

Eco-Logical Webinar Series



Eco-Logical Mitigation Approaches

Presenters:

Mike Ruth, Federal Highway Administration, Office of Project Development and Environmental Review

Lauren Diaz, U.S. Army Corps of Engineers

Deblyn Mead, U.S. Fish and Wildlife Service

Keith Greer, San Diego Association of Governments

Marjorie Kirby and Xavier Pagan, Florida DOT

September 1, 2015

[\(Learn more about Eco-Logical at the FHWA website\)](#)

Steps to Ensure Optimal Webinar Connection

This webinar broadcasts audio over the phone line and through the web room, which can strain some internet connections. To prevent audio skipping or webinar delay we recommend participants:

- Close all background programs
- Use a wired internet connection, if possible
- Do not use a Virtual Private Network (VPN), if possible
- Mute their webroom audio (toggle is located at the top of webroom screen) and use phone audio only

What is Eco-Logical?

- An ecosystem methodology for planning and developing infrastructure projects
- Developed by eight Federal agency partners and four State DOTs
- Collaboration between transportation, resource, and regulatory agencies to integrate their plans and identify environmental priorities across an ecosystem
- For more information, visit the [Eco-Logical Website](#)



The Integrated Eco-Logical Framework

- 1. Build and strengthen collaborative partnerships**
- 2. Integrate natural environment plans**
- 3. Create a Regional Ecosystem Framework (REF)**
- 4. Assess effects on conservation objectives**
- 5. Establish and prioritize ecological actions**
- 6. Develop crediting strategy**
- 7. Develop programmatic consultation, biological opinion, or permit**
- 8. Implement agreements, adaptive management, and deliver projects**
- 9. Update REF**

Partner
Share Data
Analyze Effects

Identify key sites
and actions

Document
Implement
Evaluate

Mitigation in the IEF (REF)

- REF (Step 3) is a cornerstone of the Eco-Logical approach
- By integrating resource data with transportation data, the REF helps transportation and environmental agencies identify joint needs and priorities
- Data in the REF is used to build a mitigation approach
 - Identify sites
 - Set priority sites
- Mitigation approaches can help implement and organize the needs and priorities identified through the REF

Mitigation in the IEF (4-8)

- Step 4: Assess effects on conservation objectives
- Step 5: Establish and prioritize Eco-Logical actions
- Step 6: Develop crediting strategy
- Step 8: Implement actions, including mitigation



Eco-Logical Mitigation Approaches

Peer Exchanges

FHWA and AASHTO hosted two peer exchanges on programmatic mitigation as part of Implementing Eco-Logical Technical Assistance Activities:

- **State DOTs**

- March 11-12, 2015 at FHWA Headquarters
- Participants:
 - California DOT, Colorado DOT, Florida DOT, and South Carolina DOT

- **MPOs**

- June 2-3, 2015 at the National Highway Institute
- Participants:
 - East-West Gateway Council of Governments, Metropolitan Transportation Commission (MTC), North Central Texas Council of Governments (NCTCOG), and San Diego Association of Governments (SANDAG).



Mitigation Definition

The Council on Environmental Quality (CEQ) regulations (40 CFR 1508.20) define mitigation as:

- Avoiding an impact altogether by not taking a certain action or parts of an action;
- Minimizing impacts by limiting the degree or magnitude of the action and its implementation;
- Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
- Reducing the impact over time by preservation and maintenance operations during the life of the action;
- Compensating for the impact by replacing or providing substitute resources or environments.

Mitigation Options

- Project-specific mitigation
- Multiple-project mitigation
- Ecosystem-based mitigation agreements



Multiple-project Mitigation

- Mitigation banking
- In-lieu fee mitigation
- Conservation banking

Wildlife and Habitat Mitigation Examples

In the context of wildlife habitat replacement, mitigation might include:

- Physical modification of replacement habitat to convert it to the type lost or a desired type;
- Restoration or rehabilitation of previously altered habitat so that the value of the lost habitat is replaced;
- Provision of wildlife linkage areas;
- Improvement of water quality;
- Replacement of off-site culverts; and
- Increased management of replacement habitat so that the value of the impacted habitat is replaced.

