

0-6762: Maximizing Mitigation Benefits—Making a Difference with Strategic Inter-resource Agency Planning

Background

Transportation agencies do their best to avoid and minimize any impacts to the environment, but some impacts are unavoidable.

Compensatory mitigation is used to offset these unavoidable impacts to the environment. Over \$3.3 billion is spent annually on compensatory mitigation under the Clean Water Act and Endangered Species Act programs, so there are significant incentives to minimize the cost of mitigation from transportation impacts. This project assessed current mitigation policies and practices to identify strategies and priorities to reduce mitigation cost and provide opportunities to expedite project delivery. The Integrated Ecological Framework (IEF)¹ is one of these strategies that provides a step-by-step approach to identifying ecological priorities and integrating them into transportation planning and decision making (Table 1).

Table 1. Integrated Ecological Framework Steps.¹

IEF Steps (Condensed)	Outcomes
Step 1: Build collaborative partnerships and regional vision.	Stakeholders agree on vision, roles, and responsibilities.
Step 2: Create a regional ecosystem framework (REF).	Define your ecosystem and its important elements.
Step 3: Define transportation and infrastructure scenarios.	Define your transportation plan's effect on the region.
Step 4: Create a regional ecosystem and infrastructure development framework (REIDF).	Describe the transportation system intersecting with the ecosystem.
Step 5: Implement agreements, permits, crediting strategies, and programmatic mitigation, and prioritize ecological actions.	Create stakeholder agreements that preserve both the ecosystem and transportation system.
Step 6: Monitor and update the REF and REIDF.	Keep score and measure progress.

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1. Marie Venner Consulting and URS Corporation (2014). *An Ecological Approach to Integrating Conservation and Highway Planning, Volume 1*. SHRP2 Research Report S2-C06-RW-1, Transportation Research Board of the National Academies, Washington, D.C. Available at http://onlinepubs.trb.org/onlinepubs/shrp2/SHRP2_S2-C06-Rw-1.pdf.

What the Researchers Did

The research team:

- Reviewed current and relevant practices, processes, and programs on mitigation, and evaluated the regulatory/Texas Department of Transportation (TxDOT) framework.
- Gathered information on mitigation case studies.
- Conducted workshops in Dallas, Pharr, Houston, and Lufkin to share the research results and seek input and feedback on potential strategies for improving mitigation management.
- Prepared strategies and recommendations to complement current environmental review and project development practices.

What They Found

This project developed strategies and recommendations for mitigation in project development, including:

- Tracking statewide, district, and project-level mitigation costs.

- Providing project mitigation cost-estimating guidance with regional and resource-specific valuations, typical cost ranges, or typical unit prices.
- Working with metropolitan planning organizations to expand TxDOT involvement and participation in regional mitigation for pilot projects and corridors.
- Implementing IEF processes in regional transportation planning and decision making.

What This Means

The IEF is a science-based and step-by-step approach used to identify ecological priorities and integrate them into transportation and infrastructure decision making. The IEF complements TxDOT National Environmental Policy Act (NEPA) assignment and the project development process.

For More Information

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