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January 10, 2005

received
1/11/05

Ms. Victoria Rutson, Chief
Section of Environmental Analysis
Surface Transportation Board
1925 K Street, N. W.
Washington, DC 20402-0001

FEDERAL EXPRESS MAIL

Re: Finance Docket No. 34284-Southwest Gulf Railroad Company
Petition for Exemption from U.S.C. 10901 to Construct and
Operate a Rail Line in Medina County, Texas

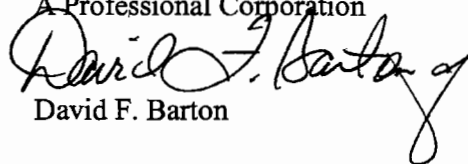
Dear Ms. Rutson:

Enclosed please find four copies of Medina County Environmental Action Association's
Comments on the Draft Environmental Impact Statement regarding the referenced matter.

Please contact me should you have any questions or comments.

Very truly yours,

THE GARDNER LAW FIRM
A Professional Corporation


David F. Barton

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Encs.

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Originals of maps and some figures
submitted in color. Please contact the
Section of Environmental Analysis to
view a color copy.

BEFORE THE SURFACE TRANSPORTATION BOARD

STB Finance Docket No. 34284

**SOUTHWEST GULF RAILROAD COMPANY
CONSTRUCTION AND OPERATION—MEDINA COUNTY, TX**

*received
1/11/05*

MEDINA COUNTY ENVIRONMENTAL ACTION ASSOCIATION

Comments on the Draft Environmental Impact Statement

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January 10, 2005

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Acronyms

CEQ – Council on Environmental Quality
MCEAA – Medina County Environmental Action Association
NEPA – National Environmental Policy Act

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5. U.S. Fish and Wildlife Service Region 2, BLACK-CAPPED VIREO RECOVERY PLAN (1991) – (Not included due to length. Found at http://ecos.fws.gov/docs/recovery_plans/1991/910930h.pdf) (USGS summary recovery plan included.)
6. U.S. Fish and Wildlife Service, “Minimum Procedures for Determining the Presence/Absence of Golden-Cheeked Warblers and Black-Capped Vireos” (Apr. 3, 2002)

I. THE RAIL LINE AND QUARRY ARE “CONNECTED ACTIONS” UNDER THE CONTROLLING REGULATION FOR THE SCOPE OF ENVIRONMENTAL IMPACT STATEMENTS

The primary action “not in accordance with law” in this proceeding has been the agency’s unwillingness to treat Vulcan’s quarry as a “connected action,” disclosing its direct and indirect, as well as cumulative effects, in the environmental impact statement. MCEAA has refuted the applicant’s arguments (and to the extent the agency has adopted them, the agency’s arguments) three times, all prior to the release of the draft environmental impact statement.¹

The result is an environmental impact statement that does not adequately consider the cumulative environmental impacts of the quarry and the rail line, because the agency refuses to analyze the direct and indirect effects of the quarry as inputs to a comprehensive analysis, particularly for flooding.

A. The Rail Line Lacks Independent Utility

The National Environmental Policy Act of 1969 (NEPA) “directs that, to the fullest extent possible . . . all agencies of the Federal government shall—

¹ See Letter, David F. Barton, The Gardner Law Firm, to Victoria J. Rutson, Section of Environmental Analysis (Feb. 19, 2004); Letter, David F. Barton, The Gardner Law Firm, to Victoria J. Rutson, Section of Environmental Analysis (Apr. 19, 2004); MCEAA Scoping Comments (Feb. 24, 2004). All three of the above submissions are hereby incorporated by reference.

include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on --

- (i) the environmental impact of the proposed action,
- (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,
- (iii) alternatives to the proposed action,
- (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 which would be involved in the proposed action should it be implemented.²

Anticipating that more detailed regulations governing the scope and content of environmental impact statements would flow from this provision, Congress established the Council on Environmental Quality (CEQ),³ and gave it the sole authority to interpret the statute.⁴ CEQ's regulations "are entitled to substantial deference,"⁵ and "binding on all Federal agencies for implementing the provisions of [NEPA]."⁶

The statute requires agencies to prepare a "detailed statement" (the environmental impact statement) on "proposals for legislation and other

² 42 U.S.C. § 4332(2)(C) (2000).

³ 42 U.S.C. § 4342 (2000).

⁴ 42 U.S.C. § 4334(3) (2000). *See also* *Andrus v. Sierra Club*, 442 U.S. 347, 358 (1979) (citing this provision for the proposition);

⁵ *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 355 (1989); *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 372 (1989); *Andrus v. Sierra Club*, 442 U.S. 347, 358 (1979).

⁶ 40 C.F.R. § 1500.3 (2004).

major Federal actions.” The Supreme Court has construed the term “proposals” to apply to both “legislation” and “other major Federal actions.”⁷

The CEQ promulgated regulations in 1978.⁸ These regulations detail what actions are swept into the scope of the environmental impact statement to avoid segmenting a proposal on jurisdictional grounds (“connected actions”), and what actions it is unnecessary to prepare a comprehensive environmental impact statement for because, taken collectively, a comprehensive proposal is not yet ripe (“cumulative actions”).⁹ The regulations address and incorporate numerous pre-1978 case law holdings bearing on when a “proposal” exists.¹⁰

This case is about the first category (“connected actions”). The CEQ regulations require agencies to consider “[c]onnected actions, which means that they are closely related and therefore should be discussed in the same

⁷ *Kleppe v. Sierra Club*, 427 U.S. 390 (1976).

⁸ 43 Fed. Reg. 55,992 (Nov. 29, 1978), *codified at* 40 C.F.R. §§ 1500–1508 (2004).

⁹ *Compare* 40 C.F.R. § 1508.25(a)(1) (“connected actions”) *with id.* § 1508.25(a)(2) (“cumulative actions”).

¹⁰ In particular, the CEQ regulations specifically incorporate language in *Kleppe v. Sierra Club*, 427 U.S. 390 (1976), a “cumulative action” case involving the timing of numerous Federal oil and gas leases in the Northern Great Plains, that also devised an “independent utility” test for actions generally. That test was incorporated into the CEQ regulations for “connected actions” at 40 C.F.R. § 1508.25(a)(1)(iii). *See also* Memorandum on “*Kleppe v. Sierra Club*” and “*Flint Ridge Development Co. v. Scenic Rivers Assn. of Oklahoma*”, 43 Fed. Reg. 61,069–61,072 (Dec. 1, 1977).

impact statement.”¹¹ Actions are connected if they, among other tests, “[a]re interdependent parts of a larger action and depend on the larger action for their justification.”¹²

Connected actions are defined in a manner consistent with the criteria recognized in the independent-utility cases.¹³ The Second Circuit has affirmatively acknowledged that “[t]he proper test to determine relatedness under 40 CFR § 1508.25(a)(1)(iii) is whether the project has independent utility.”¹⁴

The independent utility test requires that “[i]f proceeding with one project will, because of functional or economic dependence, foreclose options or irretrievably commit resources to future projects, the environmental consequences of the projects should be evaluated together.”¹⁵

On the facts in this case, the rail line does not possess any real independent utility. The rail line applicant and the quarry operator are the same entity. The applicant admits the physical and corporate governance connection. The proposed rail line connects an existing rail line to land

¹¹ 40 C.F.R. § 1508.25(a)(1) (2004).

¹² *Id.* § 1508.25(a)(1)(iii).

¹³ *Fritiofson v. Alexander*, 772 F.2d 1225, 1242 (5th Cir. 1985); *Piedmont Heights Civic Club, Inc. v. Moreland*, 637 F.2d 430, 439 (5th Cir.1981).

¹⁴ *Town of Huntington v. Marsh*, 859 F.2d 1134, 1141–42 (2d Cir.1988); *Hudson River Sloop Clearwater v. Department of the Navy*, 836 F.2d 760, 764 (2d Cir.1988).

¹⁵ *Fritiofson*, 772 at 1241 n. 10; *Stewart v. Potts*, 996 F. Supp. 668, 683 (S.D. Tex. 1998).

leased for quarrying, and for no other purpose. The applicant admits that no other shippers have located or expressed intent to locate along any of the proposed alternatives. The applicant admits that its parent will fund the line, and the quarry may depend on the rail line in order to function cost-effectively once a certain level of production is reached.

1. The rail line and quarry are both part of the “major Federal action”: the “action” consists of the connected actions

Connected actions are therefore the “action” to be analyzed; each project is now “part of the action,” that is, the “major federal action”; there is not a proposed “action” and a separate “connected action.” The connected action regulation sweeps in those projects that “depend” on the proposal, or, as here, on which the proposal “depend[s]”, and recognizes that this dependence makes them part of a larger “action,” the “proposed action.”

It matters not that the agency has jurisdiction only to license the rail line, and cannot disapprove the quarry. The agency’s jurisdiction is irrelevant to the scope of the environmental impact statement as defined by the regulation, because NEPA is a procedural, not a substantive statute.¹⁶ The agency is free to license the rail line once it has fulfilled its NEPA obligations. The agency cannot cite a single case holding that the 1978 CEQ

¹⁶ See, e.g., *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989).

regulation governing the scope of environmental impact statements does not mean what it says and control this case.

The Supreme Court has correctly observed that “[t]he statute, however, speaks solely in terms of proposed actions.”¹⁷ Consistent with this statement, the connected action regulation sweeps in only those projects so dependent on the proposed action that they are effectively proposed with it and effectively a part of the “larger action.”¹⁸

¹⁷ *Kleppe v. Sierra Club*, 427 U.S. 390, 410 n.20 (1976).

¹⁸ As Congress and the Supreme Court have recognized generally, the purpose of an environmental impact statement on the “action” is to

ensur[e] that the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts; it also guarantees that the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process and the implementation of that decision. Simply by focusing the agency's attention on the environmental consequences of a proposed project, NEPA ensures that important effects will not be overlooked or underestimated only to be discovered after resources have been committed or the die otherwise cast. Moreover, the strong precatory language of § 101 of the Act and the requirement that agencies prepare detailed impact statements inevitably bring pressure to bear on agencies to respond to the needs of environmental quality. Publication of an EIS, both in draft and final form, also serves a larger informational role. It gives the public the assurance that the agency has indeed considered environmental concerns in its decisionmaking process, and, perhaps more significantly, provides a springboard for public comment.

Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 349 (1989). Because Medina County is getting a quarry and a rail line from Vulcan, and not just a rail line, it is not hard to understand why the statute protects the interest of the County's residents and landowners in having the agency analyze the quarry as well. These citizens have a legitimate concern that, for instance, the design of the rail line—its bridges, grading, and drainage features—must incorporate and

Once Vulcan's quarry is constructed, every phase of it will be connected to the proposed rail line, because none of the quarry phases have independent utility with respect to one another. They will all rely on common equipment, a shared crushing unit, and shared personnel and resources. They cannot exist apart from one another or the rail line that will transport at least some of their joint output.

2. The connected action regulation applies regardless of who proposed the rail line

The connected action regulation applies regardless of whether Vulcan or a major railroad proposes the rail line, since the line exists solely to serve the quarry, and is thus interdependent on it.

disclose the impacts of the quarry on the area's hydrology and flooding in order for the discussion of the rail line's impacts on hydrology and flooding to be meaningful. An environmental impact statement lacking this discussion, as this draft does, "overlook[s]" flooding impacts from the quarry, denies "relevant information" to the larger audience of county officials who will have to address overlapping impacts from the quarry and rail line on roadways and floodplains, and denies the public the opportunity to comment on a meaningful analysis.

B. The Agency Has Adopted the Applicant's Argument, Which Ignores the Controlling Regulation, Invents Jurisdictional Barriers Not Contemplated by the Statute or Regulations, and Badly Misrepresents Existing Case Law

The draft environmental impact statement largely adopts the erroneous reasoning, if not the exact caselaw, of Vulcan's position that its quarry is not a connected action.¹⁹

Before again refuting an argument that essentially represents the culmination of thirty years of agency foot-dragging on NEPA—the final showdown between federal agencies that wish to think (and argue) in compartmentalized jurisdictional boxes and the statute and regulations that bind them to the contrary²⁰—we think, after three refutations,²¹ the message is just not getting through, or, most likely, being deliberately ignored. We think we should finally give the agency the only valid argument it can make. In so doing, we demonstrate that the agency's impermissible position in this

¹⁹ Compare Draft Environmental Impact Statement, at 1-10 to 1-16, with Letter, David Coburn, Steptoe & Johnson, to Victoria J. Rutson, Section of Environmental Analysis (Mar. 10, 2004).

²⁰ For over thirty years, the courts have made clear that NEPA's "detailed statement" extends beyond an agency's jurisdiction, encompassing more than just those parts of or alternatives to the proposed action that the agency could adopt. See e.g., *Natural Resources Defense Council v. Morton*, 458 F.2d 827, 834–835 (D.C. Cir. 1972); *Environmental Defense Fund, Inc. v. U.S. Army Corps of Engineers*, 492 F.2d 1123, 1135 (5th Cir. 1974); *City of Alexandria v. Slater*, 198 F.3d 862, 868 (D.C. Cir. 1999).

²¹ Letter, David F. Barton, The Gardner Law Firm, to Victoria J. Rutson, Section of Environmental Analysis (Feb. 19, 2004); Letter, David F. Barton, The Gardner Law Firm, to Victoria J. Rutson, Section of Environmental Analysis (Apr. 19, 2004); MCEAA Scoping Comments (Feb. 24, 2004).

proceeding masks its intent to bend NEPA to meet its fundamental policy views on how rail lines should be constructed.

1. NEPA does not yield to the agency's current fundamental policy views

Congress gave the authority to interpret NEPA to the Council on Environmental Quality (CEQ), and courts must give its interpretations "substantial deference".²² Where CEQ has spoken by regulation, the other federal agencies, including the Surface Transportation Board, must follow.²³ The CEQ has made a regulation governing the scope of environmental impact statements, and the types of actions those impact statements must consider and analyze.²⁴ Of these three principles, there can be no dispute.

Further, as discussed below, the agency has already determined that the quarry and the rail line are "related" within the meaning of the applicable regulation.²⁵ Therefore, if the agency has the power to advance any position at all, it is only through interpretation of some other part of the CEQ's scope of environmental impact statement regulation. Even so, such an

²² *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 355 (1989); *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 372 (1989); *Andrus v. Sierra Club*, 442 U.S. 347, 358 (1979).

²³ 40 C.F.R. § 1500.3 (2004).

²⁴ 40 C.F.R. § 1508.25(a)(1) (2004).

²⁵ As discussed *infra*, the determination of relatedness is made at the environmental assessment stage, before the decision to prepare a more detailed environmental impact statement is made.

interpretation would receive no deference.²⁶ Likewise, agencies receive no deference at all when a regulation is clear,²⁷ which, given the relatively straightforward concept of independent utility, CEQ's scope of environmental impact statement regulation arguably is.

Nevertheless, the only term even conceivably subject to interpretation in the regulation that applies to this case is "interdependent." Such an interpretation would have to hold that rail lines always, by their very nature, have an independent utility that open-access facilities, such as highway or road segments to nowhere, lack.²⁸ Such an interpretation would provide an intermediate position between spur tracks, which do not require Surface Transportation Board approval or environmental review to construct, but

²⁶ *Southern S.S. Co. v. NLRB*, 316 U.S. 31, 46–47 (1942); *Hoffman Plastic Compounds, Inc. v. NLRB*, 535 U.S. 137, 143–44 (2002) (no deference for agency accommodations of statutes or policies beyond their area of expertise entrusted by Congress; interpretation precluded if in conflict).

²⁷ *Christensen v. Harris County*, 529 U.S. 576, 588 (2000); *Bowles v. Seminole Rock & Sand Co.*, 325 U.S. 410, 414 (1945) (agency's interpretation must be given "controlling weight *unless* it is plainly erroneous or *inconsistent with the regulation*.") (emphasis added).

²⁸ Roads have independent utility only if they have "logical termini." *Save Barton Creek Ass'n v. Federal Highway Admin.*, 950 F.2d 1129, 1140 (5th Cir. 1992). Logical termini include existing development and other roads.

Road construction projects may enable future development on surrounding lands, and are used by and accessible to the public, and therefore may be said to have a general public independent utility if they are not being built solely to access a piece of land that is not a traffic generator. *See Association Concerned About Tomorrow, Inc. v. Dole*, 610 F. Supp. 1101, 1108-09 (N.D. Tex. 1985). Unlike road projects, rail lines are for private use, and generally connect to private shippers on private land.

which the Board maintains jurisdiction over,²⁹ and the requirements NEPA currently imposes absent such an interpretation.

This is plainly what the agency wants to further its policy choice on how new rail construction should occur. One of the most fundamental questions for the uninitiated in this proceeding (and others like it) is: “Where’s the railroad?” Where’s Union Pacific? The agency has made a policy decision to allow private non-railroad shipping companies, such as Vulcan, to create private paper railroads, and, once the agency grants a license to construct, common carrier status (i.e. “public use”) and thus eminent domain power through the states.

This policy choice forces the non-railroad shipping companies to front all the costs of new construction, and takes the burden off the rail carriers. When shippers want competitive service, or access to a main rail line, the rail carriers tell the shippers: “If you build it, we will come,” and the agency tacitly approves the policy consequences.

The agency’s policy choice also allows a private, non-rail corporation that has never been delegated and would not otherwise receive “public use” eminent domain power from the state legislature to take the land of private citizens. This last consequence cannot be understated. It is by far the most

²⁹ 49 U.S.C. § 10501(b)(2) (2000).

egregious and the most dangerous, and the most central to the success of the agency's policy choice. Lately it has become fashionable for the agency to claim that a case from the District of South Dakota holds that states cannot use their eminent domain statutes to block rail construction if a federal license has been issued.³⁰ In a brief, the agency has stated, without apparent shame or acknowledgement of its position in a government of limited power:

Accordingly, the county court's conclusion here that whether a railroad "has the power to condemn in a certain instance . . . is a question of state law that Congress . . . has left to the States to decide" *is clearly wrong*. As the court made clear in [DM&E Railroad v. South Dakota, 236 F. Supp. 2d 989 (D.S.D. 2002)] state courts cannot interpret and apply condemnation law in a way that "will wholly prevent" construction of a Board-approved rail line.³¹

We cannot recall the Congress ever passing a federal eminent domain statute for licenses issued by the agency. Nor can we find any evidence that Congress ever impliedly created (if it even could) such preemptive authority in the agency's statutory mandate. The agency itself holds that condemnation "occurs in accordance with the state's railroad condemnation

³⁰ Draft Environmental Impact Statement at 4-65.

³¹ Brief of the Surface Transportation Board as Amicus Curiae in Support of Appellant Burlington Northern-Santa Fe Railway, BNSF v. City of Houston, No. 14-03-01311-CV (Tex. Ct. App., 14th Dist.) (2003), at *22-*23, *available at* 2003 WL 23571201 (internal citations omitted) (emphasis added).

law.”³² Indeed, the actual holding of the South Dakota federal district court on the eminent domain issue in the case—whether South Dakota could condition eminent domain on a finding of public use—shows how badly the agency is overstating its authority in the above-cited brief:

[T]he question becomes whether Congress intended to preempt a state’s right to condition an exercise of state eminent domain power upon a finding by the state of public use and necessity. The answer to that question is no.