Advanced Environmental Mitigation Requirements

Environmental mitigation activities are “intended to be regional in scope, and may not necessarily address potential project-level impacts.”

- 23 CFR 450.104



FHWA Policies

Regulations

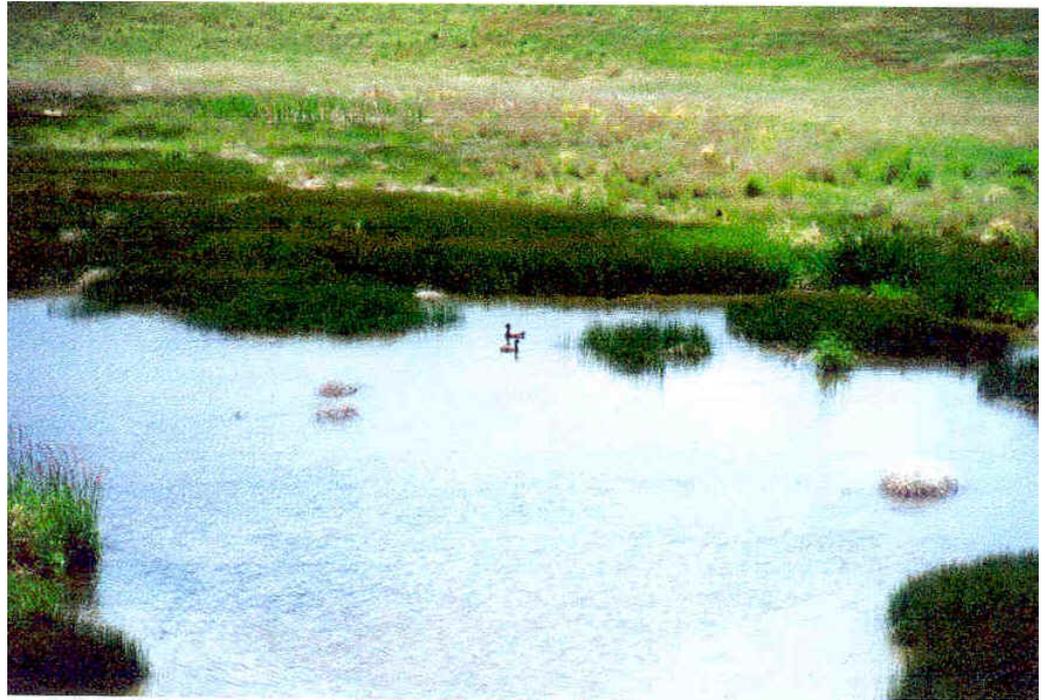
- 23 CFR 777 Mitigation of Impacts to Wetlands and Natural Habitat

Guidance and Executive Order

- Federal-aid Eligibility for Long-Term Management Activities in Wetland and Natural Habitat Mitigation (Oct 3, 2008)
- Federal-aid Eligibility of Wetland and Natural Habitat Mitigation (March 10, 2005)
- Executive Order 11990-- Protection of wetlands

Funding a Mitigation Program

- Federal Funds are allowed to be used for mitigation programs
- Can be totally State funded
- Can be a public-private partnership



Data and Tools to Manage Mitigation Sites

- Infrared Photography
- Aerial Photography
- USDA Maps
- NRCS Soil Surveys
- USFWS National Wetland Inventory Maps
- USGS Topographic maps
- Conservations Maps
- FEMA Firm Maps
- Species Maps
- Vegetation Cover maps
- Forestry Surveys

Eco-Logical Webinar Series



Eco-Logical Mitigation Approaches

[\(Learn more about Eco-Logical at the FHWA website\)](#)

