an informational tool, which allows states and the public to monitor the listed sites and determine if a cleanup response is necessary.

CERCLA authorizes three means of cleaning up a contaminated site: (1) the EPA may conduct its own cleanup using Superfund money; (2) the EPA may order the responsible parties to carry out the cleanup, or (3) third parties may clean up the site and recover costs incurred from potentially responsible parties (PRPs), or file a claim from reimbursement from the Superfund.³⁹⁰ The EPA may order PRPs to clean up hazardous substances when there "may be an imminent and substantial endangerment to the public health or welfare or the environment because of the actual or threatened release of hazardous substance from a facility...."391 This order is called the Unilateral Administrative Order (UAO) and failure to comply with a UAO without "sufficient cause" can result in fines, damages plus interests, and further orders to conduct the cleanup.³⁹²

CERCLA liability is essentially based on four requirements: (1) the release or substantial threat of release; (2) of a hazardous substance; (3) from a vessel or facility; and (4) caused by a responsible party (i.e., PRP).³⁹³ PRPs consist of four classes of persons: (1) current owners and operators of facilities where hazardous substances are released or threatened to be released, (2) owners and operators of facilities at the time substances were disposed, (3) persons who arranged for transportation or disposal or treatment of such substances,³⁹⁴ and (4) persons who accepted such substances for transport for disposal or treatment.³⁹⁵ These parties will be held

³⁹¹ 42 U.S.C. § 9606(a) (2000); EPA, *Superfund* (*CERCLA*) *Enforcement* (last modified Thursday, Oct. 16, 2003), http://www.epa.gov/compliance/cleanup/superfund/getdone/ index.html. "Imminent" in the statute refers to the risk of harm and not the actual harm itself. "[T]he imminence of a hazard does not depend on the proximity of the final effect but may be proven by the setting in motion of a chain of events which would cause serious injury." United States v. Hardage, Civ-80-1031-W slip op. at 3, 4 (W.D. Okla. Dec. 2, 1982), 1982 U.S. Dist. Lexis 17854.

³⁹² 42 U.S.C. § 9606(a)(b) (2000); EPA, Superfund (CERCLA) Enforcement (last modified Thursday, Oct. 16, 2003), http://www.epa.gov/compliance/cleanup/superfund/getdone/ index.html. Sufficient cause can be an "[o]bjectively reasonable, good faith belief that one has a valid defense." United States v. Vertac. Chem. Corp., 480 F. Supp. 870, 885 (E.D. Ark. 1980), quoting, Reserve Mining Co. v. EPA, 514 F.2d. 492, 529 (8th Cir. 1975).

³⁹³ Cruden, *supra* note 380, at 397, 409–10.

³⁹⁴ Liability is extended to any person who arranges for the disposal or treatment of hazardous substances that the person owned or possessed, or who by contract or agreement otherwise arranged for disposal or treatment, or arranged with a transporter for disposal or treatment, of hazardous substances owned or possessed by such person. 42 U.S.C. § 9607(a)(3) (2000). Cole & Brookbank, *supra* note 342, at 9–10.

 395 42 U.S.C. § 9607(a) (2000). Liability is extended to any person who accepts any hazardous substance for transport to a

jointly and severally liable for the costs of responding to the release or threat of release of a hazardous substance.

Transit providers are more likely to be named as a PRP in CERCLA litigation as a generator, typically for problems surrounding the disposal of used lead-acid batteries or used motor oil.³⁹⁶ However, transportation companies have also been held liable as owners and operators.³⁹⁷ The Fifth Circuit U.S. Court of Appeals held several transportation companies liable under CERCLA for the cleanup costs resulting from the rupture of the companies' tanker truck, holding that a tanker truck and the truck terminal is a facility within the CERCLA definition.³⁹⁸ The court based its analysis upon CERCLA's statutory history and congressional intent to extend liability beyond waste disposal sites to include mere owners or operators of CERCLA facilities.³⁹⁹ The court also emphasized that congressional intent was to extend CERCLA to hazardous substance releases, not just disposals at toxic waste facilities.⁴⁰⁰

Though liability is strict, a transit provider may avail itself of certain affirmative defenses if applicable, such as an act of God, an act of war, or an act or omission of a third party.⁴⁰¹ CERCLA also excludes from its definition of hazardous substances "petroleum, including crude oil" so long as the use of petroleum does not result in elevated levels of hazardous substances.⁴⁰² Some transit providers may be eligible to take advantage of the service station dealers exemption for the release of recycled oil.⁴⁰³ Under the condemnation defense, CERCLA also exempts from liability a governmental entity that acquires contaminated property involuntarily.⁴⁰⁴ Under the "due diligence" or "innocent landowners" defense, a landowner may be shielded from liability if it can prove (1) another party was the sole cause of

disposal or treatment facility or sites selected by such a person from which there is a release or threatened release. *Id.* at \$ 9607(a)(4).

³⁹⁶ Cole & Brookbank, *supra* note 342, at 11.

³⁹⁷ See Uniroyal Chem. Co. v. Deltech Corp., 160 F.3d 238 (5th Cir. 1998).

400 *Id.* at 249–50.

 401 42 U.S.C. § 9607(b) (2000). The third party defense is applicable only if it has no connection, contractual or otherwise, with the party seeking to avoid liability. *Id.* Cole & Brookbank, *supra* note 342, at 12.

 $^{\rm 402}$ Natural gas is not excluded. 42 U.S.C. § 9601(14) (2000).

 403 A service station dealer is "any person...where a significant percentage of the gross revenue of the establishment is derived from the fueling, repairing, or servicing of motor vehicles." 42 U.S.C. § 9614(c)(1) (2000).

⁴⁰⁴ The rationale is that unlike private parties, a transportation agency may have little choice as to which property to acquire for expansion. The defense is available to a governmental entity that has the power of eminent domain, whether or not condemnation proceedings took place. Cole & Brookbank, *supra* note 342, at 14.

³⁹⁰ The Penn Central R.R. Corp. v. United States, 862 F. Supp. 437 (Special Court 3R Act 1994); EPA, *Superfund (CERCLA) Enforcement* (last modified Thursday, Oct. 16, 2003), http://www.epa.gov/compliance/cleanup/superfund/ getdone/index.html.

 $^{^{^{398}}}Id.$ at 240.