. . . This Court will not lightly infer a Congressional intent to preempt the ability of a state to condition the exercise of state eminent domain power upon the black letter law requirement of public use when Congress did not explicitly say so. If Congress would have intended to supplant such a basic state power, it could have delegated its own eminent domain power or made the preemption of state eminent domain law express in nature. Accordingly, it is the finding of this Court that only those provisions of South Dakota law that are clearly regulatory in nature, are preempted by federal law.³³

The agency’s policy choice on new rail construction for build-outs and access to competitive service is its fundamental worldview. It has four necessary elements: No analysis of “nonjurisdictional” related proposals (such as the quarry); approval of a paper railroad created by a private, non-rail corporation to obtain a common carrier license that the statute grants

³² Draft Environmental Impact Statement at 4-65.

³³ *Dakota, Minn., & Eastern R.R. v. South Dakota*, 236 F. Supp. 2d 989, 1012 (D.S.D. 2002), *aff’d* 362 F.3d 512 (8th Cir. 2004).

only if consistent with “public convenience and necessity”³⁴; the assumption of all permitting and construction costs by the private, non-rail corporation (the shipper); and preemption of state eminent domain authority.

We reject the agency’s fundamental worldview and its policy choice as inconsistent with the Constitutions of the United States and the state of Texas, and as inconsistent with the requirements of NEPA. The ongoing validity of the agency’s fundamental worldview, and the agency’s attempt to make NEPA—and ultimately private citizens in the path of non-rail corporations and their paper railroads—yield to that policy choice, is what this case is all about.³⁵

It is clear to see why the analysis of “nonjurisdictional” related proposals (such as the quarry) would cause the agency’s policy choice to break down. If a shipper knew that the agency had to disclose the environmental consequences of the facility that the rail line would serve, it might make a greater effort to locate along existing rail lines, rather than develop farther away from rail lines and attempt to bear the cost of bringing the rail line to itself.

³⁴ 49 U.S.C. § 10901 (2000).

³⁵ See also Surface Transportation Board News Release, Dec. 20, 2004, Statement of Chairman Roger Nober (“Where shippers want rail competition, rail construction proposals continue to provide the opportunity both to construct *and to negotiate based on the right to construct.*”) (emphasis added).

There are other ways to build a railroad, and other policy choices the agency could make. Congress has not specified the policy choices that the agency now advances. The agency retains nearly unqualified latitude to change its policy. But, opportunistically, it would rather change NEPA and the CEQ regulations. This, it lacks the power to do.

Compelling arguments exist on both sides of the rail access issue and how the nature of federal rail policy does or does not give rail lines an inherent “independent utility.” But the agency has not yet had the courage or the forthrightness to make those arguments. It has not yet interpreted the term “interdependence” in a rulemaking. It has not asked the CEQ to make an exception for new rail construction in its regulations. It has not promulgated regulations of its own and made an argument that they are consistent with the controlling CEQ regulation. Until it does so, the agency’s arguments concerning the scope of the environmental impact statement, as well as the applicant’s, are entitled to no respect from any court; or, for that matter, any citizen of a constitutional republic with a federal government of limited power.

2. The agency’s argument fails because it applies the independent utility test to the quarry, but not to the rail line

In this proceeding, the agency's and applicant's positions³⁶ are without merit and reflect extreme disregard for the consensus policies underlying agency analysis under the National Environmental Policy Act as well as its existing regulations and case law. Nowhere do the agency or the applicant advance an argument that the statutes and regulations are invalid or that the case law requires reversal. Rather, their misuse and misclassification of legal standards and case law fails to support their position.

- a. The agency fails to apply the connected action regulation to the rail line

The draft environmental impact statement presumes that the quarry is a non-federal action that will not, and cannot through some operation of law, be included in the EIS. The applicant fails to test this assumption by properly applying the relevant connected action regulation, 40 C.F.R. § 1508.25(a)(1)(iii) (defining scope for actions that lack independent utility as those that “are interdependent parts of a larger action and depend on the larger action for their justification”), anywhere.

Instead of applying 40 C.F.R. § 1508.25(a)(1)(iii) to the quarry and the rail line, the draft environmental impact statement applies it only to the

³⁶ Draft Environmental Impact Statement, at 1-10 to 1-16; Letter, David Coburn, Steptoe & Johnson, to Victoria J. Rutson, Section of Environmental Analysis (Mar. 10, 2004).

quarry. Everything in the draft environmental impact statement discussion centers on whether the unproposed action (the quarry) has independent utility. This ignores the fact that it is the rail line in this proceeding that lacks independent utility when 40 C.F.R. § 1508.25(a)(1)(iii) is applied, and therefore draws the action it is interdependent with (the quarry) into the scope of NEPA analysis. The agency never tests the assumption that the federalized rail line action is independent of, and therefore not connected to the “non-federal quarry,” and the remainder of the *ipse dixit* “analysis” serves solely to obfuscate this deliberate omission.

- b. Federalization of the quarry—or the “non-Federal” project generally—is not the issue

The issue in this case is whether either the rail line or the quarry lack independent utility such that they are “interdependent parts of a larger action and depend on the larger action for their justification.”³⁷ Here, the rail line is a wholly-owned subsidiary of the quarry’s owner/operator that is “an interdependent part” of the quarry, lacks any other potential customers, and “depend[s] on” the quarry for its justification.

³⁷ 40 C.F.R. § 1508.25(a)(1)(iii) (2004).

1. The controlling regulation, governing environmental impact statements, makes case law based on environmental assessments irrelevant

The agency relies heavily on environmental assessment cases to hide its failure to apply the controlling regulation for the scope of environmental impact statements.

Environmental assessments are summary analyses that an agency may prepare in order to decide whether an environmental impact statement is required.³⁸ Following the preparation of an environmental assessment, an agency will reach one of two possible outcomes.³⁹ If an agency finds a significant impact, it must prepare an EIS. If it does not, and if the action does not significantly affect the quality of the human environment independently, the agency must prepare a Finding of No Significant Impact and finalize the decision.

Neither NEPA nor the CEQ regulations speak to the scope of an environmental assessment. A multi-factor test (the multifactor federalization test for relatedness) has evolved to determine whether actions they must be considered in a proposed federal action's environmental assessment because they are sufficiently "related". These factors, which "federalize" otherwise non-jurisdictional segments of a project at the environmental assessment stage, include, but are not limited to:

- (1) whether the regulated activity comprises "merely" a link" in a corridor type project (e.g., a transportation or utility transmission project);
- (2) whether there are aspects of the nonjurisdictional activity in the immediate vicinity of the regulated activity which uniquely determine the location and configuration of the regulated activity;
- (3) the extent to which the entire project will be within the agency's jurisdiction; and
- (4) the extent of cumulative federal control and responsibility.⁴⁰

³⁸ 40 C.F.R. § 1501.4(b) (2004).

³⁹ 40 C.F.R. § 1501.4(c)–(e) (2004).

⁴⁰ See *Sylvester v. Army Corps of Engineers*, 884 F.2d 394, 398-99 (9th Cir. 1989) (quoting similar Corps of Engineers regulations at 33 C.F.R. Part 325 Appx. B, §7(b)(2)).

The leading case on the multi-factor test, *Sylvester v. U.S. Army Corps of Engineers*,⁴¹ involved the alleged segmentation of a proposed golf course from other portions of a proposed resort at Squaw Valley, California, including a village and additional ski runs. The state completed an environmental impact report on all segments of the proposal, pursuant to state law.⁴² The Corps of Engineers, however, issued a finding of no significant impact for the federal wetland fill permit after completing an environmental assessment describing only the golf course, which was the only segment of the proposal that it had jurisdiction over. The Corps applied the federalization test in its regulations, 33 C.F.R. Part 325 Appx. B, §7(b)(2), and concluded that the other segments of the resort were not related to the golf course for the purposes of NEPA. The court held that NEPA was unclear as to the proper scope of analysis of NEPA review for nonjurisdictional actions in an environmental assessment, and that the Corps' interpretation was not an impermissible reading of the statute.⁴³ In the wake

⁴¹ *Id.*

⁴² *Id.* at 396.

⁴³ *Id.* at 397.

of *Sylvester*, numerous other federal agencies promulgated EIS-threshold regulations similar to the Corps.⁴⁴

Certainly one other permissible interpretation of the statute for the scope of environmental assessments is to apply the controlling CEQ regulation for the scope of environmental impact statements. Some courts have done exactly that.⁴⁵

No court, however, has ever held that any other test—“but for”, “proximate cause”, or otherwise—replaces the controlling CEQ regulation for the scope of environmental impact statements.

The agency makes much of the Supreme Court’s recent decision in *Department of Transportation v. Public Citizen*,⁴⁶ a case involving an environmental assessment for proposed trucking safety regulations. Congress had imposed a moratorium on Mexican motor carriers receiving operating authority in the United States in 1982, and authorized the President to lift it. The President had announced his intent to lift the moratorium, subject to the issuance of safety regulations by a subagency of the Department of Transportation. That subagency issued regulations, which

⁴⁴ See e.g., 23 C.F.R. § 771.111(f) (2003) (Federal Highway Administration), 18 C.F.R. § 380.12(c)(2)(ii) (2003) (Federal Energy Regulatory Commission).

⁴⁵ *Thomas v. Peterson*, 753 F.2d 754 (9th Cir. 1985).

⁴⁶ 124 S.Ct. 2204 (2004).

were subject to NEPA, and produced an environmental assessment, the content of which was the subject of the litigation.

Nowhere in *Public Citizen* does Justice Thomas, writing for a unanimous Court, *ever* say that the CEQ regulation for the scope of an *environmental impact statement* is invalid or superseded by a test of the Court's creation. The CEQ scope regulation for environmental impact statements is not even cited in the case. The agency's use of *Public Citizen* to support its position in this draft environmental impact statement is beyond disingenuous.

Yet the applicant and agency would deny the effect of the CEQ environmental impact statement connected action regulation by substituting such an inapplicable relatedness analysis from the environmental assessment cases, with their multiple potential factors, including independent utility. This is why it is essential to classify and separate the case law on environmental assessments and environmental impact statements. The applicant's and agency's use of environmental assessment cases applying the relatedness test in various forms is disingenuous and disrespectful of clear rules of law represented by the environmental impact statement connected action regulation.

We have enclosed a classification of environmental impact statement and environmental assessment cases dealing with "scope" issues below:

EIS cases – Applying connected action regulation or test

<i>Piedmont Heights Civic Club, Inc. v. Moreland</i>	637 F.2d 430 (5th Cir.1981)
<i>Sierra Club v. Sigler</i>	695 F.2d 957 (5th Cir. 1983)
<i>Chelsea Neighborhood Association v. U.S. Postal Service</i>	516 F.2d 378 (2d Cir.1975)
<i>Town of Huntington v. Marsh</i>	859 F.2d 1134 (2d Cir.1988)
<i>Hudson River Sloop Clearwater v. Department of the Navy</i>	836 F.2d 760 (2d Cir.1988)
<i>Texas Committee on Natural Resources v. Van Winkle</i>	197 F. Supp. 2d 586 (N.D. Tex. 2002)
<i>Welch v. U.S. Air Force</i>	249 F. Supp. 2d 797, 820-25 (N.D. Tex. 2003)
<i>Blue Ocean Preservation Society v. Watkins</i>	754 F. Supp. 1450 (D. Haw. 1991)
<i>City of Williams v. Dombeck</i>	151 F. Supp. 2d 9 (D.D.C. 2001)
<i>Sierra Club v. Dombeck</i>	161 F. Supp. 2d 1052 (D. Ariz. 2001)
<i>Shoshone-Paiute Tribe v. U.S.</i>	889 F. Supp. 1297 (D. Idaho 1994)
<i>Citizens Committee to Save Our Canyons v. U.S. Forest Service</i>	297 F.3d 1012 (10th Cir. 2002)

Environmental Assessment cases – Applying relatedness test that is inapplicable here

<i>Department of Transportation v. Public Citizen</i>	124 S.Ct. 2204 (2004)
<i>Fritiofson v. Alexander</i>	772 F.2d 1225 (5th Cir. 1985)
<i>Stewart v. Potts</i>	996 F. Supp. 668 (S.D. Tex. 1998)
<i>Sylvester v. Army Corps of Engineers</i>	884 F.2d 394 (9th Cir. 1989)
<i>Thomas v. Peterson</i>	753 F.2d 754 (9th Cir. 1985)
<i>Friends of the Earth v. Coleman</i>	518 F.2d 323 (9th Cir.1975)
<i>Winnebago Tribe of Nebraska v. Ray</i>	621 F.2d 269 (8th Cir. 1980)
<i>Save the Bay, Inc. v. U.S. Army Corps of Engineers</i>	610 F.2d 322 (5th Cir. 1980)
<i>Friends of the Earth v. Hintz</i>	800 F.2d 822 (9th Cir. 1986)
<i>Save the Yaak Committee v. Block</i>	840 F.2d 714 (9th Cir. 1988)
<i>California Trout v. Schaefer</i>	58 F.3d 469, 472 (9th Cir. 1989)
<i>Northwest Resource Information Center v. National Marine Fisheries Service</i>	56 F.3d 1060 (9th Cir. 1996)
<i>Morongo Band of Mission Indians v. Federal Aviation Administration</i>	161 F.3d 569 (9th Cir. 1998)
<i>Wetlands Action Network v. U.S. Army Corps of Engineers</i>	222 F.3d 1105 (9th Cir. 2000)
<i>Airport Neighbors Alliance, Inc. v. United States</i>	90 F.3d 426 (10th Cir. 1995)

<i>Utahns for Better Transportation v. U.S. Department of Transportation</i>	305 F.3d 1152 (10th Cir. 2002)
<i>Vieux Carre Property Owners, Residents, and Associates, Inc. v. Pierce</i>	719 F.2d 1272, 1278 (5th Cir. 1983)
<i>Save Barton Creek Assn. v. FHWA</i>	950 F.2d 1129 (5th Cir. 1992)
<i>Citizen Advocates for Responsible Expansion, Inc. v. Dole</i>	586 F. Supp. 1094 (N.D. Tex. 1984)
<i>Association Concerned About Tomorrow, Inc. v. Dole</i>	610 F. Supp. 1101 (N.D. Tex. 1985)
<i>Sierra Club v. U.S. Department of Energy</i>	255 F. Supp. 2d 1117 (D. Colo. 2002)
<i>Border Power Plant Working Group v. U.S. Department of Energy</i>	260 F. Supp. 2d 997 (S.D. Cal. 2003)
<i>Hoosier Environmental Council, Inc. v. U.S. Army Corps of Engineers</i>	105 F. Supp. 2d 953 (S.D. Ind. 2000)
<i>Tennessee Gas Pipeline Co.</i>	95 FERC ¶ 61,169, 2001 WL 469985
<i>Coalition for a Livable Westside v. HUD</i>	1997 U.S. Dist. LEXIS 8860

2. Why the environmental assessment case law does not apply

- a) Environmental assessment factors for relatedness do not carry over to the environmental impact statement

A court does not have the power to create new NEPA doctrine on connected actions for environmental impact statements, in the face of the clear regulation. To do so would usurp an agency of the Executive Branch, which made the regulation. A reviewing court may not impose its own procedural requirements on an agency where a minimum standard exists.⁴⁷

By adopting the environmental assessment approach and establishing a multifactor test for an environmental impact statement, and ignoring the test

⁴⁷ *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council*, 435 U.S. 519 (1977).

in the existing regulation (which is entitled to substantial deference), a court would impermissibly make up new factors that could be applied later.

The agency cannot recast its multifactor jurisdictional argument to fit within the "independent utility" part of the connected action test, because “independent utility” and the broader question of whether an agency should assert jurisdiction over a project and federalize it in an environmental impact statement, are two different things.

One is a functional analysis—Can x and y happen separately, or is proposing x effectively proposing y due to a “but for” or “dependent” relationship? Answer: Because Vulcan Materials Company is not in the business of building rail lines that lack customers, proposal of the rail line effectively depends on proposal of the quarry that it will solely serve.

The other, broader question is jurisdictional—Is y related enough to x to be part of the federal project?

The existing scope regulation at 40 C.F.R. § 1508.25(a)(1)(iii) answers the function question. The rail line lacks independent utility. No new test is necessary, and in fact, the court is barred from creating its own test.

The broader jurisdictional question has already been answered in this proceeding.

- b) The multifactor federalization test for relatedness has already been applied, and the applicant has lost—the quarry has been deemed related

It is telling that the applicant is attempting to take a second bite at the apple by applying the inapplicable case law-based multifactor relatedness test for the scope of an environmental assessment in lieu of the clear connected action regulation for the scope an EIS. For if simply federalizing the non-federal project is the issue, rather than establishing the dependence of the federal proposal on an additional project that must be considered part of the “action” and directly analyzed in the EIS, the applicant has already lost. It concedes that “the Board’s January 28 Draft Scoping Notice specifically and correctly states that the quarry will be considered under the cumulative impacts analysis of the EIS” and that “the rail line and quarry are related to the extent that the rail line will serve the quarry.”⁴⁸ The only test left to apply is the connected action regulation for the scope an EIS.

The EIS connected action regulation properly excludes jurisdictional concerns because the significance determination whether to prepare an EIS, where jurisdictional concerns may play a role, has already been made. Any

⁴⁸ Letter, David Coburn, Steptoe & Johnson, to Victoria J. Rutson, Section of Environmental Analysis (Mar. 10, 2004).

further exercise of jurisdictional limits after that point may lead to an EIS that is practically an environmental assessment.

More disturbing is the fact that both the applicant and the agency use environmental assessment cases to stand for the categorical principle that projects “not financed by federal funding” and not controlled by “federal regulation,” or, “not [but-for] dependent on the federal action . . . and an independent private project over which the [agency] has no jurisdiction,” *id.*, or where “only one of them falls under agency jurisdiction,” cannot be connected actions in an environmental impact statement. The environmental assessment cases do not even stand for this principle in an environmental assessment, much less in an environmental impact statement where they cannot apply. The factors those cases list are just that—factors—meant to be applied by agencies in environmental assessments on a case by case basis, and not as categorical rules.

- c) To resurrect the federalization test from the environmental assessment stage, the agency seeks to define “action” in the CEQ regulations to mean only “federal action,” which it clearly does not

Now that an EIS will be required, and the only test left to apply is the connected action regulation, the applicant’s only argument is to replace the explicit EIS regulation at 40 C.F.R. § 1508.25(a)(1)(iii) (the independent

utility test) with a multifactor, jurisdictional federalization test for relatedness. Unfortunately for the agency and its restated federalization tests, 40 C.F.R. § 1508.25(a)(1) contains no requirement that the connected action be subject to agency permitting or funding, be otherwise federal, or even be proposed as opposed to planned.⁴⁹

Assume for a moment that the agency's implicit assertion—that “action” as used in the Council on Environmental Quality regulations means only federal actions—is even arguable:

Federalization of a project not otherwise subject to federal agency review occurs during the environmental assessment stage, when an agency's decision to prepare an EIS turns on whether the action and any related segment does so “significantly.”⁵⁰ In that determination, significance may arise directly from the proposed action, or cumulatively. If “the action is related to other actions with individually insignificant but cumulatively significant impacts . . . [then] [s]ignificance exists if it is reasonable to anticipate a cumulatively significant impact on the environment.”⁵¹ As

⁴⁹ Compare 40 C.F.R. § 1508.25(a)(2) (2003) (requiring analysis in the same EIS only for “proposals” that are cumulative actions) with *id.* § 1508.25(a)(1) (lacking that requirement for connected actions).

⁵⁰ 40 C.F.R. § 1502.3 (2004).

⁵¹ *Id.* § 1508.27(b)(7) (2004).

Fritiofson v. Alexander,⁵² and hundreds of environmental assessment cases before and since have recognized, the “other actions” that may be considered in the determination of cumulative significance may be non-federal. A multifactor federalization test for relatedness, which includes independent utility and other potential factors, governs whether these non-federal actions are related enough to the proposed federal project to be included in that significance determination.⁵³

Then, when these other actions are considered in an EIS, if they are not otherwise connected actions (§ 1508.25(a)(1)) or cumulative actions (§ 1508.25(a)(2)), they are considered as merely cumulative impacts (§ 1508.7). A “cumulative impact” is “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.”