- **Mike Ruth**, Federal Highway Administration (mike.ruth@dot.gov)
- **Lauren Diaz**, U.S. Army Corps of Engineers (Lauren.B.Diaz@usace.army.mil)
- **Deblyn Mead**, U.S. Fish and Wildlife Service (deborah_mead@fws.gov)
- **Keith Greer**, San Diego Association of Governments (Keith.Greer@sandag.org)
- **Marjorie Kirby**, Florida DOT (Marjorie.Kirby@dot.state.fl.us)
- **Xavier Pagan**, Florida DOT (Xavier.Pagan@dot.state.fl.us)

Establishing a Mitigation Bank or In-Lieu Fee Program



Interagency Review Team

- Reviews establishment & operation of 3rd party mitigation
- Federal, Tribal, State, and local resource agencies
- Coordination required
- Consensus is desired
- Corps makes final decision
- MOAs with Federal/State/local resource agencies to delegate tasks

Overview

- Draft prospectus
- Prospectus & Public Notice
- Draft instrument
- Final instrument

<i>TABLE OF CONTENTS</i>	
<i>PREPARED FOR:</i> BUNROOTS, LLC 400 SOUTH RECORD SUITE 1250 DALLAS, TX 75202	iv
	viii
	ix
	x
CHEROENHAKA WETLAND AND STREAM MITIGATION BANK	1
	2
	2
	3
	3
MITIGATION BANKING INSTRUMENT	4
	4
FEBRUARY 2010 FINAL FOR SIGNATURE	5
	6
	6
	6
	6
	6
	6
	7
	8
	9
	9
	11
	11
	11
	11
	12
	12
	14
	14
	15
	17
	17
	17
	iv



PREPARED BY:
TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS.

1001 BOULDERS PARKWAY, SUITE 300
RICHMOND, VIRGINIA 23225
PHONE: 804.200.6500
FAX: 804.560.1648
WWW.TIMMONS.COM
TIMMONS GROUP PROJECT NO. 27127

Action Items for the DOT/sponsor

Compensatory Mitigation Rule Timeline for Bank or ILF Instrument Approval*

		Event	# of Days**		
Phase I		Optional Preliminary Review of Draft Prospectus	30		DE provides copies of draft prospectus to IRT and will provide comments back to the sponsor within 30 days.
		Sponsor Prepares and Submits Prospectus ~DE must notify sponsor of completeness w/in 30 days of submission~			
Day 1**		Complete Prospectus Received by DE			
Phase II	Day 30	Public notice must be provided within 30 days of receipt of a complete prospectus	30		
	Day 60	30-Day Public Comment Period	30		
	Day 90	DE must provide the sponsor with an initial evaluation letter within 30 days of the end of the public comment period.	30	15	DE distributes comments to IRT members and sponsor within 15 days of the close of the public comment period.
		Sponsor Considers Comments, Prepares and Submits Draft Instrument ~DE must notify sponsor of completeness w/in 30 days of submission~			
Day 1		Complete Draft Instrument Received by IRT Members			
Phase III	Day 30	30-day IRT comment period begins 5 days after DE distributes draft instrument to IRT members	30		
	Day 90	DE discusses comments with IRT and seeks to resolve issues ~ # of days variable~	60	90	Within 90 days of the receipt of a complete draft instrument by IRT members, the DE must notify the sponsor of the status of the IRT review.
		Sponsor Prepares Final Instrument ~Sponsor provides copies to DE and all IRT members~			
Day 1		Final Instrument Received by DE & IRT			
Phase IV	Day 30	DE must notify IRT members of intent to approve/not approve instrument within 30 days of receipt.	30	45	IRT members have 45 days from submission of final instrument to object to approval of the instrument and initiate the dispute resolution process.
	Day 45	Remainder of time for initiation of dispute resolution process by IRT members	15		
Day 45		INSTRUMENT APPROVED/NOT APPROVED, or DISPUTE RESOLUTION PROCESS INITIATED			