³⁹⁹ Id. at 257.

the contamination, (2) the other responsible party must not have caused the contamination via a contractual agency or employment relationship with the owner, and (3) the owner must have exercised due care to guard against the foreseeable acts of the third party.⁴⁰⁵ Transit providers that are state agencies may also be eligible for the 11th Amendment shield against a federal court claim brought by a private individual.⁴⁰⁶

If the defenses do not provide immunity from liability, the defendant must then defend itself in the apportionment phase of the litigation. The cleanup costs of a heavily contaminated site may run into the several millions of dollars, for which any single defendant will try to shift to other PRPs. CERCLA allows any PRP to seek contribution from any other PRP.⁴⁰⁷ Though liability under CERCLA may be joint and several, the court may allocate costs among liable parties using equitable factors. The following are some of the factors that have been used by courts to apportion liability:

• The ability of a party to prove that its contribution to the release or disposal of a hazardous substance can be distinguished from those of other parties;

• The amount of the hazardous substance involved in cleanup at the site;

• The toxicity of the hazardous substance;

• The degree of involvement by the parties in the generation, transportation, treatment, storage, or the disposal of hazardous substance;

• The degree of care exercised by the parties in handing the hazardous substance;

• The degree of cooperation by the parties with governmental officials to prevent harm to public health or the environment;

• The financial resources of the party;

• The party's knowledge of the environmental problems at the facility;

• The party's knowledge of the environmental risks;

• The party's financial interest in the site;

 \bullet The party's efforts to prevent harm to the public; and

 \bullet The party's good faith attempts to reach a settlement. 408

The EPA has a strong interest in encouraging settlement between PRPs and cleaning up hazardous substance releases as timely and as efficiently as possible. One mechanism the EPA uses to achieve this end is Orphan Funding.⁴⁰⁹ In cases involving numerous PRPs, such as industrial dumps or landfills, the EPA provides "orphan share funding" in place of the insolvent or obsolete PRPs.⁴¹⁰ The EPA uses Superfund monies to reflect the portion of orphan shares and the identifiable and solvent PRPs can settle for a more equitable and realizable amount for cleanup.

Because CERCLA liability is strict, joint, and several, and triggered by mere land ownership, environmental due diligence must be integrated into all potential real property transactions.⁴¹¹ The scope of a due diligence investigation may depend on the size of the transaction but "it is important to keep in mind that even a relatively small transaction where the target company seems free from environmental concerns may result in substantial and unanticipated costs if potential liabilities are not properly assessed." ⁴¹² Environmental due diligence can be divided into two components: (1) the document and file review, and (2) the environmental audit.⁴¹³

The document and file review should determine whether the real property has any history of noncompliance with environmental regulations or whether internal documents describe any potential environmental problems.⁴¹⁴ The environmental audit can consist of several phases depending on potential or known environmental problems.⁴¹⁵ The Phase-One audit is a simple onsite investigation to discover potential environmental liabilities.⁴¹⁶ If the Phase-One audit results in the discovery of environmental issues, a subsequent Phase-Two and Phase-Three audit should be completed to determine the extent of the problem and whether the transaction should proceed.⁴¹⁷ Transit providers would be well advised to carefully examine any real property before acquiring it.

2. The Paoli Railroad Yard: A Case Study

The cost and complexity of CERCLA litigation is illustrated in the lawsuits filed against the Southeastern Pennsylvania Transportation Authority (SEPTA), the National Railroad Passenger Corporation (Amtrak), and the Consolidated Rail Corporation (Conrail) [collectively referred to as the defendants] in the Paoli Yards dispute, heard multiple times by the federal district court for the eastern district of Pennsylvania and the Third Circuit U.S. Court of Appeals.⁴¹⁸ The Paoli Railroad

⁴¹⁸ See, e.g., In Re: Paoli R.R. Yard PCB Litig., 221 F.3d 449 (3d Cir. 2000); Brown v. SEPTA (In Re: Paoli R.R. Paoli Yard

⁴⁰⁵ Courts examine whether the landowner followed commercially reasonable and customary practices, the special knowledge or experience of the landowner, the relationship between the purchase price and the actual fair market value of the property, the information that was reasonably ascertainable, and how easily the contamination was detectable. Cole & Brookbank, *supra* note 342, at 14.

⁴⁰⁶ Cole & Brookbank, *supra* note 342, at 12.

 $^{^{\}rm 407}$ 42 U.S.C. § 9613(f)(1) (2000).

⁴⁰⁸ Cole & Brookbank, *supra* note 342, at 16–17.

⁴⁰⁹ John C. Cruden, *CERCLA Overview*, ALI-ABA 397, 430 (June 25–29, 2001).

 $^{^{\}scriptscriptstyle 410}$ Id.

⁴¹¹ Allan J. De Lorme and Joyce S. Schlesinger, *Environmental Due Diligence for Business Transactions*, Practicing Law Institute: Real Estate Law and Practice Course Handbook Series (2000).

⁴¹² Gary M. Lawrence, *Overview of Environmental Due Diligence*, Due Diligence in Business Transactions (2001).

 $^{^{^{413}}}Id.$

 $^{^{414}}$ Id.

 $^{^{415}}$ Id.

¹a.

 $^{^{\}scriptscriptstyle 416}$ Id.

 $^{^{}_{417}}Id.$

Yard [the Yard] dates back to 1915, when a facility to repair steam-powered locomotives was built on the site.⁴¹⁹ Beginning around 1940, polychlorinated biphenyls (PCBs) were handled and spread on the ground in the course of maintaining electric cars and servicing train transformers.⁴²⁰ The Yard was owned and operated by the Pennsylvania Railroad from 1939 to 1967. In 1967, that company merged with the New York Central to become Penn Central, which fell into bankruptcy in 1970 and was reorganized with several other northeastern railroads to become Conrail.⁴²¹ SEPTA, Amtrak, and Conrail all owned or operated at the Yard beginning in 1976. Amtrak had owned the Yard since 1976; Conrail operated the Yard between 1976 and 1983; and SEPTA had operated the Yard since 1983. In 1982, Conrail and SEPTA entered into an agreement that transferred Conrail's right to operate the Yard to SEPTA. The transfer agreement provided that Conrail would indemnify SEPTA for any liability it incurred for "any injury or damage to any person or property' or 'contamination of the environment.""422 In its 1983 settlement agreement with Conrail, SEPTA agreed it would "indemnify and hold Conrail harmless from any and all liability ... arising out of the environmental conditions at Paoli Shop or Paoli Yard."423 Due diligence should have revealed that Pennsylvania environmental authorities had discovered PCBs at Paoli Yards in 1979, 3 years before SEPTA acquired it.

The Commonwealth of Pennsylvania first discovered PCBs and other contaminants in the Yard in 1979.⁴²⁴ By

⁴¹⁹ United States v. AMTRAK, No. Civ. A. 86-1094, 1999 WL 199659 at *1, 1999 U.S. Dist. Lexis 4781 (E.D. Pa. Apr. 6, 1999).

 420 Id.

⁴²¹ Id.; Paul Dempsey, Antitrust Law & Policy in Transportation: Monopoly I\$ the Name of the Game, 21 GA. L. REV. 505, 565 (1987); PAUL DEMPSEY & WILLIAM THOMS, LAW & ECONOMIC REGULATION IN TRANSPORTATION 288–93 (Quorum 1986).

 $^{\scriptscriptstyle 422}$ Consolidated Rail Corp. v. United States, 883 F. Supp. 1565, 1572 (Special Court 3R Act 1995).