Having established that even the most remote “actions” considered in an EIS are both federal and non-federal, we turn to the applicant’s assertion that those “actions” most directly tied to the federal action—indeed, connected to it—need not be considered if they are non-federal. The result can be no

⁵² 772 F.2d 1225 (5th Cir. 1985).

⁵³ *Id.*; *Sylvester v. Army Corps of Engineers*, 884 F.2d 394, 398-99 (9th Cir. 1989).

different. The applicant's only justification could be that multiple environmental documents are preferable to one, per the two hypotheticals discussed above. If this were true, STB would consider the quarry solely as a cumulative impact in the rail line EIS, as the applicant desperately wishes at this late date. But it is not. The connected action regulation exists apart from the cumulative impact regulation for a reason, and the applicant's argument must fail.

d) Consequences of the agency's Position

The applicant's flawed view of connected actions in an EIS under NEPA can be distilled into two hypothetical principles:

First, if an applicant desires to construct what would otherwise be a connected action under 40 C.F.R. § 1508.25(a)(1)(iii), such as a quarry and a rail line, they can avoid analyzing them together in an EIS by proposing the one that lacks independent utility (the rail line) first.

Second, if an applicant desires to construct what would otherwise be a connected action under 40 C.F.R. § 1508.25(a)(1)(iii), such as a quarry and a rail line, they can also avoid analyzing them together in an EIS by proposing the federal action (the rail line) first, and then waiting until after that process to see if the nonfederal action requires an EIS.

Both of these hypotheticals are flatly inconsistent with NEPA and the connected action regulation. Underlying this inconsistency is the theoretical

argument that two EISs are just as good as one, because the cumulative impact section in the second one will account for the effects of the first (probably after it is built). That ignores the basis for the connected action regulation for EISs,⁵⁴ and its three tests, in favor of treating all unproposed actions as unconnected cumulative impacts. The purpose of 40 C.F.R. § 1508.25(a)(1) is precisely to require the direct effects analysis of both projects at the same time, since without each other they would not both be built. The connected action regulation applies regardless of whether the quarry had obtained or would obtain non-federal permits

3. If the rail line has independent utility, then impacts from other shippers are imminent and must be analyzed

A rail construction license issued by the Surface Transportation Board confers common carrier status that permits (but does not guarantee the right to) exercise eminent domain under Texas law. *See* 49 U.S.C. §§ 10102(5) (defining rail carrier as common carrier); 10501(b) (exclusive jurisdiction of STB); Tex. Const. Art. I § 10 (authority of rail carriers to construct). Vulcan alleges that various highly general characteristics of rural land near rail lines support the rail line's independent utility, in that these characteristics could

⁵⁴ 40 C.F.R. § 1508.25(a)(1) (requiring analysis in the “*same EIS*”) (emphasis added).

someday attract a shipper that Vulcan's Southwest Gulf Railroad could serve by virtue of its common carrier status.⁵⁵

Of course, if these “someday shippers” give the rail line its independent utility, their impacts must be analyzed. To trumpet the benefits of activities in the EIS as a selling point for the proposal renders a decision that these activities are imminent. NEPA therefore requires full disclosure and analysis of their costs.⁵⁶ The agency cannot tip the scales of an environmental impact statement by promoting possible benefits while ignoring their costs. Simple logic, fairness, and the premises of cost-benefit analysis, let alone NEPA, demand that a cost-benefit analysis be carried out objectively.⁵⁷ There can be no “hard look” at costs and benefits unless all costs are disclosed.⁵⁸

If an agency were permitted to cite possible benefits in order to promote a project, yet avoid citation of accompanying costs by hiding behind *Kleppe* [*v. Sierra Club*, 427 U.S. 390, 410 n.20 (1976)], the cost-benefit analysis in the EIS would be reduced to a sham: such a “cost-benefit analysis” would

⁵⁵ See e.g., Finance Docket No. 34284, Southwest Gulf Railroad Company—Construction and Operation Exemption—Medina County, TX, at 1 (served May 9, 2003) (Conditional Exemption).

⁵⁶ *Sierra Club v. Sigler*, 695 F.2d 957, 978-79 (5th Cir. 1983).

⁵⁷ *Id.*

⁵⁸ *Id.*

always be tipped in favor of benefits.⁵⁹ This is because “NEPA does not require an agency to consider the possible environmental impacts of less imminent actions when preparing the impact statement on proposed actions.”⁶⁰

4. However, the rail line lacks independent utility, because location of other shippers is not imminent, as the applicant concedes

By concocting its “someday shippers,” Vulcan wants to have it both ways: for the agency to find the “someday shippers” imminent enough, based on speculative relocation potential, to justify the independent utility of the rail line, but too speculative to require cumulative impact analysis as “other . . . reasonably foreseeable future actions.” Indeed, Vulcan’s counsel brazenly admits as much:

Ms. [sic] Kitchen commented that construction of the line “will cause a significant increase in commercial and industrial development along the railroad.” SGR at this point is not aware of any specific shippers that may locate on the line, other than Vulcan. While the line will be operated as a common carrier line and thus open to use by other shippers, SGR has no information at this time about other shippers that may locate in the area. *Accordingly, any assessment of the level of*

⁵⁹ *Id.*

⁶⁰ *Vieux Carre Property Owners, Residents & Assoc., Inc. v. Pierce*, 719 F.2d 1272, 1278 (5th Cir. 1983), *quoting Kleppe*, 427 U.S. at 410 n.20.

*commercial and industrial development that could develop along the line is speculative.*⁶¹

It would be irrational to assume that the rail line can proceed independently on the basis of speculation.

If a bare assertion about “someday shippers” can undercut the connected action regulation, the regulation might as well not exist.

C. Because the Agency Has Not Analyzed the Rail Line and Quarry as Connected Actions, It Has Misrepresented the No Action Alternative

The no action alternative to the connected action neither builds a rail line nor builds any quarry facilities. For a connected action, no action is something that is *not the connected action* (i.e., something that has independent utility apart from the connected action) that would occur anyhow. It is illogical to define no action as part of the action itself.

The agency’s position yields an EIS where the public and decision-makers never see the impact of the quarry without thousands of trucks lumped in with it, or the impact of doing nothing at all—a result that would be perfectly fine if we were considering, say, an independent federal interstate highway project that was going to be built through part of the quarry site where the quarry was certain to be built with or without the

⁶¹ Letter from David Coburn, Steptoe and Johnson, to Victoria Rutson, Section of Environmental Analysis, at 3 (January 5, 2004) (emphasis added).

highway. But here, we are considering a rail line that will only be built if the quarry is.

The agency's incorrect argument is predicated on a line of NEPA case law that does not deal with connected actions. In every single case that could justify the agency's position, the either/or proposition to reasonably define no action applies as follows:

either the *action* / or something that is *not the action* that would occur anyhow.

No action is obviously the latter "or" result. These cases all proceed from the assumption that no action can be defined "reasonably" as something that is *not the action* that would occur regardless of whether the *action* did. We cannot disagree with that general principle. Here, however, the *action* is a *connected action* with two constituent and interdependent parts. If actions are so bound up and closely related that they cannot be separated, and require side-by-side consideration in the same EIS, then they obviously cannot be juxtaposed against one another in an either/or analysis. The proper analysis to determine the no action alternative is:

either the *connected action* /

or something that is *not the connected action* (i.e., something that has independent utility apart from the connected action) that would occur anyhow

not what the agency has done in the draft environmental impact statement, which is:

either one part of the connected action /

or the other part of the connected action with a substitute for the first part that would occur anyhow

As the definition of “scope” in the CEQ regulations states, scope consists of the ranges of actions, alternatives, and impacts to be considered in an EIS. Actions, alternatives, and impacts—each term is set out and defined separately by the regulation; each term follows from the other. Defining alternatives to an action, including the alternative of *no action*, necessarily requires defining the *action* in a previous step of the scoping process. The agency cannot “undefine” or “redefine” the scope of the action—be it connected, cumulative, similar, or single and unconnected—in a subsequent step if these codified words, which are entitled to substantial deference, mean anything at all.

The general principle that something that is *not the action*, but that would occur regardless of whether the *action* did or did not, can reasonably constitute a no action alternative differs by orders of magnitude from redefining the scope of the action after it has already been defined. The de

facto result of independent utility if the quarry is assumed as part of *no action* is no illusion—it is the outright reversal of the connected action determination made one step earlier.

II. THE AGENCY HAS FAILED TO CONSIDER THE CUMULATIVE IMPACT OF THE QUARRY AND THE RAIL LINE ON FLOODING AND HYDROLOGY

The agency has completely failed to analyze flooding and hydrologic impacts for the rail line and the quarry.

The agency has not analyzed flooding and hydrologic impacts from the quarry at all.

For the rail line, the agency has impermissibly delegated its responsibilities to the applicant as a mitigation condition. It is well-settled that the agency assumes responsibility for compliance with NEPA and may not delegate this duty.

This is indeed curious (and unlawful), because the Supreme Court has held that NEPA does not require adoption of a complete mitigation plan by the applicant to mitigate environmental harm before an agency can act.⁶² The applicant's voluntary promise to analyze the flood impacts of the rail line lane is amorphous and ultimately self-defined.

Residents of the project area, including the County Judge⁶³ and County Commissioners,⁶⁴ have been most concerned with flood impacts, and with good reason. Flash flooding in Medina County is common, as are sustained

⁶² Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 351–53 (1989)

⁶³ See Letters, County Judge Jim Barden, to Rini Ghosh, Section of Environmental Analysis (requesting detailed flooding analysis).

⁶⁴ See Letters, County Commissioners Royce Hartmann and Chris Mitchell, to Rini Ghosh, Section of Environmental Analysis (requesting detailed flooding analysis).

flood events.⁶⁵ Just over a year and a half ago, rivers crested at record levels in June of 2002 as accumulations totaled between 40 and 45 inches during a week-long set of storms. The Medina Dam was almost overtopped during this event. On August 1-2, 1998, during a 24-hour period, 32 inches of rain were recorded at Medina, in nearby Bander County. The U.S. record for extreme point rainfall in a 72-hour period is held by Medina—48 inches during Tropical Storm Amelia in 1978.⁶⁶ Accumulations of 6-9 inches in 6 hours or less leading to flash flood events occur almost annually and can be verified with rainfall data from the National Weather Service's San Antonio office.

The proposed rail line will impact flooding and hydrology in at least the following ways: (1) by adding fill in and around stream crossings, widening the floodplain upstream; (2) by using trestle (trellis) bridges, the piers of which will have major hydraulic effects, as with any bridge pier, including the likely collection of debris; (3) the use of fill to elevate track away from the stream crossings, altering surface runoff patterns and channeling flow along the berms to the stream crossing.

⁶⁵ MCEAA has submitted voluminous documentary evidence of flooding in the project area. Those letters are incorporated by reference into these comments.

⁶⁶ See U.S. Geological Survey Open File Report 03-193, "Major Catastrophic Storms and Floods in Texas," available at <http://www.floodsafety.com/USGSdemo/25ormore.htm> (last visited Feb. 22, 2004).

The agency concedes that:

Construction of the proposed rail line (any route) could have an adverse impact on flooding because it would require the crossing of a number of intermittent streams and could involve the use of fill (added material) at these stream crossings. . . The added fill would increase the width of floodplains above stream crossings because it would change the hydraulic conditions at the crossings.⁶⁷

However, the agency does not inquire further in the draft environmental impact statement. Rather, it relies on Vulcan's mitigation promise to analyze the impacts later. This is an impermissible delegation of agency duty to the applicant and requires correction in a supplemental environmental impact statement.

The proposed quarry will impact flooding and hydrology in at least the following ways: (1) by removing all vegetation from significant portions of the quarry site adjacent to and flowing into Polecat and Elm Creeks; (2) by altering the hydrologic characteristics of the site by excavating, blasting into ledges, and piling debris; (3) by paving or rendering impermeable large portions of the site; and (4) by pumping significant amounts of groundwater

⁶⁷ Draft Environmental Impact Statement at 4-34.

for site use and dust control upgradient and then redepositing that water in a concentrated fashion to the groundwater table downgradient.⁶⁸

The agency has analyzed the direct, indirect, and cumulative effects of none of these impacts. It must do so in a supplemental environmental impact statement.

As a practical matter, the analysis in the environmental impact statement, whether agency calls it that or not, must satisfy the “hard look” and “sufficient detail” criteria of the Fifth Circuit’s “adequacy” test in *Mississippi River Basin Alliance v. Westphal*,⁶⁹ by answering the following three questions for both the quarry and the rail line, regardless of how the connected action issue is decided:

- Can you tell what the baseline is?
- Can you tell what the impact contribution of each project in the connected action is?
- Can you tell what the total impact is, when added to any other cumulative impacts?

⁶⁸ The base flow of the streams in the area is largely based on groundwater seepage when flash floods are not occurring. There is a legitimate concern that groundwater pumping at the quarry could permanently dry up these streams and any wells near the site. The link between groundwater and surface water flows, during flooding or otherwise, has not been analyzed by the agency.

⁶⁹ 230 F.3d 170, 174 (5th Cir. 2000).

The existing draft environmental impact statement contains only qualitative, conclusory statements that do not meet these requirements or those of majority rule case law for cumulative impacts.⁷⁰

⁷⁰ *Kern v. Bureau of Land Management*, 284 F.3d 1062 (9th Cir. 2002).

III. THE AGENCY HAS FAILED TO CONSIDER THE PROPOSED RAIL LINE'S CUMULATIVE IMPACT ON SAN ANTONIO RAILWAYS AND ROADWAYS

A. Agency Duties

“To determine the scope of environmental impact statements, agencies shall consider 3 types of actions, 3 types of alternatives, and 3 types of impacts.”⁷¹ Of the latter, impacts may be direct, indirect, or cumulative.⁷²

A cumulative impact is “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.”⁷³

B. Specific Complaints

In the draft environmental impact statement, the agency failed to consider the effect of Vulcan’s rail traffic on San Antonio’s railways and roadways. Specifically, the agency did not inquire into whether future rail traffic from Vulcan would exacerbate, cause, or contribute to at-grade crossing delays exceeding federal delay criteria on major roadways.

C. Vulcan’s traffic will add to pre-existing grade crossing delay problems for at least three major at-grade railroad crossings in south San Antonio.

⁷¹ 40 C.F.R. § 1508.25 (2004).

⁷² *Id.* at § 1508.25(c).

⁷³ 40 C.F.R. § 1508.7 (2004).

1. There is only one route Vulcan's eastbound traffic can physically follow

The San Antonio area is a hub of national and international rail traffic, receiving trains from West Coast ports, the Gulf Coast, and up and down the NAFTA corridor. Due to the stated routing of Vulcan's rail traffic, a cumulative impact on specific lines that make up this network is not speculative, but certain.

[A Powerpoint slide presentation has been prepared and enclosed with these comments to assist in visualizing the facts below]

From points west, rail traffic enters the city on what is known as the Union Pacific Del Rio subdivision, paralleling U.S. highway 90. This rail line is shown in red on Slide 1 in the presentation. Vulcan's rail traffic, if going east from its connection with the Union Pacific line, must follow this route. There are no other rail intersections between the tie in and the city.

Coming into the city, this red line parallels a line from the southwest shown in yellow, which carries traffic arriving from Laredo and Mexico. East of the former Kelly Air Force Base, another spur line enters the Laredo line from the south. This line will serve the Toyota assembly plant currently under construction. Just west of downtown, the Del Rio line (red) and the Laredo line (yellow) cross.

But significantly, as Slides 2 and 4 illustrate, there is no connector in either the northwest or northeast quadrant of this intersection between the Del Rio Line and the Laredo line. Traffic wishing to turn north on these lines must continue at least as far as the San Antonio river, where another track enters from the northwest, and conduct a reverse movement there. In any case, Vulcan has indicated in its petitions, which the agency has adopted in the draft environmental impact statement,⁷⁴ that “the primary market for that aggregate [produced at the proposed quarry] is in the eastern part of Texas, including the Greater Houston area.”⁷⁵ Vulcan has further indicated that its “connection with the Union Pacific main line “must be such that loaded trains on the SGR [Vulcan] line enter the UP main line with the *eastbound orientation*, since the vast majority of SGR rail shipments will be going east, where it is expected that the primary markets for aggregate will be located.”⁷⁶ The lines taking off to the north, in contrast, split into one short spur line that terminates not far past the northwest limits of San Antonio, and another line that travels due north, along which Vulcan already operates several quarries.

⁷⁴ Draft Environmental Impact Statement at 2-1 n.1.

⁷⁵ Southwest Gulf Railway [Vulcan] Petition for Exemption at 2 (filed Feb. 27, 2003).

⁷⁶ Letter, David Coburn, Steptoe & Johnson, to Victoria Rutson, Section of Environmental Analysis, at 13 (May 4, 2004).

It is therefore extremely unlikely that any Vulcan traffic will turn to the north at the first major intersection in San Antonio. Rather, the traffic must continue south of downtown, as shown in red on Slides 1 and 2, and cross the San Antonio River. Therefore, Vulcan's cumulative impact on these portions of the San Antonio rail network is certain.

2. The consequences of the route Vulcan's eastbound traffic must follow are significant

The result is that Vulcan's eastbound traffic will not have a chance to turn onto other lines before it reaches the San Antonio River.

The consequences of this routing are real, severe, and additive to a pre-existing problem that the agency has a duty to disclose in the environmental impact statement. At least three major at-grade railroad crossings currently experience vehicle delay in excess of federal delay criteria.

Federal delay criteria for grade crossings is established by the umbrella agency for the Surface Transportation Board, the U.S. Department of Transportation (the Board itself is an independent agency). The criteria establish various thresholds for when a railroad crossing should be grade separated: some are based on train speed, some are based on road speed or average daily traffic, but the key criteria for this analysis is the "total hours

of vehicle delay per day.” When this value—defined as the average delay per vehicle times the average number of vehicles per day—exceeds 40 hours, the federal criteria indicate that a crossing should be grade separated. The agency’s failure to disclose this information to the public violates its duties to consider cumulative impacts in the environmental impact statement.

Using the Surface Transportation Board’s own methodology, outlined extensively in an environmental impact statement for another recent urban rail construction project in Houston,⁷⁷ MCEAA has determined the total hours of vehicle delay for three major intersections in south San Antonio. To do so, MCEAA has obtained the relevant average daily traffic data from the City of San Antonio,⁷⁸ and used the same average train length that the agency used in its Houston analysis. MCEAA has followed the agency’s methodology exactly as laid out in the Houston analysis.⁷⁹

⁷⁷ See Finance Docket No. 34079, Bayport Loop Build-Out, Draft Environmental Impact Statement, Appendix F. This document is enclosed with these comments.

⁷⁸ MCEAA was not able to fully analyze one other grade crossing that may require separation under federal criteria, on Proband near Lone Star, because current traffic counts did not exist for those streets. It is the agency’s burden to address this uncertainty.

⁷⁹ The only change MCEAA has made was to correct a vehicle departure rate later found to be erroneous in the agency’s Houston analysis. In that analysis, the agency wanted to choose a vehicle departure rate for arterial streets, but instead chose the vehicle departure rate for arterial *highways*, such as the four-lane divided U.S. highway 67 in Louisiana. MCEAA corrected for this by selecting the next lowest vehicle departure rate from the set of corresponding rates and road categories that the agency presented in its Houston

[The calculations in MCEAA's analysis—from which the use of the agency's methodology can be clearly verified—appear in an Excel spreadsheet enclosed with these comments. The agency's methodology from the Houston analysis is also enclosed.]