EPA/Corps draft 4/02/08

Total Required Federal Review (Phases II-IV): ≤225 Days

*Timeline also applies to amendments

**The timeline in this column uses the maximum number of days allowed for each phase.

Phase 1: Draft Prospectus

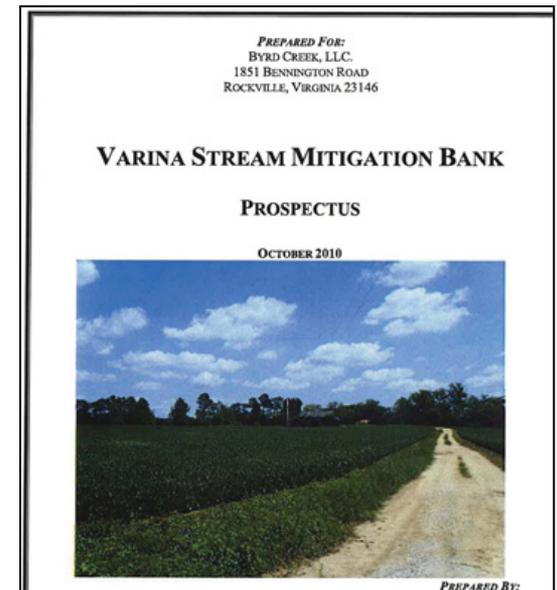
	Event	# of Days**	
Phase I	Optional Preliminary Review of Draft Prospectus	30	DE provides copies of draft prospectus to IRT and will provide comments back to the sponsor within 30 days.
	Sponsor Prepares and Submits Prospectus ~DE must notify sponsor of completeness w/in 30 days of submission~		
Day 1**	Complete Prospectus Received by DE		

- Preliminary review of draft prospectus
- Optional but “...*strongly recommended*...”
- IRT has opportunity to review
- DE provides comments to sponsor within 30 days

Phase 2: Prospectus

Contents (§332.8(d)(2))

1. Objectives
2. How it will be established & operated
3. Proposed service area
4. Need & technical feasibility
5. Ownership arrangements
6. Qualifications



What does a complete prospectus include?

A complete prospectus includes the following:

- Objectives of the proposed bank or in-lieu fee program
- How the bank or ILF will be established & operated
- The proposed service area(s)
- The general need and technical feasibility of the proposed bank or ILF program
- The proposed ownership arrangements and long-term management strategy for the bank or ILF project sites
- Qualifications of the sponsor to successfully complete the types of mitigation projects proposed, including information on past activities

For a proposed mitigation bank, the prospectus must also address:

- Ecological suitability of the site to achieve the objectives of the bank, incl. physical, chemical, & biological characteristics of the site and how that site will support the planned types of aquatic resources and functions.
- Assurance of sufficient water rights to support long-term sustainability of the mitigation bank.

For a proposed in-lieu fee program, the prospectus must also include:

- The compensation planning framework, which will be used to select, secure, and implement aquatic resource compensatory mitigation activities. The compensation planning framework is discussed in greater detail at 33 CFR 332.8(c)/40 CFR 230.98(c).
- A description of the in-lieu fee program account. The in-lieu fee program account is the repository for all fees collected from permittees, earnings, and interests received by the in-lieu fee program from operation as a method of compensatory mitigation. The establishment, operation, and use of the program account is discussed in greater detail at 33 CFR 332.8(i)/40 CFR 230.98(i).