 $^{^{423}}Id.$

⁴²⁴ United States v. National R.R. Passenger Corp. ("Amtrak"), No. Civ. A. 86-1094, 1999 WL 199659 at *1, 1999 U.S. Dist. Lexis 4871 (E.D. Pa. Apr. 6, 1999); *Paoli Rail Yard* — *General Site Information* (last modified August 6, 2003), http://epa.gov/reg3hwmd/super/PA/paoli-rail/pad.htm; *\$28M Remedy Planned for Paoli Rail Yard*, Superfund Week, Aug. 8, 1997, *available in* 1997 WL 12955967 (Soil at the Yard was contaminated with PCBs and VOCs. The PCBs were found 3

that time, PCBs had leached into the ground, contaminating groundwater and nearby streams.⁴²⁵ The Commonwealth of Pennsylvania issued an Administrative Order, which essentially ordered Amtrak, Conrail, and SEPTA to inspect the Yard, determine the level of contamination, and correct the problem.426 In 1985, the EPA became concerned when its representatives observed unrestricted access to the contaminated property by pedestrians and children.⁴²⁷ The EPA representatives also noted that runoff from the Yard flowed directly to residential neighborhoods.⁴²⁸ The following year, in order to pursue remediation of the Yard through Superfund, the EPA brought suit against the defendants under CERCLA, RCRA, and Section 7 of the Toxic Substances Control Act (TSCA)⁴²⁹ to compel cleanup of the Yard.

Between 1986 and 1988, the EPA conducted a removal action at the Yard and surrounding homes. EPA's removal action included the construction of sedimentation and erosion control facilities, including stormwater collection basins on site, the excavation of 671 cubic yards of soil, and covering over of some 10,000 square yards of soil with a tarpaulin off-site.⁴³⁰ In addition, the EPA removed 3,500 cubic yards of contaminated soil from 35 properties in the neighborhoods surrounding the Yard.⁴³¹ The EPA also closed the nearby Valley Creek to fishing because of PCBs found in the fish and the creek sediment.⁴³²

Since the EPA initiated this action, the parties have signed "five partial preliminary consent decrees" outlining remediation measures for the defendants at the Yard and surrounding areas.⁴³³ In 1990, the EPA placed the Yard on the NPL. In 1992, the EPA issued an ROD requiring extensive excavation and treatment of soil at both the Yard and nearby streams and residential properties.⁴³⁴ The ROD estimated the cost to remedy the contamination at \$28 million.⁴³⁵ In 1992, 1994, and

feet below the surface and the VOCs were found as deep as 10 feet. PCBs are linked to cancer, immune system deficiencies, liver damage, birth defects, and impairment of reproductive systems. Penn Central Corp. v. United States, 862 F. Supp. 437, 444 (Special Court 3R Act 1994)).

 $^{\scriptscriptstyle 425}$ Id. The PCBs from the Yard contaminated the Valley Creek and its tributaries.

426 1999 WL 199659 at 1-2.

 $^{^{427}}Id.$ at 2.

429 Id.; 15 U.S.C. § 2606 (2000); 1999 U.S. Dist. Lexis 4781.

⁴³⁰ *Id.*, 1999 WL 199659 at *3.

⁴³¹ Paoli Rail Yard—General Site Information (last modified August 6, 2003), http://epa.gov/reg3hwmd/super/PA/paolirail/pad.htm.

 $^{\scriptscriptstyle 432}$ Id.

⁴³³ United States v. SEPTA, 235 F.3d 817, 820 (3d Cir. 2000)

 $^{\scriptscriptstyle 434}$ Id. at 821. The ROD is a record decision by the EPA involving public comment. STEVEN FERREY, ENVIRONMENTAL LAW, EXAMPLES AND EXPLANATIONS 308 (1997).

⁴³⁵ *Id.*; *Paoli Rail Yard—General Site Information* (last modified August 6, 2003), http://epa.gov/reg3hwmd/super/PA

PCB Litig)., 113 F.3d 444 (3d Cir. 1997); In Re Paoli R.R. Yard PCB Litig., 35 F.3d 717 (3d Cir. 1994), *cert. denied sub nom*. General Electric. Co. v. Ingram, 513 U.S. 1190 (1995); In the Matter of Penn Central Transp. Co., 944 F.2d 164 (3d Cir. 1991); In Re Paoli R.R Yard PCB Litig., 916 F.2d 829 (3d Cir. 1990); Consolidated Rail Corp. v. United States, 883 F. Supp. 1565 (Special Court 3R Act 1995). American Premier Underwriters, Inc., formerly known as The Penn Central Corporation, was the only Defendant not to settle with the EPA pursuant to the 1999 consent decree. United States v. SEPTA, 235 F.3d 817, 821–22 (2000).

 $^{^{\}scriptscriptstyle 428}$ Id.

1995, the EPA attempted to settle with all of the defendants collectively.⁴³⁶ Settlement attempts were unsuccessful due to the lack of cooperation between the defendants and their disagreement over apportionment and the extent of liability.⁴³⁷ Finally in 1999, the federal court approved a consent decree, which settled liability and contribution issues for the Yard.438 Pursuant thereto, the defendants jointly agreed to pay \$500,000 to the EPA and \$100,000 to the Pennsylvania Department of Environmental Protection.⁴³⁹ In addition, they agreed to pay "\$850,000 to federal and state trustees to settle claims for environmental damage."440 The defendants had already expended approximately \$12 million on the cleanup pursuant to previous consent orders.⁴⁴¹ The EPA apportioned liability in the consent decree based upon the number of years of ownership and the possibility of contamination during those years.⁴⁴² The consent decree also gives "contribution protection" to the defendants and "protection for all remedial actions they have performed or will perform at the [Yard]...."443 The Third Circuit U.S. Court of Appeals upheld the fairness and validity of the consent decree in 2000.44

/paoli-rail/pad.htm. \$28M Remedy Planned for Paoli Rail Yard, Superfund Week, Aug. 8, 1997, available in 1997 WL 12955967.

 436 United States v. National R.R. Passenger Corp. ("Amtrak"), No. Civ. A. 86-1094, 1999 WL 199659 at *4-6 (E.D. Pa. Apr. 6, 1999).

⁴³⁷ Id. at 5–6.

⁴³⁸ *Id.* at 15; American Premier Underwriters, Inc. (formerly The Penn Central Corp.) did not participate in the settlement. *Court OKs \$1.45 Million Settlement Over Paoli Rail Yard Cleanup*, Associated Press Newswires at 18:41 (Apr. 13, 1999).

⁴³⁹ Court OKs \$1.45 Million Settlement Over Paoli Rail Yard Cleanup, Associated Press Newswires at 18:41 (Apr. 13, 1999); Rail Companies Pay \$1.45 Million to Government for Paoli Rail Yard Superfund Cleanup, U.S. Water News Online (May 1999) (visited Sept. 24, 2001), http://www.uswaternews.com/ archives/arcrights/9raicom5.html.

⁴⁴⁰ Court OKs \$1.45 Million Settlement Over Paoli Rail Yard Cleanup, Associated Press Newswires, Apr. 13, 1999, at 18:41.

⁴⁴¹ Rail Companies Pay \$1.45 Million to Government for Paoli Rail Yard Superfund Cleanup, U.S. Water News Online (May 1999) (visited Sept. 24, 2001), http://www.uswaternews. com/archives/arcrights/9raicom5.html.

 $^{\rm 442}$ United States v. SEPTA, 235 F.3d 817, 823–4 (3d Cir. 2000).