MCEAA analyzed a range of existing train traffic levels, to determine whether grade separation is *presently* required. When analyzing cumulative impacts, the agency must consider “the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions.”⁸⁰ MCEAA concludes that grade separation is certainly required for one south San Antonio street, Zarzamora,⁸¹ and may likely be required for two others, Brazos⁸² and Flores,⁸³ based on current train traffic levels.

analysis. Given the urban nature and low speed limits on the south San Antonio streets, this is a conservative assumption that may still overstate the vehicle departure rate, and thus understate the total vehicle hours of vehicle delay per day.

⁸⁰ 40 C.F.R. § 1508.7 (2004).

⁸¹ See Powerpoint presentation slides 4 and 8.

⁸² See Powerpoint presentation slides 4 and 9.

⁸³ See Powerpoint presentation slides 5 and 11.

San Antonio Streets Currently Exceeding Federal Grade Separation Criteria

August 2004

	N of trains	Total hrs	Threshold (hrs)	Over/Under (hrs)
Zarzamora at Merida	20	65.75	40	25.75
Brazos south of				
Laredo	20	26.66	40	-13.34
Flores at Lone Star	20	27.32	40	-12.68
Probant at Lone Star	20	N/A	40	N/A

	N of trains	Total hrs	Threshold (hrs)	Over/Under (hrs)
Zarzamora at Merida	16	42.08	40	2.08
Brazos south of				
Laredo	16	17.06	40	-22.94
Flores at Lone Star	16	17.48	40	-22.52
Probant at Lone Star	16	N/A	40	N/A

	N of trains	Total hrs	Threshold (hrs)	Over/Under (hrs)
Zarzamora at Merida	13	65.75	40	25.75
Brazos south of				
Laredo	30	39.99	40	-0.01
Flores at Lone Star	30	40.98	40	0.98
Probant at Lone Star	??	N/A	40	N/A

The most recent published train movement data for one of the three major railroads serving San Antonio, the Union Pacific, indicates 25 train movements per day on the lines entering the city from the west.⁸⁴

Additional reported data places the present total number of daily train movements from all railroads passing through San Antonio between 40 and 45. Viewing Slide 2 in the Powerpoint presentation, it is clear that the vast majority of these trains will have to cross the San Antonio River. MCEAA

⁸⁴ TRAINS MAGAZINE, July 2004.

made extremely conservative assumptions as to daily train traffic, and made assumptions for train length identical to those used in the Houston analysis.

The agency has a duty to determine the actual level of train traffic along Vulcan's route and determine the effect of Vulcan's contribution to it. The agency should be able to easily obtain this information as it did in its Houston analysis. If no further information is provided, the agency must use the uncertainty regulation, 40 C.F.R. § 1502.22, and apply reasonable inputs to the methodology it has suggested. The Surface Transportation Board knows well that "when the nature of the effect is reasonably foreseeable but its extent is not . . . the agency may not simply ignore the effect."⁸⁵

⁸⁵ Mid States Coalition for Progress v. Surface Transportation Board, 345 F.3d 520, 550 (8th Cir. 2003).

IV. THE AGENCY HAS NOT COMPLIED WITH THE ENDANGERED SPECIES ACT

A. Relevant duties of the agency

Section 7 of the Endangered Species Act (ESA) imposes on Federal agencies the duty to “insure that actions authorized, funded, or carried out” by them do not jeopardize the continued existence of any threatened or endangered species or result in the destruction or modification of habitat of such species which the Secretary of Interior determines to be critical.⁸⁶

An agency proposing to take an action must inquire of the U.S. Fish and Wildlife Service, as the Secretary’s delegate, “whether any threatened or endangered species may be present” in the area of the proposed action.⁸⁷ If the answer is affirmative, the proposing agency must prepare a “biological assessment” to determine whether such species “is likely to be affected” by the action.⁸⁸ An agency may fulfill the biological assessment requirement as part of an environmental impact statement.⁸⁹

⁸⁶ 16 U.S.C. § 1536(a)(2) (2000).

⁸⁷ *Id.*

⁸⁸ 16 U.S.C. § 1536(c)(1) (2000).

⁸⁹ *Id.*; 50 C.F.R. 402.12(f) (2004). If, after completing the biological assessment, the agency determines that an action may “affect” proposed or listed threatened or endangered species or their proposed or designated critical habitat, it must formally consult with the U.S. Fish and Wildlife Service. 16 U.S.C. § 1536(b)(3)(A) (2000).

The ESA requires that Federal agencies “adequately consider” the “total impact” of their actions on endangered and threatened species, including “indirect effects.”⁹⁰ The federal agency involved “must take *all necessary action* to insure that its actions will not jeopardize the continued existence of an endangered species or destroy or modify habitat critical to the existence of the species.”⁹¹

These duties apply independent of other procedural duties under the National Environmental Policy Act (NEPA) or other statutes.

B. Specific Complaints

Regardless of how the scope of the action is construed under NEPA, the Surface Transportation Board has failed to “adequately consider” the “total impact” of the action under the ESA.⁹²

If the quarry and rail line are “connected actions” under NEPA’s regulation governing the scope of environmental impact statements,⁹³ and the quarry is thus part of the action, then there is no dispute that its effects

⁹⁰ *National Wildlife Federation v. Coleman*, 529 F.2d 359, 373 (5th Cir. 1976).

⁹¹ *Id.* at 371 (emphasis added).

⁹² MCEAA has raised these concerns previously, in the scoping phase of this proceeding. See Letter, David Barton, The Gardner Law Firm, to Victoria J. Rutson (Feb. 19, 2004) (regarding analysis under the ESA). This letter is incorporated by reference into these comments.

⁹³ 40 C.F.R. § 1508.25(a), (a)(1) (2004).

must be considered in determining whether a species “is likely to be affected” by the action.

Even if the quarry and rail line are not connected actions, however, the agency still has a duty—as the Fifth Circuit amply stated nearly three decades ago in *National Wildlife Federation v. Coleman*, the leading case on agency responsibilities beyond the mere direct effects of a project on species and their habitat—to “adequately consider” the “total impact” of licensing Vulcan’s rail line by considering “indirect effects.”⁹⁴ “The fact that . . . private development . . . does not result from direct federal action does not lessen the [agency’s] duty under § 7.”⁹⁵ In this proceeding, the Surface Transportation Board failed to adequately consider indirect effects from the quarry and future land development along the rail line. The effect of the quarry was not adequately considered; the effect of future land development along the rail line was not considered at all.

An agency’s failure to conduct an inquiry of the proper scope amounts to a failure to consider relevant factors, reversible as arbitrary and capricious under section 706(2)(A) of the Administrative Procedure Act.⁹⁶

⁹⁴ *National Wildlife Federation v. Coleman*, 529 F.2d 359, 373 (5th Cir. 1976).

⁹⁵ *Id.* at 374 (5th Cir. 1976).

⁹⁶ *Citizens to Preserve Overton Park v. Volpe*, 401 U.S. 402, 416 (1971).

C. Background and Summary of Process to Date

1. Species of concern

The U.S. Fish and Wildlife Service has identified species that “may be present” in the area of the proposed action.⁹⁷ Two listed endangered species that occur both along the rail route and at the quarry site are songbirds: the black-capped vireo (*Vireo atricapillus*) and the golden-cheeked warbler (*Dendroica chrysoparia*).⁹⁸

The vireo nests in mainly Texas during April through July and migrates to Mexico in the winter. To nest, it relies on low woody brush typically cleared or overgrazed by deer and livestock. Vireos return year after year to the same area, approximately 2 to 4 acres in size.

The warbler nests and raises its young in exclusively in the Edwards Plateau region of Texas and migrates annually between there and Central America. It comes to Texas in March and leaves in July. It prefers mixed Ashe juniper or oak woodland that is disappearing due to clearing for development and grazing. Like the vireo, it is an exceptional songbird well known to the landowners in Medina County.

2. Habitat destruction has not been adequately considered for the quarry

⁹⁷ Draft Environmental Impact Statement, at 3-27 to 3-29.

⁹⁸ Draft Environmental Impact Statement, at 3-27 and 4-108.

It is well-settled that habitat destruction would likely “affect” both the vireo and the warbler.⁹⁹ This would trigger a duty for the agency to consult further to determine the extent of, and appropriate course of action based on, those effects.¹⁰⁰

The issue in this proceeding is the agency’s failure to adequately consider “indirect effects” of the quarry and future land development adjacent to the rail line when determining if habitat destruction would occur. The effect of the quarry was not adequately considered; the effect of future land development along the rail line was not considered at all.

Determining if habitat destruction would occur, and thus whether the birds would be affected, is not simply a paper exercise where the applicant may make representations to the agency concerning the viability of the project site as potential habitat based on the flora. Only if *no* potential habitat exists does the inquiry terminate at that step. Where potential habitat

⁹⁹ The U.S. Fish and Wildlife Service states that “Loss of habitat is the most important threat to the existence of the golden-cheeked warbler. In particular, on-going and imminent habitat destruction was used to justify the emergency listing of the golden-cheeked warbler in 1990.” U.S. Fish and Wildlife Service Region 2, GOLDEN-CHEEKED WARBLER RECOVERY PLAN (1992), at 21. This document is enclosed with the comments for inclusion in the record. A similar finding has been made for the black-capped vireo. U.S. Fish and Wildlife Service Region 2, BLACK-CAPPED VIREO RECOVERY PLAN (1991), at 28. This document is enclosed with the comments for inclusion in the record.

¹⁰⁰ 16 U.S.C. § 1536(b)(3)(A) (2000) and note 89, *supra*.

exists, the U.S. Fish and Wildlife Service requires presence and absence surveys.¹⁰¹

Vulcan has contracted to conduct biological and threatened and endangered species surveys for the quarry since April 1999, four years prior to the commencement of any public process.¹⁰² Yet during the nearly six years to date, Vulcan has never conducted the required focused counting outlined by the U.S. Fish and Wildlife Service presence and absence survey protocol over the entire potential habitat on the 1700-acre quarry site.¹⁰³

From the beginning, Vulcan has known that the U.S. Fish and Wildlife Service requires three migration seasons of data (i.e., data collected over three years) to establish presence or absence at a site as large as the 1700-acre quarry.¹⁰⁴ Yet Vulcan has carried out the survey protocol on only

¹⁰¹ U.S. Fish and Wildlife Service, “Minimum Procedures for Determining the Presence/Absence of Golden-Cheeked Warblers and Black-Capped Vireos” (Apr. 3, 2002), *hereinafter* Survey Protocol. This document is enclosed with the comments for inclusion in the record.

¹⁰² 2001 Biological Assessment, at 2.

¹⁰³ Survey Protocol, *supra* note 101, at ¶ 4–5.

¹⁰⁴ See Letter, David C. Frederick, Supervisor, U.S. Fish and Wildlife Service Austin Field Office, to Dr. William Rodgers, Vulcan consultant, at 2 (Mar. 20, 2002) (“Normally, the Service requires a minimum of three years of Service-approved bird surveys to determine the absence of golden-cheeked warblers and black-capped vireos from potential habitat areas before we will concur that a development project will not adversely affect the species.”); 2003 Biological Assessment at 3.

a 400–600 acre portion designated as “Phase 1” of the quarry, leaving the other phases to an unspecified future date after Phase 1 operation begins.¹⁰⁵

This approach is arbitrary and capricious when unsurveyed potential habitat exists on Phases 2–5 of the quarry site for the warbler, as Vulcan,¹⁰⁶ the Service,¹⁰⁷ and the Surface Transportation Board¹⁰⁸ all admit.

The Federal agencies attempt to ignore the presence of potential habitat in Phases 2–5 by deeming it “low quality” and “unsuitable”.¹⁰⁹ This amounts to criteria-free, amorphous, arbitrary line drawing that would only trigger focused counting under the Service’s survey protocol whenever the Federal agencies felt like it, rather than whenever potential habitat existed. That is simply not within their discretion.

Even under the current survey protocols, an apparent lack of suitable habitat is not a sufficient basis to rest a “not likely to affect” determination on in a biological assessment:

¹⁰⁵ 2003 Biological Assessment at 2–3. The Service has slickly termed this approach “somewhat unconventional.” Letter, David C. Frederick, Supervisor, U.S. Fish and Wildlife Service Austin Field Office, to Dr. William Rodgers, Vulcan consultant, at 3 (Mar. 20, 2002).

¹⁰⁶ 2003 Biological Assessment at 3, 6, 13–17.

¹⁰⁷ Letter, Robert T. Pine, Supervisor, U.S. Fish and Wildlife Service Austin Field Office, to Dr. William Rodgers, Vulcan consultant, at 2 (Oct. 17, 2003).

¹⁰⁸ Draft Environmental Impact Statement at 4-109.

¹⁰⁹ Letter, Robert T. Pine, Supervisor, U.S. Fish and Wildlife Service Austin Field Office, to Dr. William Rodgers, Vulcan consultant, at 2 (Oct. 17, 2003) (adopting private consultant’s conclusion in 2003 Biological Assessment at 15); Draft Environmental Impact Statement at 4-109.

One species, the Golden-cheeked Warbler, has recently been found in a variety of habitats other than Ashe juniper hardwood, so the [Service] does not currently allow the use of habitat surveys to determine presence of the species in a proposed disturbance area.¹¹⁰

This undercuts the Federal agencies' conclusion: that even though focused counting for the presence and absence of the warbler did not occur on Phases 2–5, the totality of the circumstances (habitat quality, absence during screening surveys, and Vulcan's promise to keep potential habitat areas as buffers) justifies a finding that the warbler is not likely to be affected by the project. Rather, the quality of the habitat supports no inference as to presence or absence. Therefore, additional criteria cannot be used to “overcome” a determination that the agency failed to make.

3. *Habitat destruction has not been considered for future land development*

Meanwhile, the Surface Transportation Board has limited its inquiry into habitat destruction along the rail line to the width of the easement, a distance of 80 feet.¹¹¹ This renders it impossible to evaluate the impact of future rail-served development on the species.

¹¹⁰ 2001 Biological Assessment at 20.

¹¹¹ Draft Environmental Impact Statement at 4-43.

National Wildlife Federation v. Coleman would hold that such development along major channels of interstate commerce rises above “mere speculation.”¹¹² Candidly, the important point here is congruence with the scope of the NEPA analysis. If, for the purposes of NEPA, the agency relies on the indirect effect of future rail-served development to claim that Vulcan’s rail segment has independent utility, and is therefore not a connected action with its quarry, then it must analyze the impact of such development.¹¹³

D. The ESA requires the agency to account for indirect effects from the quarry.

¹¹² *National Wildlife Federation v. Coleman*, 529 F.2d 359, 373 (5th Cir. 1976). MCEAA notes that the Surface Transportation Board has not adopted this position. In the absence of any proposed development along the line whatsoever, i.e., without Vulcan’s quarry or any other shipper, the agency’s position must be different, and consistent with *Coleman*, because the agency would “control this development to the extent that they control the placement” of the line. *Id.* at 374. However, MCEAA continues to believe that the agency can maintain its current position only so long as it does not adopt the opposite one when determining scope of the environmental impact statement. In the latter context, MCEAA has previously pointed out Vulcan’s own statements that proposals for other future development have not yet materialized and are speculative.

¹¹³ See *Sierra Club v. Sigler*, 695 F.2d 957, 978-79 (5th Cir. 1983) (applying the same principle in the NEPA context).

When determining whether a species “is likely to be affected” by the action, an agency must “adequately consider” the “total impact” of its action by considering “indirect effects.”¹¹⁴

The quarry, if not a direct effect or a baseline condition that must be considered, is still an indirect effect within the meaning of *Coleman*.

If the quarry and rail line are “connected actions” under NEPA’s regulation governing the scope of environmental impact statements,¹¹⁵ and the quarry is thus part of the action, then there is no dispute that its effects must be considered in determining whether a species “is likely to be affected” by the action.

Even if the quarry and rail line are not connected actions, however, the agency still has the same duty.

Vulcan and the agency, however, want it both ways. As in the NEPA context, they would create jurisdictional bars where none exist, and insist on inapplicable but-for cause standards while ignoring the applicable law. The result, both under NEPA and the ESA, is impermissible abdication of agency authority and the failure to adequately consider the effects of related actions. Underlying the abdication of authority is the baseless assumption that effects

¹¹⁴ *National Wildlife Federation v. Coleman*, 529 F.2d 359, 373 (5th Cir. 1976).

¹¹⁵ 40 C.F.R. § 1508.25(a), (a)(1) (2004).

on the birds will not occur during the successive phases of quarry excavation, blasting, and operations, including the rail line. The conclusions in the record on this issue consist of a bald assertion that blasting will not affect flora or fauna.¹¹⁶

First, Vulcan absurdly argues that the agency has no duty to consider the quarry at all in its ESA analysis, citing a sole inapposite and misrepresented case holding from the Western District of Kentucky in support of its analysis.¹¹⁷ This is clearly erroneous given “The fact that . . . private development . . . does not result from direct federal action does not lessen the [agency’s] duty under § 7.”¹¹⁸ There simply is no jurisdictional bar to the agency’s duty to consider the “total impact” of the action, including “indirect effects,” regardless of their source.

Vulcan next insists that the duty to consider indirect effects in *Coleman* applies only to those effects that result from strict but for cause.¹¹⁹ This proposition is also incorrect insofar as it would excuse an agency duty to consider the quarry, and Vulcan clearly labors in its argument to ignore the fact that (as it maintains) the quarry is *certain to occur regardless of whether*

¹¹⁶ 2003 Biological Assessment, at 18.

¹¹⁷ Letter, David Coburn, Steptoe & Johnson, to Victoria J. Rutson, Section of Environmental Analysis, at 9 (Mar. 10, 2004).

¹¹⁸ *Coleman*, 529 F.2d at 374 (5th Cir. 1976).

¹¹⁹ Letter, David Coburn, Steptoe & Johnson, to Victoria J. Rutson, Section of Environmental Analysis, at 10 (Mar. 10, 2004).

the rail line is built. Simply put, it is inexcusable, as well as arbitrary and capricious, for the agency to ignore a *known baseline condition* when determining the impact of its action on the warbler and the vireo.

As the Fifth Circuit stated in *Coleman*, the result compelled by the ESA is for the agency “to insure that [the project] will not jeopardize the [species] or modify its habitat,” with the bottom line being “whether the [species] can survive the additional loss of habitat.”¹²⁰

In *Coleman*, the U.S. Fish and Wildlife Service had found that a segment of Interstate 10 in coastal Mississippi, proposed by the U.S. Department of Transportation, would not “jeopardize the existence” of the endangered sandhill crane.¹²¹ However, the agencies had neglected to consider the “residential and commercial development that [could] be expected to result” adjacent to the highway.”¹²² The court found that regardless of the non-federal nature of the development, the Department of Transportation still had a duty under § 7 and “control[led] the development . . . to the extent that they control[led] the placement.”¹²³

¹²⁰ *National Wildlife Federation v. Coleman*, 529 F.2d 359, 373 (5th Cir. 1976).

¹²¹ *Id.*

¹²² *Id.*

¹²³ *Id.* at 374.