A Complete Prospectus

- For Bank and ILF Programs includes:
 1. Objectives
 2. How the Bank or ILF program will be established and operated
 3. Proposed service area
 4. Need and technical feasibility
 5. Ownership arrangements
 6. Qualifications



Prospectus (cont'd)

Banks must also include:

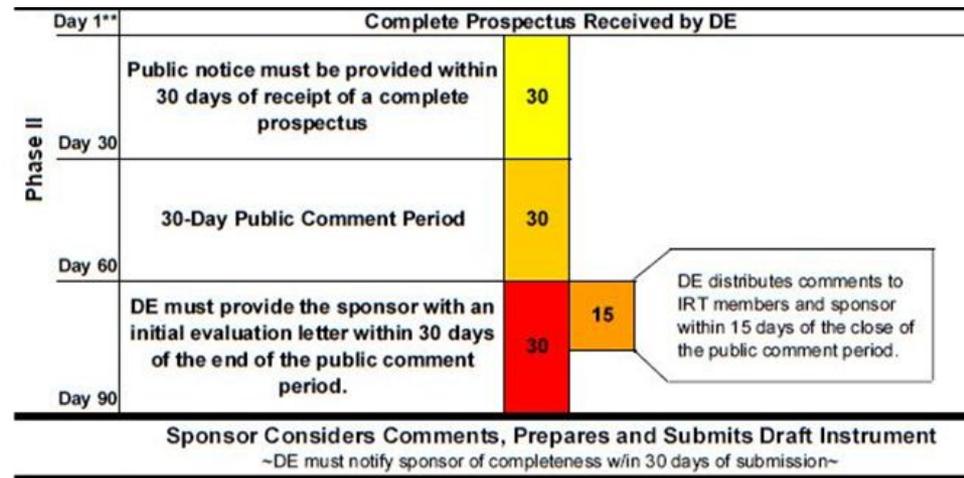
7. Ecological suitability
8. Assurance of sufficient water rights

ILFs must also include:

7. Compensation planning framework
8. Description of ILF program account



Phase 2: Public Review and Comment

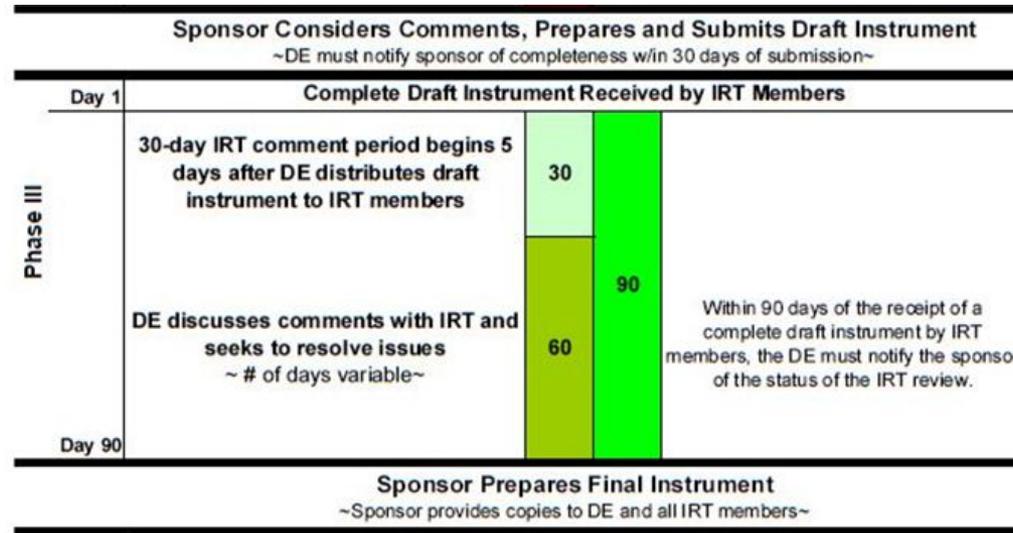


- Public Notice Required
 - Complete Prospectus
 - Most modifications of approved instruments
- Copies of comments provided to IRT & sponsor

Initial evaluation of the prospectus provided to Sponsor

- Written determination of potential suitability of proposed bank or ILF
- If suitable, DE advises sponsor to begin preparing draft instrument
- If not suitable, DE informs sponsor of reasons for that determination

Phase III



- IRT review of draft instrument
- USACE coordinates with IRT to resolve issues and provide feedback to DOT/Sponsor
- DOT/Sponsor prepares final instrument in consideration of feedback received

All 3rd party mitigation instruments include:

Service area(s)

Accounting procedures

Sponsor assumption of mitigation responsibility

Default and closure provisions

Reporting protocols

Other information deemed necessary

What does a complete draft instrument include?