 $^{_{443}}Id.$ at 821–22.

⁴⁴⁴ *Id.* at 823–26. American Premier Underwriters, Inc., challenged the validity and fairness of the consent decree based upon the apportionment equation and the indemnify protections. The Third Circuit U.S. Court of Appeals affirmed the district court's approval of the consent decree and held that the indemnity protections were permissible under CERCLA and that the apportionment equation was fair. *Id.* The EPA issued American Premier Underwriters, Inc., a UAO, which requires it to perform according to the requirements of the ROD at an estimated expense of \$6.8 million. National Association of Attorney Generals, *Court Affirms Paoli RR Consent Decree, Including Contribution Protection*, 2 NAAG NAT'L ENV'T ENFORCEMENT J. 14 (Mar. 2001). In addition, American

Also in 1986, 38 plaintiffs who lived or worked in the vicinity of the Yard brought suit in the Eastern District of Pennsylvania against the corporations that maintained the Yard and sold the PCBs.445 The plaintiffs sought to recover present and future actual and emotional damages for various severe and unusual illnesses caused by exposure to PCBs, and also for property damage.446 After 14 years of contentious litigation, the defendants ultimately prevailed.447 The jury found that no property damage resulted from the PCB contamination, and that the contamination caused no actual personal injury.⁴⁴⁸ The jury also found that the medical monitoring tests were unnecessary and "excessive."449 Despite this victory for the defendants, the litigation had not concluded. In 2001, the case was on remand from the Third Circuit U.S. Court of Appeals with re-

445 In Re: Paoli RR Yard PCB Litig., 113 F.3d 444, 451 (3d Cir. 1997). The defendants included Monsanto Company, General Electric Corporation, Westinghouse Corporation, SEPTA, and the City of Philadelphia. In Re: Paoli RR Yard PCB Litig., 113 F.3d at 444; Defense Verdict Returned in Paoli Rail Yard Case, 17 Mealey's Litigation Reports: Superfund, Dec. 1999, at 16. SEPTA filed third-party complaints against Westinghouse Electric, which manufactured some of the transformers used in the Yard; against the Budd Company, manufacturer of some of the rail cars; and against Penn Central. In the Matter of Penn Central Transp. Co., 944 F.2d 164, 166 (3d Cir. 1991). The plaintiffs also named Amtrak as a defendant but the parties settled prior to trial. U.S. Jury Rejects Longstanding Claim of PCB Damage from Paoli Rail Yard, Air/Water Pollution Report's Environment Week, Dec. 8, 1995, available in 1995 WL 2404539.

 $^{\scriptscriptstyle 446}$ In Re: Paoli RR Yard PCB Litig., 221 F.3d 449, 454 (3d Cir. 2000).

⁴⁴⁷ In Re: Paoli RR Yard PCB Litig., 221 F.3d at 454. In this landmark decision, the Third Circuit U.S Court of Appeals' recognized the tort of medical monitoring The tort allows plaintiffs to recover for potential, future injuries. The Third Circuit U.S. Court of Appeals established the following criteria for a successful medical monitoring claim:

(1) Plaintiff was significantly exposed to a proven hazardous substance though the negligent actions of the defendant.

(2) As a proximate result of exposure, plaintiff suffers a significantly increased risk of contracting a serious latent disease.

(3) The increased risk makes periodic examinations reasonably necessary.

(4) Monitoring and testing procedures exist which make the early detection and treatment of the disease possible and beneficial.

In Re: Paoli RR Yard PCB Litig., 916 F.2d 829, 852 (3d Cir. 1990)

⁴⁴⁸ U.S. Jury Rejects Longstanding Claim of PCB Damage From Paoli Rail Yard, Air/Water Pollution Report's Environment Week, Dec. 8, 1995, available in 1995 WL 2404539.

Premier Underwriters, Inc., may have to reimburse the EPA for past and future natural resource costs at an estimated \$11 million. *Rail Companies Pay \$1.45 Million to Government for Paoli Rail Yard Superfund Cleanup*, U.S. Water News Online (May 1999) (visited Sept. 24, 2001), http://www.uswaternews. com/archives/arcrights/9raicom5.html.

spect to the issue of damages.⁴⁵⁰ SEPTA settled with most of the plaintiffs for their state tort and Federal Employers Liability Act claims in 2000.⁴⁵¹ However, at this writing approximately 290 actions are still pending in the Pennsylvania state courts with respect to the Paoli Rail Yard.⁴⁵²

In acquiring property, the transit attorney should keep two words in mind at all times: due diligence.

I. THE SAFE DRINKING WATER ACT

The Safe Drinking Water Act⁴⁵³ establishes a program designed to protect underground sources of drinking water from any waste disposal or other operations that might endanger public drinking water supplies. The Act also authorizes the EPA to promulgate regulations to limit contaminants in drinking water systems that have at least 15 service connections or that regularly serve at least 25 individuals. The EPA is required to set maximum goals for any contaminants determined to have an adverse effect on human health and that may occur in public water systems with a frequency and at levels that may threaten human health.⁴⁵⁴ States are given the primary responsibility for enforcing the standards and ensuring that maximum contaminant levels are not exceeded.455 The states also have authority to issue monetary penalties for violations of the Safe Drinking Water Act.

J. WILD AND SCENIC RIVERS

The Wild and Scenic Rivers Act⁴⁵⁷ was enacted to preserve river systems in their natural, free-flowing condition and to protect these rivers and their immediate environment.⁴⁵⁸ To be protected under the Act, the river must "possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values."⁴⁵⁹

The wild or scenic river designation protects these rivers from federal actions that may interfere with the river. The Act forbids the Federal Energy Regulatory

 $^{_{459}}Id.$ at 1271.

Commission (FERC) from licensing any project, specifically dam building, that would directly affect a designated river.⁴⁶⁰ Further, the Act forbids all federal agencies from assisting (by loan, grant, license, or otherwise) in the construction of any water resource project that would have a direct and adverse effect on the river.⁴⁶¹

K. COASTAL ZONE MANAGEMENT ACT AND FLOODPLAINS

The Coastal Zone Management Act⁴⁶² provides financial assistance to states that develop federally approved coastal management plans.463 The Secretary of Commerce may make grants to any coastal state for the purpose of administering that state's management program if it is approved by the Secretary and includes certain elements, including: (1) an identification of the boundaries of the coastal zone subject to the management program; (2) a definition of what shall constitute permissible land uses and water users within the coastal zone; and (3) an identification of how the State will exercise control over the coastal management program.⁴⁶⁴ The Act was amended in 1990 to require states to adopt management measures for controlling nonpoint source pollution of coastal waters.⁴⁶⁵ To be eligible for the state grants, all federal projects must be consistent with the approved state management program.

Executive Order 11988 also requires each agency to evaluate potential effects of any actions it may take on a floodplain; to ensure that its planning programs and budget request reflect consideration of flood hazards and floodplain management (in order to reduce the risk of flood loss and minimize the impact of floods on human safety, health, and welfare); and to restore and

⁴⁶³ The Coastal Zone Management Act of 1972, 16 U.S.C. §§ 1451 *et seq.*, provides assurance of project consistency with the approved state management program.