“Similarly,” the court wrote, “the fact that timber management practices have in the past destroyed habitat of the crane does not lessen the duty of the [agency] to insure that the [project] and accompanying private development do not jeopardize the existence of the crane”¹²⁴

“Irrespective of the past actions of others,” the agencies “have a duty to ensure that the highway and the development generated by it do not further threaten the crane.”¹²⁵

Absent that analysis of past actions, i.e. baseline conditions, it would be “questionable whether the crane could survive . . . the indirect effects of the highway.”¹²⁶

Given the clear language of *Coleman*, does the agency really think that it would be excused from considering the effect of *past* actions, such as grazing and development, on the warbler and the vireo? No. The draft environmental impact statement considers these factors.¹²⁷ There is no “but for” limit on baseline conditions.

Having a clear duty to consider past and present non-Federal actions, then, there is no doubt that the agency must also consider future non-

¹²⁴ *Id.*

¹²⁵ *Id.*

¹²⁶ *National Wildlife Federation v. Coleman*, 529 F.2d 359, 373 (5th Cir. 1976).

¹²⁷ Draft Environmental Impact Statement at 3-26.

speculative non-Federal actions that will affect whether the warbler and vireo “could survive.” The quarry, certain to occur, is such an action.

By implicating “indirect effects,” the Fifth Circuit calls for the same level of inquiry used for direct effects to apply to what may fairly be called “cumulative effects” or “cumulative impacts” as the term is understood in the CEQ regulations implementing NEPA.¹²⁸

Indeed to the extent that the agency relies on its NEPA analysis to satisfy its ESA duties, it must consider such actions as the certain-to-occur quarry, which the agency itself argues is a “cumulative impact” under NEPA. The level, or depth, of inquiry must be the same in order to produce the result compelled by the ESA. As applied in *Coleman*, that was “whether the crane could survive.”¹²⁹

Even if we accept Vulcan’s “but-for” test for the sake of argument, *Coleman*’s rationale still requires the agency to consider the quarry. We cannot ignore the fact that at the moment the rail line begins operation, it will be 100% functionally interdependent on the output of the quarry. So too with Interstate 10 and its interchanges in *Coleman*. The foreseeable

¹²⁸ See 40 C.F.R. § 1508.7 (2004) (defining “cumulative impact” as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.”).

¹²⁹ *Coleman*, 529 F.2d at 373.

private developments would place their traffic on the highway the moment it was built. Would it have mattered, in evaluating whether the crane could survive the highway and its indirect effects, if the private developers had started clearing their land and operating a few months before the highway was finished? If they and their purchasers had accessed their properties up until highway completion with mule teams, airboats, or pirogues (Cajun dugout canoes)? Would the agency have been excused from considering their foreseeable and certain-to-occur impacts, when determining if the crane would survive the impact of the federal action? This is the poverty of Vulcan's argument that because the quarry may be served by trucks, some jurisdictional bar can be contrived to excuse the agency from its duties under the ESA. The duties imposed on federal agencies by the ESA do not permit decisionmaking or analysis in a vacuum. There is no basis for Vulcan's untenable distinctions, and the agency must reverse its position immediately.

Coleman holds without ambiguity that the agency must consider all phases of the quarry and rail line. In addition, the agency must consider the effects now, before operations begin that may adversely affect habitat on portions of the quarry site that have not been surveyed pursuant to required protocols. *Coleman* did not allow the U.S. Department of Transportation to wait around and see what the effects of Interstate 10 and the *foreseeable*

private development around it would have on the crane. In the same way, STB and FWS cannot wait and see what indirect effects the *certain-to-occur* blasting and other quarry operations would have on the golden-cheeked warbler or the black-capped vireo. Vulcan concedes that it will have to monitor over the life of the project anyhow—but it is the agency’s duty to analyze today that has not been satisfied.

In closing, we repeat, as noted above, that under the current survey protocols, an apparent lack of suitable habitat is not a sufficient basis for the agency to rest a “not likely to affect” determination on. The U.S. Fish and Wildlife Service does not currently allow the use of habitat surveys to determine presence of the species in a proposed disturbance area.¹³⁰ Therefore, the quality of the habitat supports no inference as to presence or absence. In addition, the Surface Transportation Board has no expertise in judging habitat quality.¹³¹ Its additional “totality of the circumstances” factors, which lack a scientific basis supporting the validity of their inherent tradeoffs, cannot be used to “overcome” a determination that the agency failed to make.

¹³⁰ 2001 Biological Assessment at 20.

¹³¹ Federal and Federal-State Agencies With Jurisdiction By Law or Special Expertise on Environmental Quality Issues, 49 Fed. Reg. 49754–49778 (Dec. 21, 1984).

APPENDIX F GRADE CROSSING DELAY AND SAFETY

F.1 TRAFFIC DELAY METHODOLOGY

For each grade crossing analyzed, SEA calculated the time that a particular crossing would be blocked for each train-crossing event and estimated the average delay per vehicle using that crossing in a 24-hour period. SEA used the average delay per vehicle at grade crossings to determine the LOS. The LOS is a letter grading system developed by the Transportation Research Board to express the amount of traffic congestion at signalized intersections. LOS is also used as a qualitative measure of road operating conditions and comfort level of passengers. LOS ranges from A (best) to F (worst). SEA analyzed average traffic delay for all vehicles over a 24-hour period and used the average delay per vehicle to determine LOS for each grade crossing based on ratings described in Table F.1-1.

**Table F.1-1
Grade Crossings Level of Service**

Level of Service (LOS)	Average Total Delay (seconds/vehicle)
A	≤5
B	>5 and ≤10
C	>10 and ≤20
D	>20 and ≤30
E	>30 and ≤45
F	>45

SEA used the following calculations to determine traffic delay at grade crossings. The traffic delay at a crossing includes the time for the train to pass, along with time for any warning device to engage.

Blocked Crossing Time:

$$(D_c) = \frac{L}{V \times 88} + 0.5 \text{ minutes}$$

L = Length of the train, in feet.

V = Train speed in miles per hour.

88 = Conversion factor from miles per hour to feet per minute (1 mile per hour = 88 feet per minute).

0.5 = Time required, in minutes, for gate closing and opening before and after train passage.¹

Crossing Delay per Stopped Vehicle:

$$(D_A) = \frac{D_C \times (S_C / (S_C - S_Q))}{2 \text{ minutes/vehicle}}$$

S_C = Vehicle departure rate, vehicles per hour per lane.²

S_Q = Average arrival rate, average daily traffic in vehicles per hour per lane.

2 = Denominator to reflect that vehicles do not experience delay for the entire time that the train blocks the grade crossing, but arrive on average at the midpoint of the train crossing period.

Number of Vehicles Delayed per Day:

$$T_D = \frac{D_C}{1,440} \times N \times \text{ADT vehicles / day}$$

1,440 = Minutes per day.

N = Number of trains per day.

ADT = Average daily traffic volume.

Average Delay per Vehicle (in a 24-hour period):

$$\text{Delay} = \frac{D_C}{1,440} \times N \times D_A \times 60 \text{ seconds / vehicle}$$

The following tables illustrate the results of the traffic delay analysis for the Proposed Action and the No-Build Alternative. The No-Action Alternative involves only the Bayport Loop Industrial Lead to Strang Yard. Table F.1-3 for the No-Build Alternative shows the existing conditions for the Bayport Loop Industrial Lead, which would remain the same under the No-Action Alternative.

¹ Not all crossings have gates as warning devices and thus blocked crossing times for such cases may be over-estimated.

² The vehicle departure rate depends on a wide range of factors such as the presence or absence of signals, number and type of lanes, lane width, grade, sight distances, type and peak vehicle traffic, and curve radius. Data on these factors are not readily available for the grade crossings included in this analysis and, thus, calculation of crossing-specific departure rates is not feasible. This analysis uses vehicle departure rates of 1800/hr for highways, 1400/hr for arterials, 900/hr for collectors, and 700/hr for local roads. For further information, see Transportation Research Board, National Research Council, *Highway Capacity Manual, Special Report 209*. Third Edition, 1994.

Table F.1-2
Proposed Action Traffic Delay Analysis

Segments	FRA Crossing ID Number	Street Name	Length of Train (ft)	Train Speed (mph)	Blocked Crossing Time for Train = D _c (minutes)	S _c	Average Crossing Delay per Stopped Vehicle D _c = D _c x (S _c /√S _c - S _a)/2 (minutes/vehicle)	Average Number of Trains per Day (N)			Average Daily Traffic (ADT)	No. of Road Lanes (NL)	Number of Vehicles Delayed per Day (T _d)			Average Delay per Vehicle (seconds)			Traffic Level of Service
								Pre	Post	Δ			Pre	Post	Δ	Pre	Post	Δ	
New Grade Crossings	N/A	Old Hwy 146 (@ Port Rd)	1,551	7.5	2.85	700	1.54	2.00	2.00	2.00	2,460	2	10	10		0.36	0.36	0.36	A
	N/A	PORT RD	1,551	7.5	2.85	700	1.63	2.00	2.00	2.00	4,260	2	17	17		0.39	0.39	0.39	A
	N/A	HWY 146-NB entrance ramp	1,551	7.5	2.85	700	1.46	2.00	2.00	2.00	921	2	4	4		0.35	0.35	0.35	A
	N/A	HWY 146-SB exit ramp	1,551	7.5	2.85	700	1.48	2.00	2.00	2.00	1,280	2	5	5		0.35	0.35	0.35	A
GH&H line	N/A	BAY AREA BLVD	2,545	7.5	4.36	700	2.97	12.50	12.50	12.50	17,920	4	678	678		6.74	6.74	6.74	B
	859598E	BRANTLEY ST.	3,618	17.5	2.85	700	1.49	3.40	5.40	2.00	1,490	2	10	16	6	0.60	0.96	0.35	A
	859597X	CHALLENGER 7 PKWY	3,618	17.5	2.85	700	1.48	3.40	5.40	2.00	2,880	5	19	31	11	0.60	0.95	0.35	A
	859596R	N. GATE	3,618	17.5	2.85	700	1.49	3.40	5.40	2.00	1,410	2	9	15	6	0.60	0.95	0.35	A
	859592N	GENDA RED BLUFF	3,618	17.5	2.85	700	3.12	3.40	5.40	2.00	18,280	2	123	195	72	1.26	2.00	0.74	A
	859589F	TIKI LANE	3,618	17.5	2.85	700	1.46	3.40	5.40	2.00	860	2	6	9	3	0.59	0.94	0.35	A
	859587S	SHAVAR	3,618	20	2.56	1,400	1.53	3.40	5.40	2.00	21,960	4	132	210	78	0.55	0.88	0.33	A
	859584W	CORONATION DRIVE	3,618	17.5	2.85	700	1.49	3.40	5.40	2.00	1,380	2	9	15	5	0.60	0.95	0.35	A
	859583P	EDGEBROOK	3,618	17.5	2.85	1,400	1.64	3.40	5.40	2.00	21,900	5	147	234	87	0.66	1.05	0.39	A
	859579A	NEVADA	3,618	22.5	2.33	700	1.35	3.40	5.40	2.00	4,730	2	26	41	15	0.45	0.71	0.26	A
	859578T	SPENCER	3,618	17.5	2.85	700	1.95	3.40	5.40	2.00	22,600	5	152	241	89	0.79	1.25	0.46	A
	859577L	PENNSYLVANIA	3,618	17.5	2.85	700	1.58	3.40	5.40	2.00	3,390	2	23	36	13	0.64	1.02	0.38	A
	859576E	VIRGINIA ST	3,618	17.5	2.85	700	1.48	3.40	5.40	2.00	1,180	2	8	13	5	0.60	0.95	0.35	A
	859575X	KENTUCKY ST.	3,618	17.5	2.85	700	1.51	3.40	5.40	2.00	1,810	2	12	19	7	0.61	0.97	0.36	A
	859574R	S. RICHEY ST.	3,618	17.5	2.85	1,400	1.67	3.40	5.40	2.00	19,770	4	133	211	78	0.67	1.07	0.40	A
	859570N	HOWARD DRIVE	3,618	17.5	2.85	1,400	1.60	3.40	5.40	2.00	18,280	5	123	195	72	0.65	1.02	0.38	A
	859569U	WYNE ST.	3,618	17.5	2.85	700	1.43	3.40	5.40	2.00	180	2	1	2	1	0.58	0.92	0.34	A
	859567F	PARK PLAC BLVD.	3,618	17.5	2.85	1,400	1.55	3.40	5.40	2.00	5,360	2	36	57	21	0.62	0.99	0.37	A
	859568M	PARK TERRACE	3,618	17.5	2.85	700	1.70	3.40	5.40	2.00	5,420	2	36	58	21	0.69	1.09	0.40	A
	859550C	BROADWAY ST.	3,618	17.5	2.85	1,400	1.61	3.40	5.40	2.00	15,660	4	105	167	62	0.65	1.03	0.38	A
Tower 30 to Tower 85	859549H	JUNUS	3,618	15	3.24	700	1.70	3.40	5.40	2.00	1,580	2	12	19	7	0.78	1.24	0.46	A
	859548B	ROWIE ST	3,618	17.5	2.85	900	1.47	3.40	5.40	2.00	1,270	2	9	14	5	0.59	0.94	0.35	A
	859547U	LAWDALE	3,618	17.5	2.85	700	1.91	3.40	5.40	2.00	17,090	4	115	183	68	0.77	1.22	0.45	A
	859546M	MANCHESTER ST.	3,618	17.5	2.85	700	1.45	3.40	5.40	2.00	630	2	4	7	2	0.59	0.93	0.34	A
	859533L	67TH ST.	3,813	17.5	2.98	700	1.55	5.00	7.00	2.00	1,260	2	13	18	5	0.96	1.34	0.38	A
	859530R	66TH ST.	3,813	17.5	2.98	700	1.56	5.00	7.00	2.00	1,570	2	16	23	6	0.97	1.35	0.39	A
Tower 85 to Tower 87	288035Y	HUGHES ST.	3,813	15	3.39	700	1.82	5.00	7.00	2.00	2,250	2	26	37	11	1.28	1.79	0.51	A
	288034S	HARRISBURG BLVD.	3,618	15	3.24	1,400	1.83	25.10	27.10	2.00	15,510	4	876	946	70	6.21	6.70	0.49	B
	288033K	SHERMAN ST.	3,618	15	3.24	700	1.73	25.10	27.10	2.00	2,130	2	120	130	10	5.86	6.33	0.47	B
	288032D	BRADY ST.	3,618	15	3.24	700	1.65	25.10	27.10	2.00	590	2	33	36	3	5.59	6.03	0.45	B
	288 024L	CANAL ST.	3,618	11	4.24	900	2.31	25.10	27.10	2.00	3,500	2	258	279	21	10.22	11.03	0.81	C
	288009J	OLD CLINTON RD.	3,618	12.5	3.79	700	1.91	25.10	27.10	2.00	190	2	13	14	1	7.55	8.15	0.60	B
	288010D	CLINTON DR.	3,618	12.5	3.79	700	1.94	25.10	27.10	2.00	2,580	6	170	184	14	7.70	8.32	0.61	B

Table F.1-2 (continued)
Proposed Action Traffic Delay Analysis

Segments	FRA Crossing ID Number	Street Name	Length of Train (ft)	Train Speed (mph)	Blocked Crossing Time for Train = D_c (minutes)	S_c	Average Crossing Delay per Stopped Vehicle $D_c = D_s \times (S_c - S_0)/2$ (minutes/vehicle)	Average Number of Trains per Day (N)			Average Daily Traffic (ADT)	No. of Road Lanes (NL)	Number of Vehicles Delayed per Day (T_d)			Average Delay per Vehicle (seconds)			Traffic Level of Service	
								Pre	Post	Δ			Pre	Post	Δ	Pre	Post	Δ	Pre	Post
Tower 87 to Dayton	287996C	MARKET	3,618	1.5	3.24	700	1.74	25.10	27.10	2.00	2,250	2	127	137	10	5.89	6.35	0.47	B	B
	287994N	LYONS AVE.	3,618	1.5	3.24	700	1.65	25.10	27.10	2.00	640	2	36	39	3	5.60	6.04	0.45	B	B
	287982U	WALLISVILLE RD.	3,618	1.5	3.24	700	1.79	25.10	27.10	2.00	3,110	2	176	190	14	6.05	6.53	0.48	B	B
	758293C	FIELDS	4,209	40	1.70	1,400	0.87	20.70	22.70	2.00	1,650	2	40	44	4	1.27	1.39	0.12	A	A
	745074B	OATES ROAD	4,209	25	2.41	700	1.32	20.70	22.70	2.00	4,490	3	156	171	15	2.76	3.02	0.27	A	A
	762907S	RAILSTON RD.	4,209	45	1.56	900	0.85	20.70	22.70	2.00	3,540	2	80	87	8	1.15	1.26	0.11	A	A
	762905D	HEATHER ROW RD	4,209	45	1.56	700	0.81	20.70	22.70	2.00	1,380	2	31	34	3	1.10	1.20	0.11	A	A
	762904W	CE KING PKWY	4,209	57.5	1.33	700	0.96	20.70	22.70	2.00	10,380	2	199	218	19	1.11	1.21	0.11	A	A
	762901B	VAN HUT RD	4,209	57.5	1.33	1,400	0.73	20.70	22.70	2.00	5,970	2	114	125	11	0.84	0.92	0.08	A	A
	762897N	RESERVOIR RD	4,209	57.5	1.33	700	0.79	20.70	22.70	2.00	2,660	1	51	56	5	0.91	1.00	0.09	A	A
	762895A	AQUEDUCT RD	4,209	57.5	1.33	700	0.67	20.70	22.70	2.00	70	1	1	1	0	0.77	0.84	0.07	A	A
	762892E	SHELDON RD.	4,209	57.5	1.33	1,400	0.72	20.70	22.70	2.00	4,890	2	94	103	9	0.82	0.90	0.08	A	A
	762872T	FIRST ST or MILLER WILSON RD	4,209	57.5	1.33	900	0.74	20.70	22.70	2.00	4,430	2	85	93	8	0.85	0.93	0.08	A	A
	762869K	RAMSEY RD	4,209	57.5	1.33	700	0.69	20.70	22.70	2.00	1,400	2	27	29	3	0.80	0.88	0.08	A	A
	762866P	BOHEMAN HALL RD or ADLONG JOHNSON RD	4,209	57.5	1.33	1,400	0.68	20.70	22.70	2.00	690	1	13	14	1	0.78	0.86	0.08	A	A
	762865H	CROSBY E GATE RD	4,209	57.5	1.33	700	0.71	20.70	22.70	2.00	1,870	2	36	39	3	0.81	0.89	0.08	A	A
	762861F	LORD RD	4,209	57.5	1.33	700	0.67	20.70	22.70	2.00	420	2	8	9	1	0.77	0.85	0.07	A	A
Baytown Subdivision	762859E	SHADY LANE	4,209	57.5	1.33	1,400	0.67	20.70	22.70	2.00	270	2	5	6	0	0.77	0.84	0.07	A	A
	762856J	COUNTY RD 604	4,209	57.5	1.33	700	0.68	20.70	22.70	2.00	250	1	5	5	0	0.78	0.85	0.08	A	A
	762855C	COUNTY RD 603	4,209	57.5	1.33	700	0.68	20.70	22.70	2.00	400	1	8	8	1	0.78	0.86	0.08	A	A
	762853N	WOLF ISLAND	4,209	57.5	1.33	1,400	0.68	20.70	22.70	2.00	1,420	2	27	30	3	0.78	0.86	0.08	A	A
	762852G	SW. DAYTON or STILSON RD	4,209	57.5	1.33	700	0.68	20.70	22.70	2.00	270	1	5	6	0	0.78	0.85	0.08	A	A
	762790L	US 90	2,526	7.5	4.33	1,400	2.39	14.90	16.90	2.00	15,640	5	700	794	94	6.41	7.27	0.86	B	B

¹1986 ADT DATA Lafayette Subdivision: FRA maximum of 70 mph is for passengers. Freight max is 60 (based on time table). Thus, for crossings with FRA minimum/maximum range of 55/70, SEA used 55/60 instead, for an average of 57.5; average of typical minimum and maximum speed based on FRA data would be 62.5.