Mitigation bank and in-lieu fee program instruments must include the following information:

- Description of the proposed service area(s). Service areas may be based on the watershed, ecoregion, or physiographic province, and/or other geographic area in which the bank or in-lieu fee program is authorized to provide compensatory mitigation
- Accounting procedures
- Provision stating that legal responsibility for providing mitigation lies with the sponsor once a permittee secures credits from the sponsor
- Default and closure provisions
- Reporting protocols
- Any other information deemed necessary by the district engineer

For a mitigation bank, a complete instrument must also include the following information (33 CFR 332.4(c)(2)-(14)/ 40 CFR 230.94(c)(2)-(14)):

- Objectives
- Site selection factors considered
- Site protection instrument (conservation easement, declaration of restrictions, title transfer, etc.)
- Baseline information – description of ecological characteristics of the proposed mitigation bank site
- Description of number of credits to be provided
- Mitigation work plan – detailed written specification and work descriptions for the mitigation bank site
- Maintenance plan – description and schedule of maintenance requirements
- Performance Standards – ecologically-based standards used to determine whether the project is achieving its objectives
- Monitoring requirements
- Long-term management plan – description of mitigation site management after meeting all performance standards to ensure long-term sustainability of the site
- Adaptive management plan – a management strategy to address unforeseen changes in site conditions or other aspects of the project. It guides decisions for addressing circumstances that adversely affect a mitigation project
- Financial assurances – a description of any financial assurances that will be provided to ensure that the mitigation project will be completed in accordance with its performance standards.
- A credit release schedule tied to achievement of specific milestones.

For an in-lieu fee program, a complete instrument must include the following information:

- Compensation planning framework (33 CFR 332.8(c)/40 CFR 230.98(c));
- Specification of the amount of advance credits (33 CFR 332.8(n)/40 CFR 230.98(n)) and the fee schedule for these credits;
- Methodology for determining future project-specific credits and fees;
- Description of the in-lieu fee program account (33 CFR 332.8(i)/40 CFR 230.98(i)).

Draft Instrument

- Banks and ILFs must include:
 1. Service area
 2. Accounting procedures
 3. Provision stating legal liability
 4. Default and closure provisions
 5. Reporting protocols



Draft Instrument (cont'd)

- Bank instruments must include:
 - Mitigation plans (12 items)
 - Credit release schedule
- ILF instruments must include:
 - Compensation planning framework
 - Advance credits
 - Fee schedule
 - Method for determining fees and credits
 - Description of in-lieu fee program account



Phase 4: Final Instrument

Sponsor Prepares Final Instrument ~Sponsor provides copies to DE and all IRT members~					
Final Instrument Received by DE & IRT					
Day 1					
Phase IV	Day 30	DE must notify IRT members of intent to approve/not approve instrument within 30 days of receipt.	30	45	IRT members have 45 days from submission of final instrument to object to approval of the instrument and initiate the dispute resolution process.
		Remainder of time for initiation of dispute resolution process by IRT members	15		
Day 45	INSTRUMENT APPROVED/NOT APPROVED, or DISPUTE RESOLUTION PROCESS INITIATED				

Contents

- Core elements
 - 18 for final bank instruments (includes 12 elements for mitigation plans)
 - 10 for final ILF instruments
- Supporting documentation addressing IRT comments
- DE determines instrument approval

What is USACE looking for?