⁴⁶⁴ *Id.* § 1465 (1985 & Supp. 2000). Other elements required to be included in a management program include: (1) An inventory and designation of areas of particular concern within the coastal zone; (2) Broad guidelines on priorities of uses in particular areas, including specifically those uses of lowest priority; (3) A description of the organizational structure proposed to implement such management program, including the responsibilities and interrelationships of local, area wide, State, regional, and interstate agencies in the management process; (4) A definition of the term 'beach' and a planning process for the protection of, and access to, public beaches and other public coastal areas of environment, recreational, historical, esthetic, ecological, or cultural value; (5) A planning process for energy facilities likely to be located in, or which may significantly affect, the coastal zone, including a process for anticipating the management of the impacts resulting for such facilities; (6) A planning process for assessing the effects of, and studying and evaluating ways to control, or lessen the impact of, shoreline erosion, and to restore areas adversely affected by such erosion. Id.

465 16 U.S.C. § 1455b(g) (Supp. 2000).

⁴⁵⁰ See In Re: Paoli Yard PCB Litig., 221 F.3d at 453–54. The plaintiffs appealed the district court's award of costs in the amount of \$154,129.30. The Court of Appeals remanded the case because the district court failed to consider the plaintiffs' indigency when determining the costs. *Id*.

⁴⁵¹ In Re: Paoli R.R. Yard PCB Litig., No. 86-2229, 87-3227, 87-1190, 87-1258, 2000 WL 1279922 at *1 (E.D. Pa. Sept. 6, 2000).

⁴⁵² In Re: Paoli Yard PCB Litig. 221 F.3d at 454 & n.2.

^{453 42} U.S.C. §§ 300f to 300j-26 (1991 & Supp. 2000).

⁴⁵⁴ *Id.* § 300g-1.(b).

⁴⁵⁵ *Id.* § 300g-2.(a).

⁴⁵⁶ *Id.* § 300 g-2(a)(6).

^{457 16} U.S.C. §§ 1271 et seq. (1985 & Supp. 2000).

 $^{^{\}scriptscriptstyle 458}$ Wild and Scenic Rivers Act of 1968, 16 U.S.C. §§ 1271 et seq., enacted to protect components of the national wild and scenic rivers systems.

⁴⁶⁰ Id. § 1278(a) (1985 & Supp. 2000).

⁴⁶¹ Id. § 1278(b).

⁴⁶² Id. §§ 1451 et seq. (1985 & Supp. 2000).

preserve the natural and beneficial values served by floodplains. $^{\rm 466}$

L. NATIONAL HISTORIC PRESERVATION ACT

"Highways and historic districts mix like oil and water, and when a new highway must go through an historic area, historic preservationists and federal and state highway officials are likely to clash over the preferred route."467 It is important that a transit agency thoroughly review the history of a construction site before it acquires it, or begins construction. In addition to the requirements imposed under Section 4(f) of the Department of Transportation Act (discussed above), Section 106 of the National Historic Preservation Act⁴⁶⁸ requires the DOT, in consultation with the State Historic Preservation Officer (SHPO), to consider a transportation project's potential effects on historic properties.⁴⁶⁹ The agency must also give the Advisory Council on Historic Preservation [Council] and other interested parties an opportunity to comment on the proposed project.⁴⁷⁰ Transportation funds cannot be approved without the agency's consideration of a project's potential effects on a historic site.471 However, this does not prevent an agency from undertaking planning activities before it has finished considering a project's effects on historic properties.472

If, after consultation, a property is identified as a historic place, the federal transportation agency must determine what kind of effects a proposed transportation project or plan would have on the property. If there are either no historic properties present, or if there are historic properties present but the project will have no effect on them, the agency must provide documentation of the findings to the SHPO.⁴⁷³ If there is no objection within 30 days, then the agency has fulfilled its obligations under the National Historic Preservation Act.⁴⁷⁴ However, if a project is likely to have effects on a his-

⁴⁶⁸ Section 106 of the National Historic Preservation Act, as amended, 16 U.S.C. § 470f (2000). *See also* Executive Order No. 11593 36 F.R. 8921 (May 13, 1971), "Protection and Enhancement of the Cultural Environment," 16 U.S.C. § 470 note (2000); the Archaeological and Historic Preservation Act of 1974, 16 U.S.C. §§ 469a-1 *et seq.* (2000); Advisory Council on Historic Preservation regulations, "Protection of Historic and Cultural Properties," 36 C.F.R. pt. 800 (1999).

469 16 U.S.C. § 470f (2000).

 $^{\rm 471}$ 36 C.F.R. § 800.1(c) (2000).

 $^{\scriptscriptstyle 472}$ Id.

 $^{\scriptscriptstyle 473}$ 36 C.F.R. § 800.4(d) (2000).

 474 Id.

toric property, the agency must invite comments and assess effects.⁴⁷⁵ If an effect is found to be adverse,⁴⁷⁶ the agency and the SHPO must develop alternatives to the project that could avoid, minimize, or mitigate adverse effects on historic properties.⁴⁷⁷ The agency and the SHPO then execute an MOA incorporating the mitigation measures, with the agreement of the Council.⁴⁷⁸ If historical artifacts are discovered during construction, the work comes to a halt until the necessary plans are changed and approved. Like Section 4(f), Section 106 has significant impacts on transit operators during the environmental process.⁴⁷⁹

M. ENERGY CONSERVATION

Congress promulgated the Energy Policy and Conservation Act⁴⁸⁰ to encourage a more efficient use of our limited energy resources.⁴⁸¹ As part of this policy, states are encouraged to develop state energy conservation plans with the goal of reducing the rate of growth of energy demand and minimizing adverse effects of increased energy consumption.⁴⁸² As an incentive, the federal government will provide financial and technical assistance to states in support of energy conservation programs.⁴⁸³ Moreover, FTA assistance for the construction

 475 Id.

 $^{\scriptscriptstyle 476}$ Adverse effects on historic properties include, but are not limited to:

(i) Physical destruction of or damage to all or part of the property; (ii) Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation and provision of handicapped access, that is not consistent with the Secretary's Standards for the Treatment of Historic Properties (36 C.F.R. part 68) and applicable guidelines; (iii) Removal of the property from its historic location; (iv) Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance; (v) Introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features; (vi) Neglect of a property which causes deterioration except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization; and (vii) Transfer, lease, or sale of property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.

36 C.F.R. \$ 800.5(a)(2) (2000).

477 36 C.F.R. § 800.6(a) (2000).

478 36 C.F.R. § 800.6(c) (2000).

 $^{\rm 479}$ See also the Archaeological and Historic Preservation Act of 1974, 16 U.S.C. \S 469a-1 (2000).

⁴⁸⁰ Energy Policy and Conservation Act of 1975, Pub. L. No. 94-163, 89 Stat. 871, 42 U.S.C. §§ 6201, 6321 (2000).

⁴⁸¹ See generally Paul S. Dempsey, Economic Aggression & Self-Defense in International Law: The Arab Oil Weapon and Alternative American Responses Thereto, 9 CASE W. RES. J. INT^{*}L L. 253 (1977).