859568M: FRA minimum/maximum of 5/10 is not consistent with adjacent crossings (because trains would not change speed this quickly), thus speed was set equal to that on adjacent crossings.

859577L and 859583P: Changed FRA functional classification based on review of maps and aerial photos.

Table F.1-3
No-Build Alternative Traffic Delay Analysis

Segments	FRA Crossing ID Number	Street Name	Length of Train (ft)	Train Speed (mph)	Blocked Crossing Time for Train= D _c (minutes)	S _c	Average Crossing Delay per Stopped Vehicle D _s = D _c x (S _c - S ₀)/2 (minutes/vehicle)	Average Number of Trains per Day (N)		Average Daily Traffic (ADT)	No. of Road Lanes (NL)	Number of Vehicles Delayed per Day (T _s)		Average Delay per Vehicle (seconds)		Traffic Level of Service				
							Pre	Post	Pre			Post	Pre	Post						
Bayport Loop - South of Bay Area Boulevard/Port Road	755672S	N BOUND FRONT RD	1,551	7.5	2.85	700	1.46	10.50	12.50	920	2	19	23	4	1.83	2.17	0.35	A	A	
	758824W	PORT ROAD	1,551	7.5	2.85	700	1.52	10.50	12.50	4,420	4	92	109	17	1.90	2.26	0.36	A	A	
Bayport Loop - North of Bay Area Boulevard/Port Road	758835J	BAY AREA BLVD	2,545	7.5	4.36	700	2.97	10.50	12.50	17,920	4	569	678	108	5.66	6.74	1.08	B	B	
	758839L	BAY AREA BLVD	2,545	7.5	4.36	700	3.27	10.50	12.50	11,250	2	357	425	68	6.24	7.43	1.19	B	B	
Bayport Loop Industrial Lead	758826K	FAIRMONT PKWY	2,961	10	3.86	700	3.20	7.40	9.40	26,610	4	528	671	143	3.81	4.84	1.03	A	A	
Strong Subdivision (Strong Yard to Pasadena Junction)	758848K	HOUSTON RD	2,604	15	2.47	700	1.31	12.10	14.10	1,980	2	41	48	7	1.64	1.91	0.27	A	A	
	758849S	UNDERWOOD RD	2,604	15	2.47	1,400	1.66	12.10	14.10	17,010	2	353	412	58	2.06	2.40	0.34	A	A	
	758854N	IVY ST.	2,604	15	2.47	700	1.25	12.10	14.10	880	4	18	21	3	1.56	1.82	0.26	A	A	
	758855V	CENTER ST.	2,604	15	2.47	700	1.54	12.10	14.10	16,370	5	340	396	56	1.91	2.23	0.32	A	A	
	758856C	SHABONA/ROBI ST.	2,604	15	2.47	700	1.43	12.10	14.10	4,510	2	94	109	15	1.78	2.07	0.29	A	A	
	755675M	SH 225 WBRONTAGE	2,604	10.5	3.32	900	1.78	12.10	14.10	2,930	2	82	95	14	2.98	3.47	0.49	A	A	
	755362X	TENNECO RD.	2,604	10.5	3.32	700	1.75	12.10	14.10	2,000	2	50	59	8	2.93	3.42	0.48	A	A	
	869756E	SOUTH ST (ETHYL)	2,604	10.5	3.32	700	1.78	12.10	14.10	2,000	2	65	76	11	2.98	3.47	0.49	A	A	
	869754R	JEFFERSON ST.	2,604	10.5	3.32	700	1.92	12.10	14.10	2,000	2	129	150	21	3.22	3.75	0.53	A	A	
	869753J	DAVISON	2,604	10.5	3.32	700	1.66	12.10	14.10	2,000	2	1	1	0	2.78	3.24	0.46	A	A	
Strong Subdivision (Sinto Jn to Pasadena Jn)	869752C	WITTER	2,604	10.5	3.32	700	1.71	12.10	14.10	990	2	28	32	5	2.86	3.33	0.47	A	A	
	869723S	N. RICHEY ST.	2,812	10.5	3.54	700	1.78	20.10	22.10	230	2	11	13	1	5.29	5.82	0.53	B	B	
Strong Subdivision (Tower 30 to Sinto Junction)	755363E	LIGHT CO RD	2,578	7.5	4.41	700	2.36	13.10	15.10	2,000	2	87	101	13	5.66	6.53	0.86	B	B	
	755364L	DODGE	2,578	7.5	4.41	700	2.53	13.10	15.10	2,000	1	87	101	13	6.09	7.02	0.93	B	B	
Tower 30 to Tower 85 (imp 4.5-2.1)	755365T	SHAW	2,578	7.5	4.41	700	2.31	13.10	15.10	2,000	2	63	73	10	5.56	6.41	0.85	B	B	
	755366A	LAWDALE ST.	2,578	7.5	4.41	1,400	2.28	13.10	15.10	2,000	4	191	220	29	5.49	6.33	0.84	B	B	
	755369V	ALLEN/GENOA RD.	2,578	7.5	4.41	1,400	2.41	13.10	15.10	2,000	2	233	268	36	5.80	6.68	0.89	B	B	
	755374S	LAWDALE ²	2,578	7.5	4.41	700	2.38	13.10	15.10	2,000	4	199	229	30	5.72	6.59	0.87	B	B	
	755375Y	CENTRAL ST.	2,578	16.25	2.30	900	1.33	13.10	15.10	2,000	2	120	139	18	1.67	1.92	0.25	A	A	
	755376F	CENTRAL ST.	2,578	16.25	2.30	1,800	1.21	13.10	15.10	2,000	2	81	93	12	1.51	1.75	0.23	A	A	
	755382J	MANCHESTER ST	2,578	12.5	2.84	700	1.67	13.10	15.10	2,000	2	128	147	19	2.59	2.98	0.39	A	A	
	869708P	FRIO ST.	2,578	10.5	3.29	700	1.67	13.10	15.10	2,000	450	2	13	16	2	2.99	3.45	0.46	A	A
	859544Y	FENNELL	2,578	7.5	4.41	700	2.23	13.10	15.10	2,000	360	2	14	17	2	5.35	6.17	0.82	B	B
	859543S	SAN ANTONIO ST.	2,578	5.5	5.83	700	2.92	13.10	15.10	2,000	50	2	3	3	0	9.28	10.69	1.42	B	C
Tower 30 to Tower 85 (imp 4.5-2.1)	859533L	67TH ST.	3,813	17.5	2.98	700	1.55	5.00	7.00	2,000	2	13	18	5	0.96	1.34	0.38	A	A	
	859530R	66TH ST.	3,813	17.5	2.98	700	1.56	5.00	7.00	2,000	2	16	23	6	0.97	1.35	0.39	A	A	
	288035Y	HUGHES ST.	3,813	15	3.39	700	1.82	5.00	7.00	2,000	2	26	37	11	1.28	1.79	0.51	A	A	

Table F.1-3 (continued)
No-Build Alternative Traffic Delay Analysis

Segments	FRA Crossing ID Number	Street Name	Length of Train (ft)	Train Speed (mph)	Blocked Crossing Time for Train= D _c (minutes)	S _c	Average Crossing Delay per Stopped Vehicle D _c = D _c x (S _c /(S _c - S ₀))/2 (minutes/vehicle)	Average Number of Trains per Day (N)		Average Daily Traffic (ADT)	No. of Road Lanes (NL)	Number of Vehicles Delayed per Day (V _d)		Average Delay per Vehicle (seconds)		Traffic Level of Service				
								Pre	Post			Pre	Post	Pre	Post		Pre	Post		
Tower 85 to Tower 87	288034S	HARRISBURG BLVD.	3,618	15	3.24	1,400	1.83	2510	2710	2,000	4	876	946	70	6.21	6.70	0.49	B	B	
	288033K	SHERMAN ST.	3,618	15	3.24	700	1.73	2510	2710	2,000	2	120	130	10	5.86	6.33	0.47	B	B	
	288032D	BRADY ST.	3,618	15	3.24	700	1.65	2510	2710	2,000	590	2	33	36	3	5.59	6.03	0.45	B	B
	288024L	CANAL ST.	3,618	11	4.24	900	2.31	2510	2710	2,000	3,500	2	258	279	21	10.22	11.03	0.81	C	C
	288009J	OLD CLINTON RD.	3,618	12.5	3.79	700	1.91	2510	2710	2,000	190	2	13	14	1	7.55	8.15	0.60	B	B
	288010D	CLINTON DR.	3,618	12.5	3.79	700	1.94	2510	2710	2,000	2,580	6	170	184	14	7.70	8.32	0.61	B	B
	287996C	MARKET	3,618	15	3.24	700	1.74	2510	2710	2,000	2,250	2	127	137	10	5.89	6.35	0.47	B	B
	287994N	LYONS AVE.	3,618	15	3.24	700	1.65	2510	2710	2,000	640	2	36	39	3	5.60	6.04	0.45	B	B
	287982U	WALLISVILLE RD.	3,618	15	3.24	700	1.79	2510	2710	2,000	3,110	2	176	190	14	6.05	6.53	0.48	B	B
	Tower 87 to Dayton	758293C	FIELDS	4,209	40	1.70	1,400	0.87	2070	2270	2,000	1,650	2	40	44	4	1.27	1.39	0.12	A
745074B		OATES ROAD	4,209	25	2.41	700	1.32	2070	2270	2,000	4,490	3	156	171	15	2.76	3.02	0.27	A	A
762907S		RALSTON RD	4,209	45	1.56	900	0.85	2070	2270	2,000	3,540	2	80	87	8	1.15	1.26	0.11	A	A
762905D		HEATHER ROW RD	4,209	45	1.56	700	0.81	2070	2270	2,000	1,380	2	31	34	3	1.10	1.20	0.11	A	A
762904W		CE KING PKWY	4,209	57.5	1.33	700	0.96	2070	2270	2,000	10,380	2	199	218	19	1.11	1.21	0.11	A	A
762901B		VAN HUT RD	4,209	57.5	1.33	1,400	0.73	2070	2270	2,000	5,970	2	114	125	11	0.84	0.92	0.08	A	A
762897N		RESERVOIR RD	4,209	57.5	1.33	700	0.79	2070	2270	2,000	2,660	1	51	56	5	0.91	1.00	0.09	A	A
762895A		AQUEDUCT RD	4,209	57.5	1.33	700	0.67	2070	2270	2,000	70	1	1	1	0	0.77	0.84	0.07	A	A
762892E		SHELDON RD.	4,209	57.5	1.33	1,400	0.72	2070	2270	2,000	4,890	2	94	103	9	0.82	0.90	0.08	A	A
762872T		FIRST ST or MILLER WILSON RD	4,209	57.5	1.33	900	0.74	2070	2270	2,000	4,430	2	85	93	8	0.85	0.93	0.08	A	A
	762869K	RAMSEY RD	4,209	57.5	1.33	700	0.69	2070	2270	2,000	1,400	2	27	29	3	0.80	0.88	0.08	A	A
	762866P	BOHEMAN HALL RD or ADLONG JOHNSON RD	4,209	57.5	1.33	1,400	0.68	2070	2270	2,000	690	1	13	14	1	0.78	0.86	0.08	A	A
	762865H	CROSBY E GATE RD	4,209	57.5	1.33	700	0.71	2070	2270	2,000	1,870	2	36	39	3	0.81	0.89	0.08	A	A
	762861F	LORD RD	4,209	57.5	1.33	700	0.67	2070	2270	2,000	420	2	8	9	1	0.77	0.85	0.07	A	A
	762859E	SHADY LANE	4,209	57.5	1.33	1,400	0.67	2070	2270	2,000	270	2	5	6	0	0.77	0.84	0.07	A	A
	762856J	COUNTY RD 604	4,209	57.5	1.33	700	0.68	2070	2270	2,000	250	1	5	5	0	0.78	0.85	0.08	A	A
	762855C	COUNTY RD 603	4,209	57.5	1.33	700	0.68	2070	2270	2,000	400	1	8	8	1	0.78	0.86	0.08	A	A
	762853N	WOLF ISLAND	4,209	57.5	1.33	1,400	0.68	2070	2270	2,000	1,420	2	27	30	3	0.78	0.86	0.08	A	A
	762852G	SW DAYTON or STILLSON RD	4,209	57.5	1.33	700	0.68	2070	2270	2,000	270	1	5	6	0	0.78	0.85	0.08	A	A
		762790L	US 90	2,526	7.5	4.33	1,400	2.39	1490	1690	2,000	15,640	5	700	794	94	6.41	7.27	0.86	B
Baytown Subdivision																				

F.2 TRAFFIC SAFETY METHODOLOGY

SEA analyzed the potential impacts of the Proposed Action and Alternatives on grade crossings and considered whether the proposed rail construction and operation would significantly affect traffic safety at grade crossings. To evaluate the potential need for grade separation at proposed grade crossings, SEA analyzed the proposed grade crossings based on USDOT guidelines. These guidelines suggest that grade crossings should be considered for grade separation or otherwise eliminated across the railroad right-of-way whenever one or more of the following conditions exist:

- The highway is a part of the designated Interstate Highway System.
- The highway is otherwise designed to have full controlled access.
- The posted highway speed equals or exceeds 70 mph.
- ADT exceeds 100,000 in urban areas or 50,000 in rural areas.
- Maximum authorized train speed exceeds 110 mph.
- An average of 150 or more trains per day or 300 million-gross-tons per year.
- An average of 75 or more passenger trains per day in urban areas or 30 or more passenger trains per day in rural areas.
- Crossing exposure (the product of the number of trains per day and ADT) exceeds 1,000,000 in urban areas or 250,000 in rural areas.
- Passenger train crossing exposure (the product of the number of passenger trains per day and ADT) exceeds 800,000 in urban areas or 200,000 in rural areas.
- The expected accident frequency for active devices with gates, as calculated by USDOT: Accident Prediction Formula, including 5-year history, exceeds 0.5.
- Vehicle delay exceeds 40 vehicle hours per day.

SEA evaluated the proposed grade crossings in relation to these USDOT criteria for requirement of grade separation. SEA concluded that grade separation is not warranted for any of the crossings associated with the Proposed Action and Alternatives because the proposed location and operational characteristics of the proposed new rail crossings would not meet any of the USDOT criteria. Nevertheless, the Applicants have proposed to grade separate the crossings at Red Bluff Road and Space Center Boulevard.

SEA quantitatively analyzed the traffic safety at existing grade crossings using the accident history from the past five years and calculated the potential change in the number of years between accidents due to the proposed railroad construction and operation. SEA did not calculate predicted accident frequencies for new grade crossings because they lack the necessary data on accident history. SEA used FRA's PC Accident Prediction System (PCAPS) to calculate baseline accident frequencies and accident frequencies that would result from an increase of an average of two trains per day. In doing so, SEA used the information on public grade crossings in the FRA database (available at <http://safetydata.fra.dot.gov/OfficeofSafety/>) with the

exception of train count and ADT information. The train count information used in the analysis is described in Appendix C. PCAPS requires that the user specify the number of day trains, the number of night trains, and the number of switching trains. For this analysis, SEA assumed that the trains are 50 percent night trains, 50 percent day trains, and 0 percent switching trains.³ It is SEA's understanding that this is consistent with how the railroads (that are the source of the train count information) normally report their information to the FRA, i.e., assume an equal distribution between day and night. The ADT information was provided by TxDOT and is based on 2001 data, with the exception of three crossings that use 1996 or 1992 data because 2001 data were not available.

The following tables show the results of the traffic safety analysis for the Proposed Action and No-Build Alternative. The results for the other Build Alternatives are the same as those for the Proposed Action except that three fewer grade public crossings on the GH&H line would be affected by Alternatives 2B and 2D. The results for the No-Action Alternative would be the same for pre- and post-project conditions. Pre-project No-Action Alternative conditions can be seen in Table F.2-2 for the Bayport Loop and Industrial Lead.

³ Train counts entered into the PCAPS model must be integer values. For rail segments with an odd number of trains, SEA assumed for this analysis that there would be one more day train than night train. For example, for a segment with 21 trains, SEA assumed 11 trains would be day trains and 10 trains would be night trains. This is a conservative assumption in that it yields a higher predicted accident frequency than would result from the opposite assumption. Further, SEA rounded non-integer train traffic estimates upwards (e.g., 3.4 trains per day on the GH&H line was rounded to 4) for input into PCAPS, which also results in conservative (higher) predicted accident frequencies.

Table F.2-1
Proposed Action Traffic Safety Analysis Results for Grade Crossings

Segments	Crossing	Street	Predicted Annual Accident Frequency		
			Pre	Post	Change
GH&H line (South of Tower 30)	859598E	BRANTLEY ST.	0.012	0.014	0.002
	859597X	CHALLENGER 7 PKWY	0.021	0.024	0.003
	859596R	N. GATE	0.015	0.018	0.003
	859592N	GENOA RED BLUFF	0.004	0.005	0.001
	859589F	TIKI LANE	0.020	0.023	0.003
	859587S	SHAVER	0.012	0.014	0.002
	859584W	CORONATION DRIVE	0.024	0.028	0.004
	859583P	EDGEBROOK	0.009	0.010	0.002
	859579A	NEVADA	0.062	0.068	0.006
	859578T	SPENCER	0.021	0.025	0.003
	859577L	PENNSYLVANIA	0.137	0.151	0.014
	859576E	VIRGINIA ST	0.027	0.032	0.005
	859575X	KENTUCKY ST.	0.011	0.013	0.002
	859574R	S. RICHEY ST.	0.064	0.070	0.006
	859570N	HOWARD DRIVE	0.023	0.027	0.004
	859569U	WYNE ST.	0.024	0.028	0.004
	859567F	PARKPLACEBLVD.	0.015	0.018	0.003
	859568M	PARK TERRACE	0.022	0.025	0.003
	859550C	BROADWAY ST.	0.015	0.018	0.003
	859549H	JUNIUS	0.083	0.090	0.007
Tower 30 to Tower 85	859548B	BOWIE ST	0.016	0.018	0.003
	859547U	LAWNDALE	0.030	0.035	0.005
	859546M	MANCHESTER ST.	0.009	0.010	0.002
Tower 85 to Tower 87	859 533L	67TH ST.	0.009	0.011	0.001
	859 530R	66TH ST.	0.018	0.021	0.003
	288 035Y	HUGHES ST.	0.052	0.057	0.005
Tower 87 to Dayton Junction	288 034S	HARRISBURG BLVD.	0.094	0.095	0.002
	288 033K	SHERMAN ST.	0.023	0.023	0.001
	288 032D	BRADY ST.	0.046	0.047	0.001
	288 024L	CANAL ST.	0.023	0.023	0.001
	288 009J	OLD CLINTON RD.	0.011	0.011	0.000
	288010D	CLINTON DR.	0.032	0.033	0.001
	287996C	MARKET	0.099	0.101	0.002
	287 994N	LYONS AVE.	0.075	0.077	0.002
Tower 87 to Dayton Junction	287 982U	WALLISVILLE RD.	0.064	0.066	0.001
	758293C	FIELDS	0.020	0.021	0.001
	745074B	OATES ROAD	0.028	0.029	0.001
	762907S	RALSTON RD	0.021	0.022	0.001
	762905D	HEATHER ROW RD	0.017	0.018	0.001
Tower 87 to Dayton Junction	762904W	CE KING PKWY	0.027	0.028	0.001
	762901B	VAN HUT RD	0.024	0.025	0.001