- Watershed approach for site selection - 332.3(c) & 332.8(b)(3)
- Self-sustaining - 332.8(a)(2)
- On public lands, environmental benefits over and above normal management activities - 332.3(a)(3)
- Likelihood of success - 332.3(a)(2) and (b)(1)
- Aquatic habitat diversity, habitat connectivity, relationships to hydrologic sources, trends in land use, ecological benefits, and compatibility with adjacent land uses - 332.3(b)(1)
- Long term protection of the project – 332.7(a)
- Long term management when appropriate – 332.7(d)

Conservation Banking – achieving compensatory mitigation using an Eco-Logical approach



Deblyn Mead
National Conservation Banking Coordinator
U.S. Fish and Wildlife Service
HQ – Falls Church, VA
deborah_mead@fws.gov

2 September 2015

U.S. Fish and Wildlife Service



What is a conservation bank?

- Definition:
 - a site or suite of sites containing natural resource values that are conserved and managed in perpetuity for specified endangered, threatened, or other at-risk species and used to offset impacts occurring elsewhere to the same type of resource (i.e., in-kind, off-site compensatory mitigation)
- Conservation banking programs are approved by USFWS and NOAA Fisheries (States may also have conservation banking programs)
- Conservation banking and in-lieu fee programs are expected to provide a net conservation benefit for the species



Need for Landscape Level Approach

- USFWS is looking for well sited, well protected, well managed, financially assured compensatory mitigation sites
- Compensatory mitigation sites based on landscape level conservation plans and mitigation strategies
- Consideration of accelerated climate change in siting of compensatory mitigation sites
- Preference for compensatory mitigation in advance of impacts in reduce risk



How do conservation banks differ from wetland and stream mitigation banks?

- Purposes
- USFWS has policy based on regulations; USACE has regulations
- Prospectus or less formal proposal is usually OK – depends on Field Office
- No public review requirement for conservation banks
- Conservation Banking Review Team (CBRT) – very similar to IRT
- No mandated timelines
- Must always be in-kind for the affected species (but not necessarily for habitat type)
- Service areas usually based on Recovery Units
- Crediting methodologies can be complex



Basic Requirements

- Mitigation Site Protection
 - Perpetual conservation easement
 - Federal lands – conservation land use agreement
- Management & Monitoring using an adaptive management approach
 - Long-term management plan
 - Measurable monitoring criteria and thresholds for action including a remediation process
 - Reporting
- Financial Assurances
 - Short term (cover habitat construction, interim management, etc.)
 - Long term (endowment to perpetually fund implementation of the management plan, monitoring, and operation and maintenance of the bank)



Move to Joint Banks

- What are joint banks:
- Why joint banks?
 - holistic approach
 - more ecologically effective
 - more cost efficient
 - better serve the regulated community where regulated resources overlap
 - improved federal permitting, reduces regulatory burden
- The FWS usually defers to the Corps' process for CWA-ESA banks
- FWS becomes a co-chair with the Corps on the IRT
- Multiple service areas for multiple resources
- Stacking/bundling of credits OK – but unstacking of credits is not OK



Example: Kimball Island Mitigation Bank



Joint Conservation-Wetland Mitigation Bank

Both Endangered Species Act and Clean Water Act credits available

ECO-LOGICAL MITIGATION APPROACHES WEBINAR

Implementing Advance Mitigation



WHAT IS SANDAG?

- MPO (original established in 1966). SANDAG is made up of the 18 cities and county government in San Diego and serves as the forum for regional decision-making.
- RTA (1971). State designates SANDAG as the Regional Transportation Agency
- State law (2002) consolidates financial programming, project design and development under SANDAG for transit development.
- *TransNet* (1/2 cent local sale tax) to promote highways, transit, local roads and bicycles. First adopted in 1987 and reauthorized in 2004 by voters
- **Environmental Mitigation Program** (2004) established for the advanced mitigation of regional transportation projects and local streets and roads.
 - \$850 million dollars of \$14 billion dollar *TransNet* program (\$2002)