482 42 U.S.C. § 6321 (1995 & Supp. 2000).

⁴⁸³ *Id.* § 6321(b).

⁴⁶⁶ 42 Fed. Reg. 26951 (May 24, 1977). Executive Order No. 11990, 42 F.R. 26961 (May 24, 1979), as amended, "Protection of Wetlands," 42 U.S.C. § 4321 note. Executive Order No. 11988, "Floodplain Management," 42 U.S.C. § 4321 note.

⁴⁶⁷ Concerned Citizens Alliance, Inc. v. Slater, 176 F.3d 686, 690 (3d Cir. 1999) (holding under Section 4(f) that the Secretary's choice of a highway location through a historic district was not arbitrary and capricious).

 $^{^{\}scriptscriptstyle 470}$ Id.

tion, reconstruction or modification of buildings requires completion of an energy assessment. $^{\rm 484}$

In developing state conservation plans, there are some TCMs that a plan is required to have in order for the state to receive federal funding to implement the plan. A state conservation plan must include programs to promote the availability and use of carpools, vanpools, and public transportation. A state must have at least one of the following programs in at least one urban area with a population of at least 50,000 or in the largest urban area in the state: (i) a carpool/vanpool matching and promotion campaign; (ii) park and ride lots; (iii) preferential traffic control for carpoolers and public transportation patrons; (iv) preferential parking for carpools and vanpools; (v) variable work schedules; (vi) improvement in transit level of service for public transportation; (vii) exemption of carpools and vanpools from regulation carrier statutes; (viii) parking taxes, parking fee regulations, or surcharge on parking costs; (ix) full-cost parking fees for State and/or local government employees; (x) urban area traffic restrictions; (xi) geographical or time restrictions on automobile use; or (xii) area or facility tolls. 485 Also, a program may include programs to increase transportation energy efficiency, including programs to accelerate the use of alternative transportation fuels for government vehicles, fleet vehicles, taxis, mass transit, and privately owned vehicles.486

In their traffic mitigation program, the 1990 Amendments to the Clean Air Act included the promotion of carpooling and ridesharing to reduce pollution.⁴⁸⁷ The 1990 Amendments attempted to transform the voluntary nature of carpooling into a mandated element of an integrated environmental policy.⁴⁸⁸ The Amendments spawned state and regional legislation that requires employers to reduce VMT by commuting employees. Typically, this is accomplished by ridematching, carpooling, and vanpooling.⁴⁸⁹ Though the principal focus of the Clean Air Act is environmental protection, like the Energy Policy and Conservation Act, it too encourages conservation of energy resources.

Furthering the conservation goals of earlier legislation, the Energy Policy Act of 1992 established a goal of having alternative fuels replace 10 percent of the petroleum consumed by 2000, and 30 percent by 2010, in part by mandating that a portion of new vehicles purchased by federal and state agencies be alternative fuel vehicles.⁴⁹⁰ By 1999, however, only 0.4 percent of all vehicles were alternative fuel vehicles; in 1998, alternative fuels had replaced only 3.6 percent of all highway gasoline use, far short of Congress's objective.⁴⁹¹

The EPA, DOT, and the Department of Energy have adopted programs to encourage the use of alternative fuels in vehicles, including transit buses. TEA-21 established a Clean Fuels Formula Grant Program, which authorized up to \$200 million a year to finance the purchase or lease of clean diesel buses and facilities in nonattainment areas. However, FTA has not implemented the program due to a lack of funding. By 1997, 5 percent of the nation's 50,000 transit buses operated on an alternative fuel system, most typically compressed natural gas.⁴⁹²

N. USE OF RECYCLED PRODUCTS

Federal transportation agencies are encouraged to use items composed of the highest possible percentage of recovered materials practicable, if the agency purchases more than \$10,000 worth of the product in a fiscal year.⁴⁹³ For transportation projects, such materials include: "(a) traffic barricades and traffic cones used in controlling or restricting vehicular traffic; (b) parking stops made from concrete or containing recovered plastic or rubber; (c) channelizers containing recovered plastic, rubber, or steel; (e) flexible delineators containing recovered plastic."⁴⁹⁴ In addition, transportation agencies are encouraged to use road signs containing recovered aluminum and sign supports and posts containing recovered plastic and steel.⁴⁹⁵

O. ENVIRONMENTAL JUSTICE

In 1994, President Clinton signed Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" [the Proclamation].⁴⁹⁶ Its purpose was to ensure

⁴⁸⁴ 49 C.F.R. § 622.301 (1999). The energy assessment must analyze the total energy requirements of a building, including overall design; materials and techniques used in construction; conservation features that may be used; fuel requirements for heating, cooling, and operations; and the kind of energy to be used. *Id*.

 $^{^{\}scriptscriptstyle 485}$ 10 C.F.R. § 420.15(b) (2000).

 $^{^{486}}$ Id. § 420.17(a)(2) (2000).

⁴⁸⁷ Clean Air Amendments of 1970, Pub. L. No. 91-604, 84 Stat. 1676 (1970), as amended, 42 U.S.C. §§ 7401 et seq. (2000).

⁴⁸⁸ Matthew Gagelin, Employer Trip Reduction—Who Is Responsible for Organizing the Carpool?, 1 ENVTLL. 203 (1994).

⁴⁸⁹ RUSSELL LIEBSON & WILLIAM PENNER, SUCCESSFUL RISK MANAGEMENT FOR RIDESHARE AND CARPOOL-MATCHING PROGRAMS (TCRP Legal Research Digest, 1994).

⁴⁹⁰ See Perry Goldschein, Going Mobile: Emissions Trading Gets a Boost From Mobile Source Emission Reduction Credits, 13 UCLA J. ENVTL L. & POL'Y 225 (1994).

 $^{^{\}scriptscriptstyle 491}$ U.S. GENERAL ACCOUNTING OFFICE, ENERGY POLICY ACT OF 1992: LIMITED PROGRESS IN ACQUIRING ALTERNATIVE FUEL VEHICLES AND REACHING FUEL GOALS at 9 (Feb. 2000).

⁴⁹² U.S. GENERAL ACCOUNTING OFFICE, MASS TRANSIT: USE OF ALTERNATIVE FUELS IN TRANSIT BUSES at 2 (Dec. 1999).

⁴⁹³ 42 U.S.C. § 6962 (1995 & Supp. 2000). The use of recycled products is required by EPA guidelines at 40 C.F.R. pt. 247 (1999), implementing Section 6002 of the Resource Conservation and Recovery Act, as amended, 42 U.S.C. § 6962 (2000).

⁴⁹⁴ 40 C.F.R. § 247.13 (2000).

⁴⁹⁵ *Id.* § 247.17(f) (2000).

⁴⁹⁶ Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, Exec. Order No. 12898, 59 Fed. Reg. 7629 (1994).