Table F.2-1 (continued)
Proposed Action Traffic Safety Analysis Results for Grade Crossings

Segments	Crossing	Street	Predicted Annual Accident Frequency		
			Pre	Post	Change
Baytown Subdivision	762897N	RESERVOIR RD	0.018	0.018	0.001
	762895A	AQUEDUCT RD	0.003	0.003	0.000
	762892E	SHELDON RD.	0.023	0.024	0.001
	762872T	FIRST ST or MILLER WILSON RD	0.022	0.023	0.001
	762869K	RAMSEY RD	0.017	0.018	0.001
	762866P	BOHEMAN HALL RD or ADLONG JOHNSON RD	0.054	0.056	0.002
	762865H	CROSBY E GATE RD	0.018	0.019	0.001
	762861F	LORD RD	0.042	0.043	0.001
	762859E	SHADY LANE	0.008	0.008	0.000
	762856J	COUNTY RD 604	0.042	0.044	0.001
	762855C	COUNTY RD 603	0.011	0.011	0.000
	762853N	WOLF ISLAND	0.064	0.065	0.002
	762852G	SW. DAYTON or STILSON RD	0.008	0.008	0.000
	762790L	US 90	0.131	0.134	0.003

Table F.2-2
No-Build Alternative Traffic Safety Analysis Results for Grade Crossings

Segments	Crossing	Street	Predicted Annual Accident Frequency		
			Pre	Post	Change
Bayport Loop - South of Bay Area Boulevard/ Port Road	755672S	N.BOUND.FRONT.RD	0.018	0.019	0.001
	758824W	PORT ROAD	0.022	0.023	0.001
Bayport Loop - North of Bay Area Boulevard/ Port Road	758835J	BAY AREA BLVD	0.074	0.076	0.003
	758839L	BAY AREA BLVD	0.019	0.021	0.001
Bayport Industrial Lead	758826K	FAIRMONT PKWY	0.072	0.076	0.004
Strang Subdivision (Strang Yard to Pasadena Junction)	758848K	HOUSTON RD	0.017	0.018	0.001
	758849S	UNDERWOOD RD	0.022	0.024	0.002
	758854N	IVY ST.	0.017	0.019	0.001
	758855V	CENTER ST.	0.070	0.075	0.005
	758856C	SHABBONA/ROBI ST.	0.024	0.026	0.002
	755675M	SH 225 WBFRONTAGE	0.019	0.020	0.001
	755362X	TENNECO RD.	0.010	0.010	0.001
	869756E	SOUTH ST (ETHYL)	0.014	0.015	0.001
	869754R	JEFFERSON ST.	0.032	0.033	0.002
	869753J	DAVISON	0.004	0.004	0.000
	869752C	WITTER	0.020	0.021	0.001
	869723S	N. RICHEY ST.	0.015	0.015	0.001
	755363E	LIGHT CO RD	0.030	0.031	0.002
Strang Subdivision (Sinco Junction to Tower 30)	755364L	DODGE	0.031	0.033	0.002
	755365T	SHAW	0.028	0.030	0.002
	755366A	LAWNDALE ST.	0.105	0.108	0.003
	755369V	ALLEN GENOA RD.	0.020	0.021	0.001
	755374S	LAWNDALE	0.022	0.023	0.001
	755375Y	CENTRAL ST.	0.020	0.021	0.001
	755376F	CENTRAL ST.	0.018	0.019	0.001
	755382J	MANCHESTER ST	0.055	0.057	0.002
	869708P	FRIO ST.	0.032	0.033	0.002
	859544Y	FENNELL	0.028	0.029	0.002
	859543S	SAN ANTONIO ST.	0.015	0.016	0.001
	859533L	67TH ST.	0.009	0.011	0.001
Tower 30 to Tower 85	859530R	66TH ST.	0.018	0.021	0.003
	288035Y	HUGHES ST.	0.052	0.057	0.005
Tower 85 to Tower 87	288034S	HARRISBURG BLVD.	0.094	0.095	0.002
	288033K	SHERMAN ST.	0.023	0.023	0.001
	288032D	BRADY ST.	0.046	0.047	0.001
	288024L	CANAL ST.	0.023	0.023	0.001
	288009J	OLD CLINTON RD.	0.011	0.011	0.000
	288010D	CLINTON DR.	0.032	0.033	0.001
	287996C	MARKET	0.099	0.101	0.002

Table F.2-2 (continued)
No-Build Alternative Traffic Safety Analysis Results for Grade Crossings

Segments	Crossing	Street	Predicted Annual Accident Frequency		
			Pre	Post	Change
Tower 87 to Dayton Junction	287994N	LYONS AVE.	0.075	0.077	0.002
	287982U	WALLISVILLE RD.	0.064	0.066	0.001
	758293C	FIELDS	0.020	0.021	0.001
	745074B	OATES ROAD	0.028	0.029	0.001
	762907S	RALSTON RD	0.021	0.022	0.001
	762905D	HEATHER ROW RD	0.017	0.018	0.001
	762904W	CE KING PKWY	0.027	0.028	0.001
	762901B	VAN HUT RD	0.024	0.025	0.001
	762897N	RESERVOIR RD	0.018	0.018	0.001
	762895A	AQUEDUCT RD	0.003	0.003	0.000
	762892E	SHELDON RD.	0.023	0.024	0.001
	762872T	FIRST ST or MILLER WILSON RD	0.022	0.023	0.001
	762869K	RAMSEY RD	0.017	0.018	0.001
	762866P	BOHEMAN HALL RD or ADLONG JOHNSON RD	0.054	0.056	0.002
	762865H	CROSBY E GATE RD	0.018	0.019	0.001
	762861F	LORD RD	0.042	0.043	0.001
	762859E	SHADY LANE	0.008	0.008	0.000
	762856J	COUNTY RD 604	0.042	0.044	0.001
	762855C	COUNTY RD 603	0.011	0.011	0.000
Baytown Subdivision	762853N	WOLF ISLAND	0.064	0.065	0.002
	762852G	SW. DAYTON or STILSON RD	0.008	0.008	0.000
	762790L	US 90	0.131	0.134	0.003

Street	Avg length of train (ft)	V train speed (mph)	mph to ft/min	Dc (blocked crossing time)	
Zarzamora at Merida	3600		15	88	3.227272727
Brazos south of Laredo	3600		15	88	3.227272727
Flores at Lone Star	3600		15	88	3.227272727
Proband at Lone Star	3600		15	88	3.227272727

Lanes	Sc (dep rate veh/hr/lane)	ADT (veh)	Sq (ADT in veh/hr/lane)	Da (delay per stopped vehicle)
Zarzamora at Merida	4	900	18540	77.25 1.765145
Brazos south of Laredo	2	700	7490	62.41666667 1.771604
Flores at Lone Star	4	900	8110	33.79166667 1.676586
Proband at Lone Star	4	900	N/A	N/A N/A

Conv. Factor	N of trains	ADT (veh)	Td veh delayed per day
Zarzamora at Merida	1440	16	18540 664.8181818
Brazos south of Laredo	1440	16	7490 268.5808081
Flores at Lone Star	1440	16	8110 290.8131313
Proband at Lone Star	1440	16	N/A N/A

Conv. Factor	N of trains	Delay per vehicle	Total min	Total hrs	Threshold	Over/Under (hrs)
Zarzamora at Merida	1440	16	3.797735371	2524.803525	42.08006	40 2.08
Brazos south of Laredo	1440	16	3.811633763	1023.731676	17.06219	40 -22.94
Flores at Lone Star	1440	16	3.607200089	1049.021153	17.48369	40 -22.52
Proband at Lone Star	1440	16	N/A	N/A	N/A	40 N/A

Sc is a vehicle departure rate from a Transportation Engineering manual. In the San Jacinto DEIS, STB used the next highest value, 1400/veh/hr/lane. The 1400 value is for arterial HIGHWAYS and was used by STB to model a crossing over U.S. 67 in Louisiana. Therefore, a value of 900 or lower is appropriate for urban areas.

Average Daily Traffic provided by Staff of Bias Pizzi, San Antonio Dept't of Public Works. Traffic Engineering Division 8/2/04 2:00pm
ADT is in both directions, all lanes

Laredo east of Brazos	17230
Brazos north of Laredo	6680
Laredo west of Brazos	10240
Brazos south of Laredo	7490
Zarzamora north of Merida	18540
Merida west of Zarzamora	2530
Lone Star east of South Flores	3000
South Flores at Pruitt (approx 1/2 mi S of Lone Star)	8110

Probant at Lone Star	No Counts Available
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
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93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

prob

	N of trains	Total hrs	Threshold	Over/Under (hrs)
Zarzamora at Merida	20	65.75	40	25.75
Brazos south of Laredo	20	26.66	40	-13.34
Flores at Lone Star	20	27.32	40	-12.68
Probant at Lone Star	20	N/A	40	N/A

	N of trains	Total hrs	Threshold	Over/Under (hrs)
Zarzamora at Merida	16	42.08	40	2.08
Brazos south of Laredo	16	17.06	40	-22.94
Flores at Lone Star	16	17.48	40	-22.52
Probant at Lone Star	16	N/A	40	N/A

	N of trains	Total hrs	Threshold	Over/Under (hrs)
Zarzamora at Merida	13	65.75	40	25.75
Brazos south of Laredo	30	39.99	40	-0.01
Flores at Lone Star	30	40.98	40	0.98
Probant at Lone Star	??	N/A	40	N/A

USDOT Grade Separation Criteria

- 40 hours or more of vehicle delay per day at an intersection
 - 40 hours is obviously cumulative:
 - » Delay per vehicle x number of vehicles/day
 - Delay per vehicle:
 - » Delay per train x number of trains
 - Methodology: Surface Transportation Board formulas

20 trains: Significant Problems at Zarzamora

	N of trains	Total hrs	Threshold (hrs)	Over/Under (hrs)
Zarzamora at Merida	20	65.75	40	25.75
Brazos south of Laredo	20	26.66	40	-13.34
Flores at Lone Star	20	27.32	40	-12.68
Probant at Lone Star	20	N/A	40	N/A

16 trains: Still requires grade separation today at Zarzamora

	N of trains	Total hrs	Threshold (hrs)	Over/Under (hrs)
Zarzamora at Merida	16	42.08	40	2.08
Brazos south of Laredo	16	17.06	40	-22.94
Flores at Lone Star	16	17.48	40	-22.52
Probant at Lone Star	16	N/A	40	N/A

Future growth

- Vulcan quarry: 4 trains/day (> mile long)
- Laredo-Austin: at least 10% growth
- Toyota: ____ Trains/day
- Los Angeles-Houston container growth (on the line Vulcan will use): at least 10% growth

Issues for San Antonio

- Protect investment in south side, downtown
 - Backups in rail traffic will affect entire city
 - Redevelopment funds at risk
 - Road traffic delays negatively impact business
 - Educational investments, children at risk
 - 6 to 8 schools within ½ mile
- Study justifies grade separation projects now
 - Need will only increase in the future

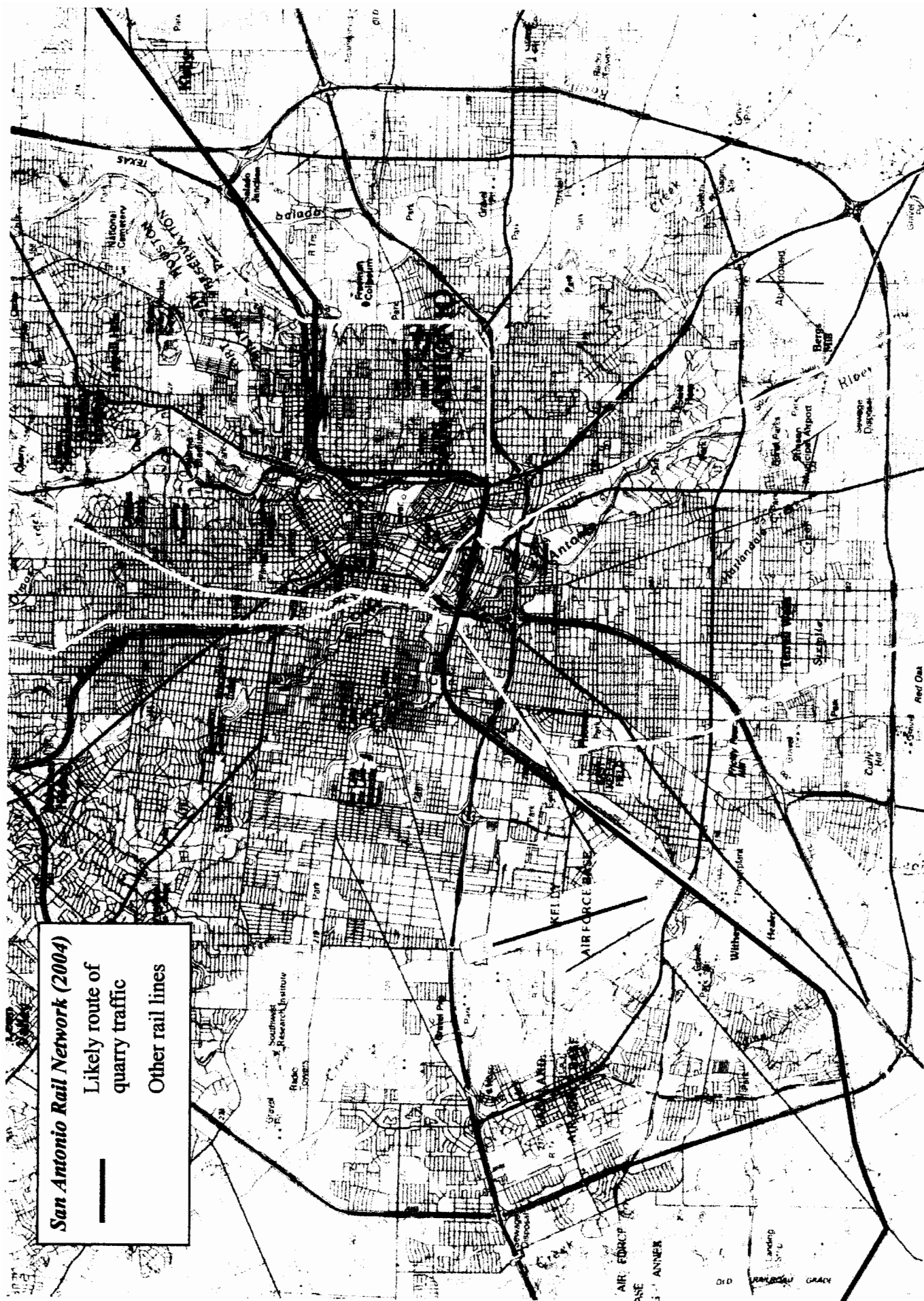
Why *this* study?

- Legal basis:
 - Nature of impact is **certain**
 - Vulcan quarry traffic will travel through SA at least as far as Brackenridge HS / SA River
 - Only extent is unclear
 - But significant problem exists now
 - Therefore, agency duty to analyze cumulative impact in EIS
 - Cumulative impact analysis for intersections along the segments of concern

Advantages to San Antonio from study now

- Identify pre-existing grade crossing needs today
- Identify future grade crossing needs
 - Before problem occurs
 - Before costs incurred
- No burden on applicant to mitigate...
- But STB could retain oversight to ensure routing changes, cooperation between SA, UP

**Likely route of
quarry traffic**



San Antonio Rail Network (2004)

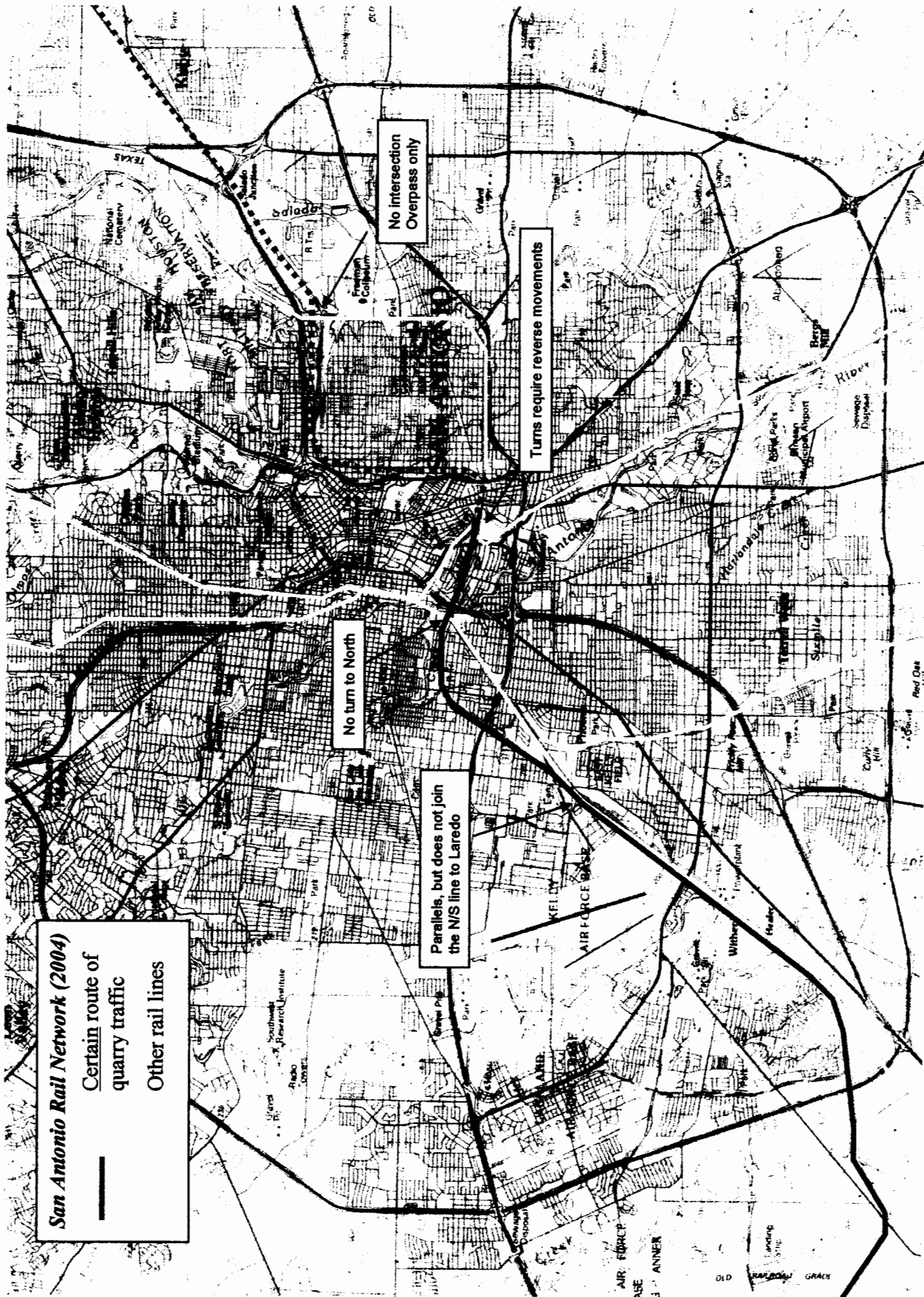
- Certain route of quarry traffic
- Other rail lines