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that each federal agency identify and address disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.⁴⁹⁷ The Proclamation required that "each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and lowincome populations...."⁴⁹⁸ Although the Proclamation does not define "environmental justice," it creates a list of procedures that all federal agencies must follow to accomplish it.⁴⁹⁹

In 1992, the EPA created the Office of Environmental Justice [the Office].⁵⁰⁰ The Office manages and supervises the incorporation of environmental justice into the EPA's programs and policies.⁵⁰¹ The Office also works with the other federal agencies that comprise the "Interagency Federal Working Group on Environmental Justice" to ensure that all federal programs consider and integrate environmental justice policy.⁵⁰² The administrators of each major federal agency or their designees comprise the Interagency Working Group.⁵⁰³ This group, guided by the Administrator of the EPA, develops the strategies and procedures for all federal agencies to follow to achieve environmental justice.⁵⁰⁴

http://epa.gov/compliance/environmentaljustice/index.html. The EPA, through the Office of Compliance and Enforcement, defines "environmental justice" as follows:

Environmental Justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. *Fair treatment* means that no group of people, including racial, ethnic, or socioeconomic groups, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies....

 501 Id.

⁵⁰² *Id.* Due to concern over the proper implementation and consideration of environmental justice in federal agency decisions, the EPA created the National Environmental Justice Advisory Council in 1993. Twenty-five members of "stakeholder" groups comprise the Council. Stakeholders include, "community-based organizations; business and industry; academic and educational institutions; state and local government agencies; tribal government and community groups; nongovernmental organizations and environmental groups." *Id.* The purpose of the Council is to act as an independent source of criticism and advice to the EPA regarding implementation and consideration of environmental justice. *Id.*

 $^{\scriptscriptstyle 503}$ Id. (providing a complete list of federal agencies in the working group).

⁵⁰⁴ Id.; Robert R. Kuehn, A Taxonomy of Environmental Justice, 30 ENVT⁴L L. REP. 10681 (Sept. 2000). Each federal agency must achieve environmental justice by:

at a minimum: (1) identifying and addressing disproportionately high and adverse human health or environmental effects of agency programs, policies, and activities on minority populations and low-income populations; (2) promoting enforcement of all health and environmental statutes in areas with minority or low-income populations; (3) ensuring greater public participation; (4) improving research and data collection relating to the health and environment of minority and low-income populations; and (5) identifying differential patterns of consumption of natural resources among minority and low-income populations.⁵⁰⁵

Pursuant to the Proclamation, the EPA created permitting regions.⁵⁰⁶ Within each region, the EPA collects, "census data, source location data, data reporting the quantity of toxic chemical releases from the most recent toxic release inventory, ...data from the Region's own permitting compliance system...location of the proposed facility, the existence of other facilities, and maximum emission data....⁵⁰⁷ An analysis of all these factors determines whether there is a disparate impact on the community resulting in discrimination.⁵⁰⁸ Inherent problems arise from determining disparate impact through the above analysis. Foremost is the ability of EPA to collect accurate data and the community challengers' ability to assess the correctness of the technical and scientific collections.

The DOT developed an Environmental Justice Strategy to comply with the Executive Order in 1995.⁵⁰⁹ The DOT's compliance with the Environmental Justice Strategy [strategy] is accomplished primarily within the framework of NEPA.⁵¹⁰ Environmental justice concerns must be addressed in the DOT's preparation of every EIS.⁵¹¹ The strategy involves the consideration of adverse effects on minority and low-income populations during the transportation planning process, and relies heavily on public involvement from members of the subject populations. If a transportation project is identified as likely to have disproportionately high adverse effects on subject populations, the transportation agency must propose measures to avoid, minimize, or

⁵⁰⁹ Department of Transportation (DOT) Order To Address Environmental Justice in Minority Populations and Low-Income Populations, Executive Order 12898, 62 Fed. Reg. 18377 (1997).

 510 Id. at 18379.

⁵¹¹ Id. at 18380; see also United States Dep't of Transp., Environmental Justice and Mass Transit Projects (visited Aug. 31, 2001), http://www.fta.dot.gov/office/planning/ep/subjarea/ envjust.html (explaining the DOT's policies and procedures for complying with the Proclamation).

 $^{^{497}} Id.$

 $^{^{498}}$ Id.

 $^{^{499}}$ Id.

⁵⁰⁰ EPA: Frequently Asked Questions,

⁵⁰⁵ *Id*. See 536.

 ⁵⁰⁶ See Sheila R. Foster, Meeting the Environmental Justice Challenge: Evolving Norms in Environmental Decisionmaking, 30 ENVTL L. REP. 10992 (Nov. 2000). See 535/36.

 $^{^{507}}$ Id.

 $^{^{508}}$ Id.

mitigate the adverse effects and consider alternatives to the proposed project. $^{\rm 512}$

Environmental justice is a legal and policy tool that has been raised in environmental planning disputes and relocation issues. The goal of the DOT in addressing environmental justice issues is to improve the overall transportation decision-making process.⁵¹³ If appropriately implemented, environmental justice in conjunction with transportation decision-making will:

• Make better transportation decisions that meet the needs of all people.

• Design transportation facilities that fit more harmoniously into communities.

• Enhance the public-involvement process, strengthen community-based partnerships, and provide minority and low-income populations with opportunities to learn about and improve the quality and usefulness of transportation in their lives.

• Improve data collection, monitoring, and analysis tools that assess the needs of and analyze the potential impacts on minority and low-income populations.

• Partner with other public and private programs to leverage transportation-agency resources to achieve a common vision for communities.

• Avoid disproportionately high and adverse impacts on minority and low-income populations.

• Minimize and/or mitigate unavoidable impacts by identifying concerns early in the planning phase and providing offsetting initiatives and enhancement measures to benefit affected communities and neighborhoods.⁵¹⁴

In addition to the agency requirements and remedies for environmental justice concerns, there are constitutional and statutory remedies under the Equal Protection Clause and Title VI of the 1964 Civil Rights Act [Title VI].

Environmental justice litigation under the Equal Protection Clause relies primarily on the holdings of Washington v. Davis⁵¹⁵ and Village of Arlington Heights v. Metropolitan Housing Development Corp.⁵¹⁶ In Washington, the court held that disproportionate impact on racial minorities by a governmental action is relevant to prove intent or purpose to discriminate based on race, but that alone it is not enough for a Equal Protection Clause violation.⁵¹⁷ The court in *Village of Arlington Heights* established a five-part test to determine whether the government acted with the intent or purpose to racially discriminate.⁵¹⁸

The five factors a court will examine to determine if there is illegal racism are:

1. whether the impact of the official action falls more heavily on one race than another and cannot be explained in any other way besides race;

2. the historical context of the decision;

3. the sequence of events immediately preceding the contested decision;

 $\ensuremath{4}\xspace.$ deviations from normal decision-making processes; and

5. the legislative and administrative history of the particular decision. $^{\scriptscriptstyle 519}$

This intent test has proven very difficult for plaintiffs to meet, and only those cases with the most obvious and unequivocal discrimination are provided a remedy under the Equal Protection Clause.⁵²⁰ Along with the Constitutional protections, Title VI also provides remedies for discrimination within the environmental justice framework.

In 1994, the NAACP Legal Defense & Educational Fund, Inc., (LDF) initiated the first civil rights class action lawsuit to challenge a transportation agency decision under Title VI.⁵²¹ The Los Angeles County Metropolitan Transportation Authority (MTA) planned to increase its bus fare by 25 cents and discontinue its unlimited \$42 monthly bus pass.⁵²² The federal district court in Los Angeles certified the class action and designated the plaintiffs as the "poor minority and other riders of MTA buses who are denied equal opportunity to receive transportation services because of the MTA's operation of a discriminatory mass transportation system."⁵²³ In October 1996, the parties signed a consent decree that settled the suit. The settlement included the reduction of overcrowding on MTA buses and a contin-

⁵¹⁷ Washington v. Davis, 426 U.S. 229.

⁵²⁰ Edward Patrick Boyle, It's Not Easy Bein' Green: The Psychology of Racism, Environmental Discrimination, and the Argument for Modernizing Equal Protection Analysis, 46 VAND. L. REV. 937, 949, 952–53 (1993).

⁵²¹ See Labor/Community Strategy Center v. L.A. County Metro. Transp. Auth., 263 F.3d 1041 (9th Cir. 2001), see also Environmental Defense, *Fighting for Equality in Public Transit: Labor Community Strategy Center v. MTA* (visited Aug. 31, 2001) (providing an in-depth overview of the conditions and proceedings leading up to the consent decree).

⁵²² Environmental Defense, Fighting for Equality in Public Transit: Labor Community Strategy Center v. MTA (visited Aug. 31, 2001).

 523 Id.

⁵¹² 62 Fed. Reg. at 18380.

⁵¹³ United States Dep't of Transp., An Overview of Transportation and Environmental Justice (last modified May 2000), http://www.fhwa.dot.gov/environment/ej2000.htm.

 $^{^{^{514}}}Id.$

 $^{^{\}rm 515}$ Washington v. Davis, 426 U.S. 229, 96 S. Ct. 2040, 48 L. Ed. 2d 594 (1976) (rejecting a challenge to a test used for police hiring where Whites passed more often than African-Americans).

⁵¹⁶ Village of Arlington Heights v. Metropolitan Housing Dev. Corp., 429 U.S. 252, 94 S. Ct. 555, 50 L. Ed. 2d 450 (1977) (holding that the denial of zoning for low-income housing that would benefit mostly minorities did not violate the Equal Protection Clause because plaintiffs failed to prove racial discrimination was the motivating factor for the zoning decision).

⁵¹⁸ Village of Arlington, 429 U.S. 252.; Robert W. Collin, *Review of the Legal Literature on Environmental Racism, Environmental Equity, and Environmental Justice*, 9 J. ENVTL. L. & LITIG. 121, 125 (1994).

⁵¹⁹ Robert W. Collin, *Review of the Legal Literature on Envi*ronmental Racism, Environmental Equity, and Environmental Justice, 9 J. ENVTL. L. & LITIG. 125 (1994).

ued low monthly fare and daily fare and set specific target dates for the MTA to accomplish these goals. 524

Fourteen months after the court approved the consent decree, the MTA had not yet met the target goals, specifically the overcrowding on the buses.⁵²⁵ The federal district court ordered the MTA to add 248 additional buses to its fleet to prevent overcrowding.⁵²⁶ The MTA appealed the order, arguing that the court misinterpreted the consent decree and acted beyond its authority in ordering the purchase of additional buses.⁵²⁷ The Ninth Circuit Court of Appeals held that the MTA violated the consent decree and had the opportunity to submit its own remedial plan to correct the violation.⁵²⁸ Therefore, the Court of Appeals affirmed the District Court's decision and order requiring MTA to purchase 248 additional buses to reduce transit overcrowding.⁵²⁹ As much as this decision was a victory for environmental justice proponents, the following United States Supreme Court decision has caused concern within the movement.530

On April 24, 2001, the United States Supreme Court dealt a strong blow to the environmental justice movement.⁵³¹ In Alexander v. Sandoval, Martha Sandoval [Sandoval], a Mexican immigrant, brought a class action lawsuit under Title VI challenging Alabama's English-only policy for administration of its driver's license tests.⁵³² Title VI, § 2000(d), prohibits any program or activity that receives federal financial assistance from excluding participants based on race, color, or national origin.⁵³³ Further, Title VI, § 2000(d)-1, directs federal agencies and departments authorized to provide federal monetary assistance to pass rules and regulations to comply with the anti-discrimination section.⁵³⁴ In furtherance of this directive, the Department of Justice [DOJ] promulgated a regulation prohibiting funding recipients from "utiliz[ing] criteria or methods of administration which have the effect of subjecting individuals to discrimination because of their race, color, or national origin...."535

⁵²⁸ Id. at 1051.

Sandoval argued that Alabama's English-only policy for driver's license exams violated the DOJ's regulation because it discriminated against non-English speakers based on their national origin.⁵³⁶ She further requested that the court enforce the DOJ regulation and order the DOJ to "accommodate non-English speakers."537 The case proceeded to the U.S. Supreme Court under the central issue of whether Sandoval, as a private citizen, had a private cause of action to enforce the DOJ regulation.⁵³⁸ The court held that private individuals could sue to enforce § 2000(d) of Title VI, but that § 2000(d) only prohibits intentional discrimination.539 Therefore, because the English-only policy created a "disparate impact" based on national origin and race and did not involve intentional discrimination, there is no private right of action to enforce regulations promulgated under § 2000(d).⁵⁴⁰ Civil rights advocates consider this decision to be a significant setback to the environmental justice movement as the standard private citizens must meet to remedy discrimination is the very high and often unattainable threshold of intentional discrimination.541

⁵⁴¹ Ringel, *supra* note 530.

 $^{^{524}}$ Id.

⁵²⁵ Labor/Community Strategy Center v. Los Angeles County Metro Transp. Auth., 263 F.3d 1041, 1045–6.

⁵²⁶ *Id.* at 1047.

 $^{^{527}}$ Id. at 1048.

 $^{^{^{529}}}Id.$

⁵³⁰ Jonathan Ringel, *Rulings a Double Whammy for Civil Liberties Groups*, THE RECORDER, Apr. 25, 2001, at 3.

 $^{^{^{531}}}Id.$

⁵⁸² 532 U.S. 275, 121 S. Ct. 1511, 149 L. Ed. 2d 517 (2001); 42 U.S.C. § 2000(d) – 2000(d)-1 (2000).

^{533 42} U.S.C. § 2000(d).

^{534 42} U.S.C. § 2000(d)-1.

⁵³⁵ 28 C.F.R. § 42.104(b)(2)(1999). See also 49 C.F.R. § 21.5 (2000), for a similar regulation promulgated by the DOT. The Court assumed that both the DOJ and DOT regulations prohibited activities with a disparate impact based on race and that such regulations are valid. Sandoval, 532 U.S. at 281–2.

⁵³⁶ Sandoval, 532 U.S. at 279.

⁵³⁷ Id. at 278.

⁵³⁸ Id. at 279-80.

⁵³⁹ Id. at 280.

⁵⁴⁰ Id. at 282, 293.