No turn to North

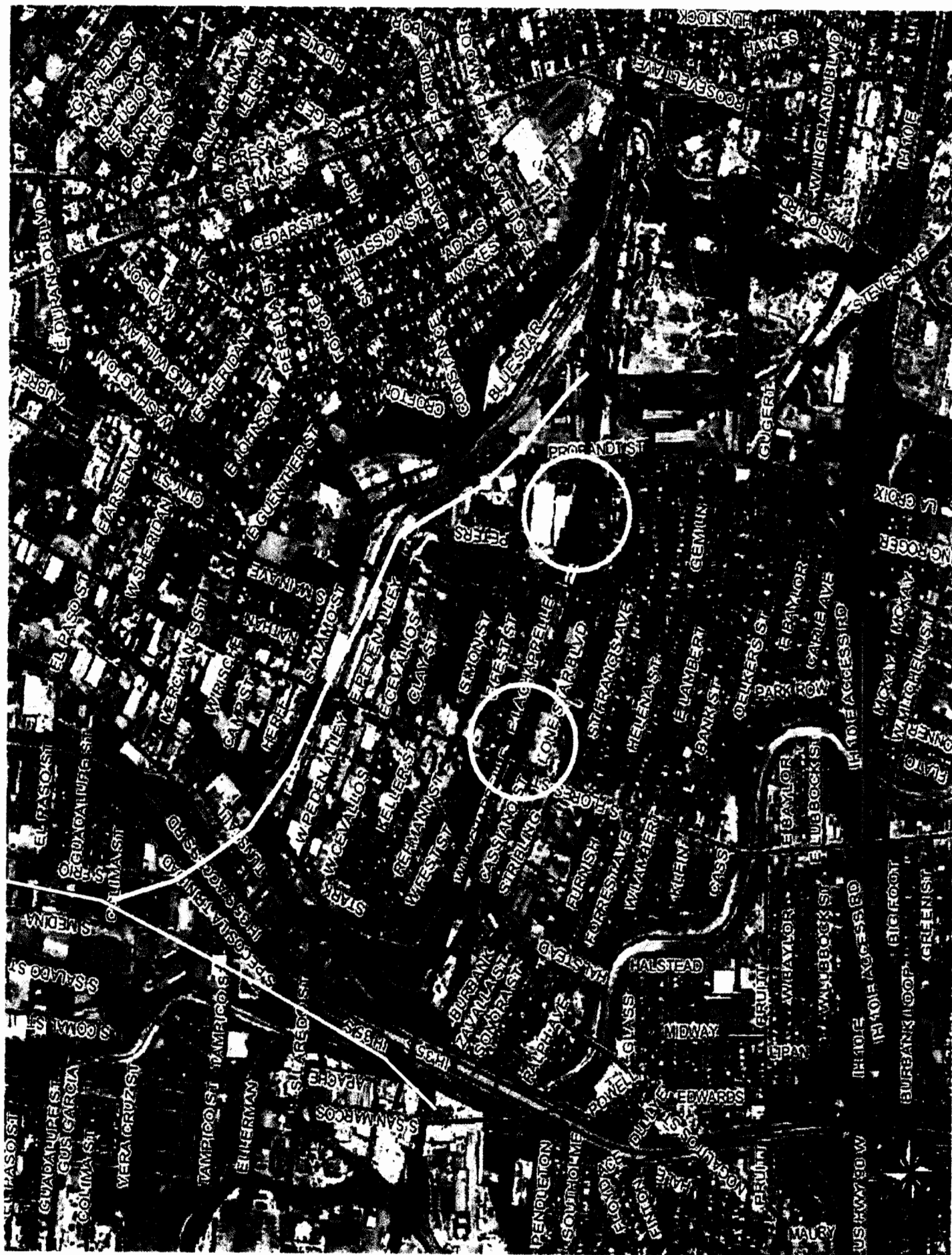
Parallels, but does not join the N/S line to Laredo

Turns require reverse movements

No intersection Overpass only



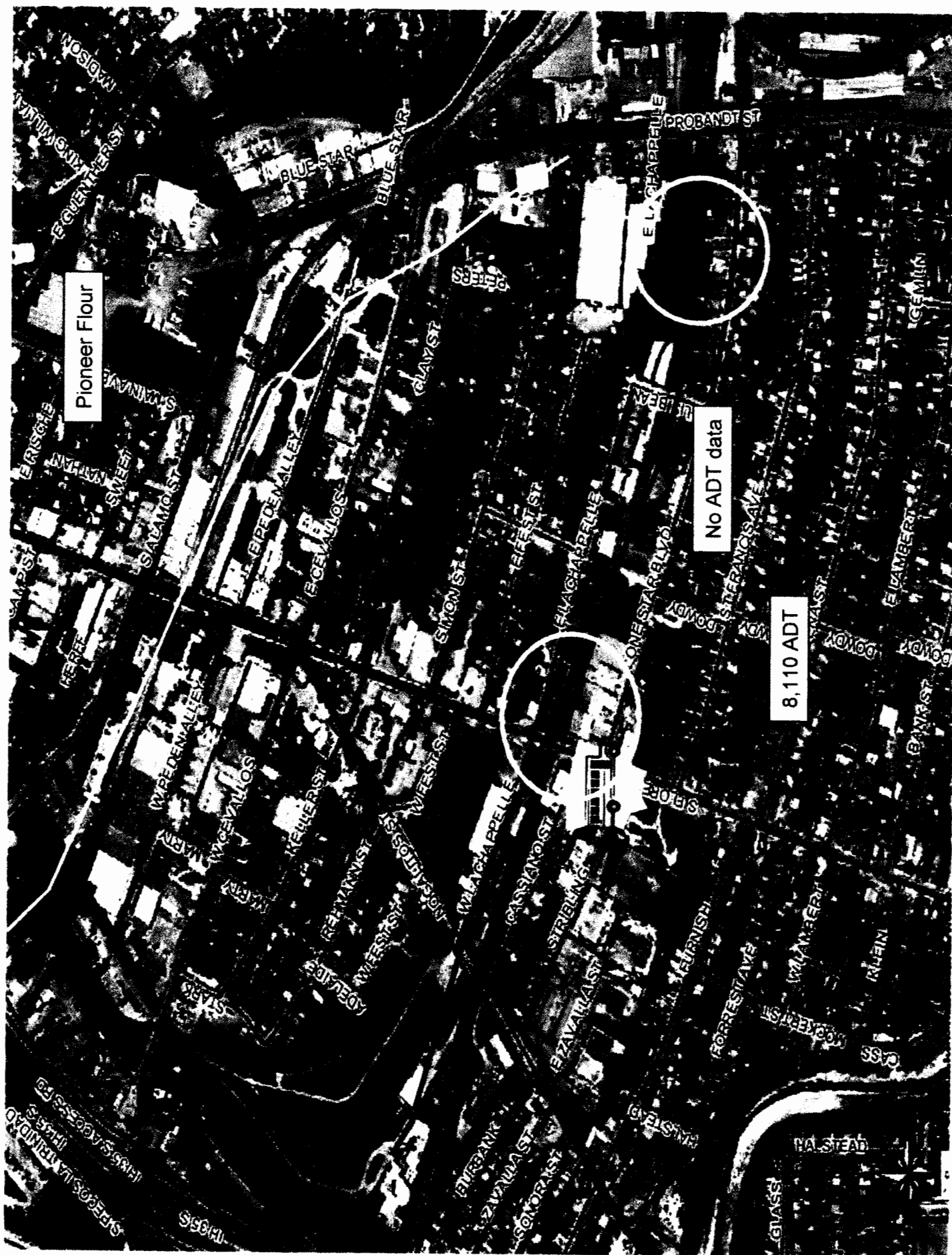
















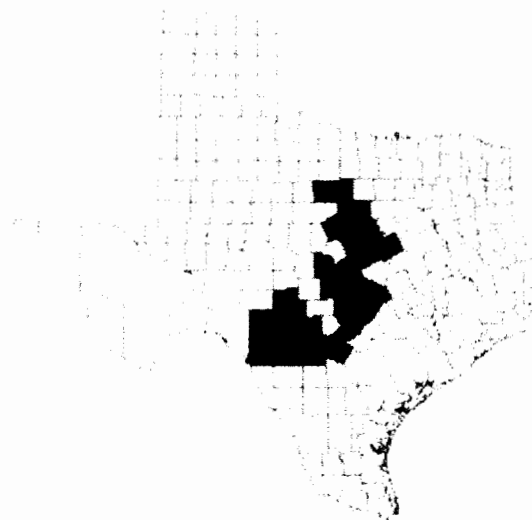
Northern Prairie Wildlife Research Center

Status of Listed Species and Recovery Plan Development

Golden-cheeked Warbler

Dendroica chrysoparia – Endangered

Texas



Current Status:

Threats include habitat loss due to urbanization and other land use practices, as well as nest parasitism by the brown-headed cowbird.

Achievements:

Establishment of the Balcones Canyonlands National Wildlife Refuge has begun with the purchase of

3,500 acres containing golden-cheeked warbler habitat, offering safe haven for the bird on Federal land. Formal section 7 consultations also have been completed for a variety of projects including: a golf course and resort hotel, apartment and housing complex (Army Corps of Engineers); business development (Environmental Protection Agency); radio tower (Federal Communications Commission); and various highway projects (Federal Highway Administration). Consultation resulted in no-jeopardy biological opinions, and all reasonable and prudent measures were accepted. Two other section 7 consultations are anticipated on military base operations (Department of Defense) and technical assistance on brush clearing and conservation measures (Soil Conservation Service). In addition, Travis County, the city of Austin, The Nature Conservancy, Texas Parks and Wildlife Department, National Audubon Society, Fish and Wildlife Service, and other groups continue to cooperate on a comprehensive Habitat Conservation Plan for seven listed species in the Austin, Texas, area. Also, the Golden-cheeked Warbler Recovery Plan has been completed, and a recovery team appointed. The Fish and Wildlife Service is working with the Texas Parks and Wildlife Department, Soil Conservation Service, and other entities to formulate Golden-cheeked Warbler Conservation Management Guidelines for private landowners.

Current Recovery Needs:

Needed recovery actions include increased landowner education and involvement, identification of winter and migratory habitat, reduced nest parasitism from cowbirds, and protection of all habitat types (e.g., nesting, wintering) required to recover this bird.

Section 6 Funding and Activities:

The Texas Parks and Wildlife Department received \$20,500 in FY 1991 and \$35,000 in FY 1992 for a Geographical Information System (GIS) project to locate potential warbler habitat. A total of \$53,000 funded the GIS, with \$2,500 set aside to conduct banding and a habitat study.

Partnerships

Department of Defense: Fort Hood Military Reservation and Camp Bullis are monitoring goldencheeked warbler populations. Fort Hood also is conducting a banding project. Both studies are in their second year.

Texas Parks and Wildlife Department: Involvement in the Habitat Conservation Plan and the Conservation Management Guidelines has helped to move species recovery activities forward.

The Nature Conservancy: The Hill Country Bioreserve, under development by this Fish and Wildlife Service partner, includes a majority of the species' range.

Recovery Plan Status:

Plan approved 9/30/92.

Northern Prairie Wildlife Research Center



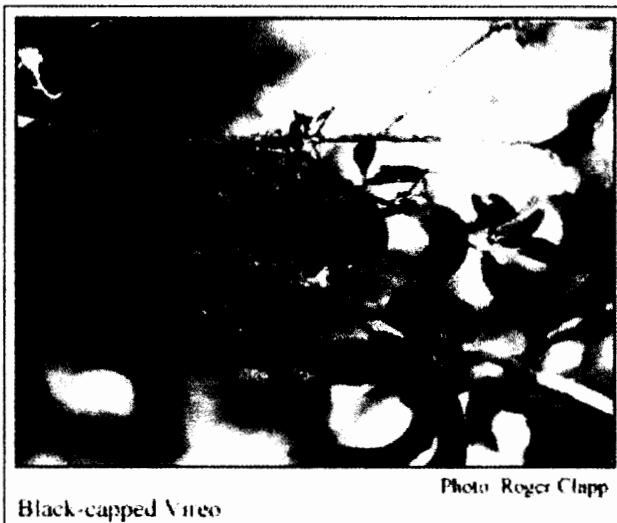
Northern Prairie Wildlife Research Center

Status of Listed Species and Recovery Plan Development

Black-capped Vireo

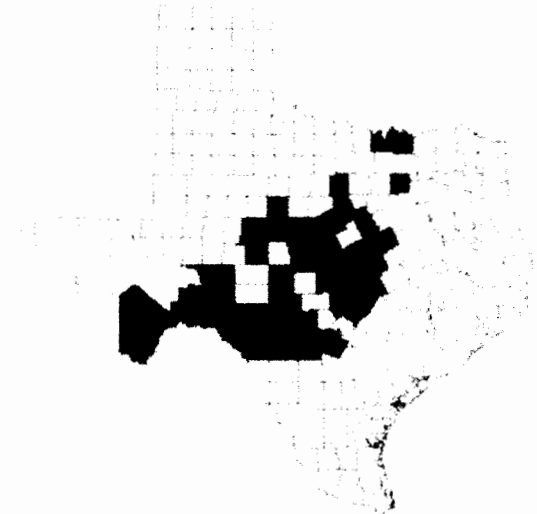
Vireo atricapillus -- Endangered

Texas



Black-capped Vireo

Photo: Roger Clapp



Current Status:

Loss of habitat to urbanization and other land uses, and nest parasitism by the brownheaded cowbird, continue to pose threats to the blackcapped vireo in Texas.

Achievements:

Cowbird control seems responsible for increased vireo nesting success in two populations, one at Fort Hood Military Reservation and one at Kerr Wildlife Management Area. Formal section 7 consultations have been completed for a variety of projects; all resulted in no-jeopardy biological opinions and all reasonable and prudent measures recommended were accepted. The Black-capped Vireo Recovery Plan also has been completed. As a result, the Fish and Wildlife Service is working with the Texas Parks and Wildlife Department, Soil Conservation Service, and others to formulate conservation management guidelines for private landowners. In addition, Travis County, the city of Austin, The Nature Conservancy, Texas Parks and Wildlife Department, Audubon Society (Travis

County Chapter and the Regional Office in Austin), and others are cooperating with the Fish and Wildlife Service on a Habitat Conservation Plan for the vireo and six other species in the Austin area. A bond election approved \$22 million for the purchase of Resolution Trust Corporation lands to preserve habitat for these species. Also, the Fish and Wildlife Service is purchasing land for the Balcones Canyonland National Wildlife Refuge, which will protect habitat for the vireo and other rare species.

Current Recovery Needs:

Actions necessary to recover the species include cowbird control, continued monitoring of vireo populations, and habitat restoration and management. Research needs include examining the biology/ecology of vireos on their wintering grounds, determining the effects of nest predators on reproductive success, and defining habitat requirements.

Section 6 Funding and Activities:

The Texas Parks and Wildlife Department received \$30,000 in FY 1992 for vireo surveys and management, including cowbird control, on State lands.

Partnerships

Department of Defense: For 6 years, the Department of Defense has been involved in black-capped vireo activities. Fort Hood Military Reservation and Camp Bullis have been monitoring vireo populations. Fort Hood also is conducting a banding project, controlling cowbirds, and experimenting with cattle removal from selected areas to determine the impacts on nesting success.

Texas Parks and Wildlife Department: The Department is conducting vireo surveys and management, including cowbird control, on State lands.

The Nature Conservancy: This organization is developing the Hill Country Bioreserve, which includes part of the vireo's range.

Recovery Plan Status:

Plan approved 9/30/91.

Northern Prairie Wildlife Research Center

MINIMUM PROCEDURES FOR DETERMINING THE PRESENCE/ABSENCE OF GOLDEN-CHEEKED WARBLERS AND BLACK-CAPPED VIREOS

Last updated 04/3/02

1. Endangered Species Permits must be obtained from FWS - Region 2 Office in Albuquerque (Stephanie Weagley 505/248-6663 or email FW2_TE_Permits@fws.gov) prior to work in occupied endangered species habitat. Texas Parks and Wildlife Department also requires persons working on endangered species to obtain a permit (512/389-4800). If there is a question about whether a permit is needed for conducting work in endangered species habitat, please call the Austin U.S. Fish and Wildlife Service Office at 512/490-0057.
2. The survey seasons are as follows:
 - a. Black-capped vireo - April 10 to July 1* and
 - b. Golden-cheeked warbler - March 15 to May 15.

* A minimum of 50% of the surveys for the BCV must be conducted between April 10 and May 31
3. We recommend survey times start 30 minutes before sunrise. **All** surveys must be completed by one o'clock in the afternoon.
4. A minimum of five visits with no more than 1 visit within any 5-day period.
5. Total survey time should be a minimum of 4 hours per 100 acres of habitat per visit (habitat is defined in the U.S. Department of Interior, Fish and Wildlife Service's "Guidance Concerning Review of Endangered Species Habitat", Revised April 1994).
6. Surveys should be conducted on days when weather conditions are suitable for the detection of bird singing. Robbins (1981) makes recommendations for acceptable limits of weather conditions and optimal conditions for increasing detection. Robbins (1981) recommends a wind speed of 12 mph as a generally acceptable maximum for satisfactory count results.
7. A minimum of 1 hour per visit is need regardless of the size of the site.
8. Taped or play back recordings of BCV or GCW or screech owl calls may be used only after the above methodology (5 visits, 4 hours/visit) have been exhausted and no birds have been located. Tapes must be used judiciously to avoid behavioral impacts. Tapes must be used to verify negative results (absence of target birds).
9. Reports must include date and year, weather (e.g., wind speed, temperature, precipitation), start and end time, number of birds heard or observed (to include absence of birds from a site), site name, whether tapes were used and observers' name(s). Two maps (7.5 min quad maps only) must be included in the report. One map of the site with location of the project area and the survey routes and another map with the bird detections as described by the International Bird Census Committee (Committee) (1970). Descriptions of habitats found on the site must also be included in the report. If available, also include GPS location information. Data collected in lat long (decimal degrees), NAD 83 is preferred. If collected in an alternate coordinate system, please report the coordinate system and datum the information was collected in. Also, please

report the GPS unit model and its accuracy, and if any real time correction or post processing was done.

The above methodology is limited to determining the presence/absence of golden-cheeked warblers and black-capped vireos. It does not provide sufficient data to determine bird densities or territories. The results of surveys must be reported (as described above) to the U.S. Department of Interior, Fish and Wildlife Service in the annual permit report whether or not the survey detected any target species.

If bird densities or territorial mapping is needed then the methodology described by the Committee (1970) should be followed. The following exceptions apply: (1) the entire project area will be censused, not a sample plot; (2) all detections on the edge of the project area will be recorded even if more than half of the territory is off the project area; (3) the survey season is as described above; and (4) the time spent per visit and the number of visits should be sufficient to document the densities of the target species and suspected territories in the project area. Reports should include the information discussed above (for presence/absence reports) as well as the locations of all bird detections (by sex and age if identifiable), nests (if incidentally), contemporaneous detections, etc. registered on 7.5 min quad maps (or larger scale) as established by the Committee. Actual locations should be mapped rather than indicating territories or areas of use. Suspected territories could be mapped in addition to actual locations. Descriptions of habitats found on the site, whether or not birds were located in it, must also be included in the report. If available, you may include this information in the same format described in the first paragraph of this section.

10. Exceptions to this methodology may be allowed only through coordination with and approval of the Austin U.S. Fish and Wildlife Service Office.

Field Supervisor
U.S. Fish and Wildlife Service
10711 Burnet Rd., Suite 200
Austin, Texas 78758
(512)490-0057/(512)490-0974 (FAX)

LITERATURE CITED

- International Bird Census Committee. 1970. An International standard for a mapping method in bird census work recommended by the International Bird Census Committee. Audubon Field Notes. 24(6): 722-726.
- Robbins, C.S. 1981. Bird activity levels related to weather. Pp. 301-310. in C.J. Ralph and J.M. Scott (eds.). Estimating numbers of terrestrial birds. Studies in Avian Biology No. 6. Cooper Ornithological Society. Lawrence, Kansas.