BACKGROUND

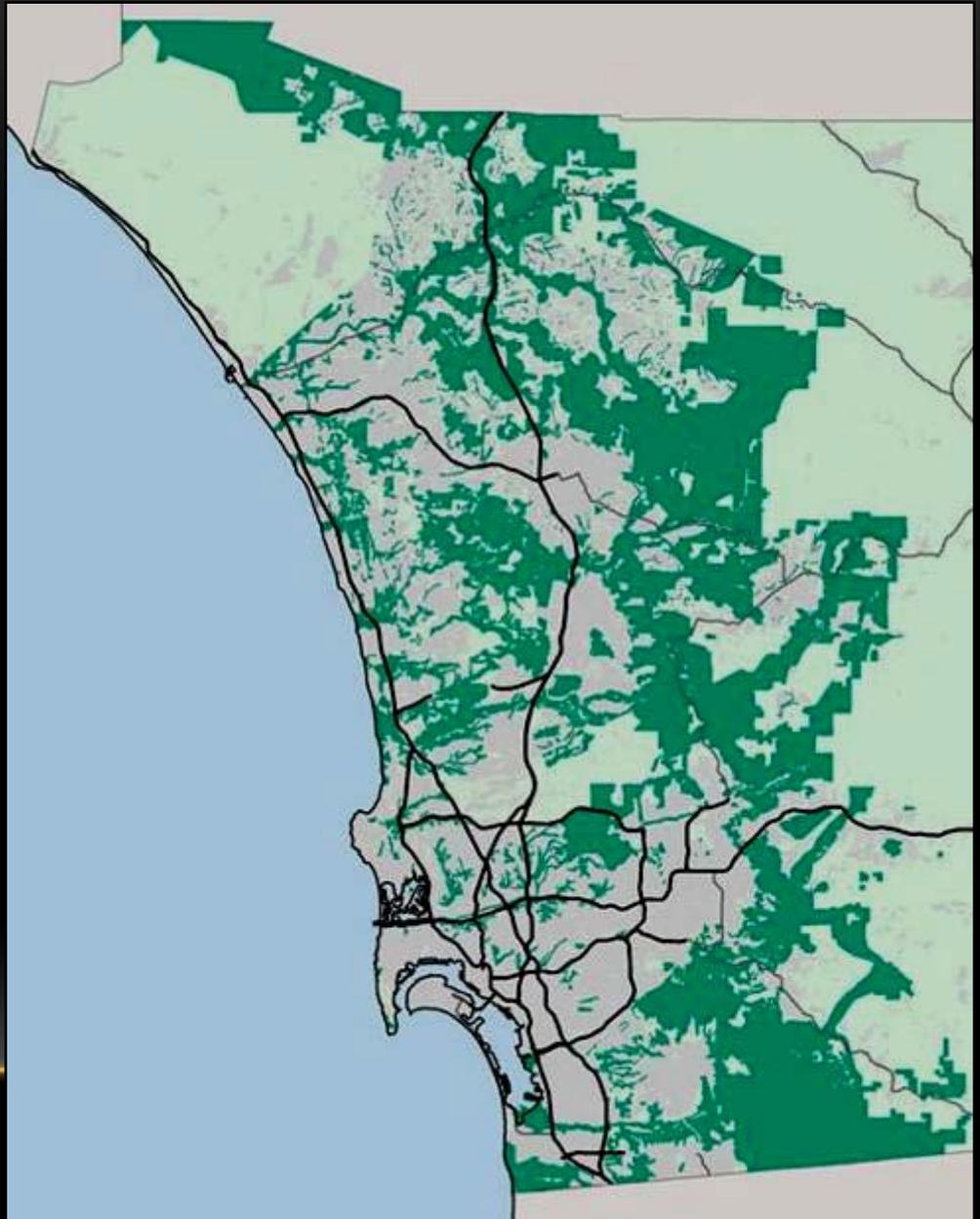
- San Diego County's endangered species "problem"
- Perception that environmental mitigation is delaying infrastructure development
- Securing biological mitigation sites case-by-case basis – costly and ineffective
- San Diego long history of HCP planning



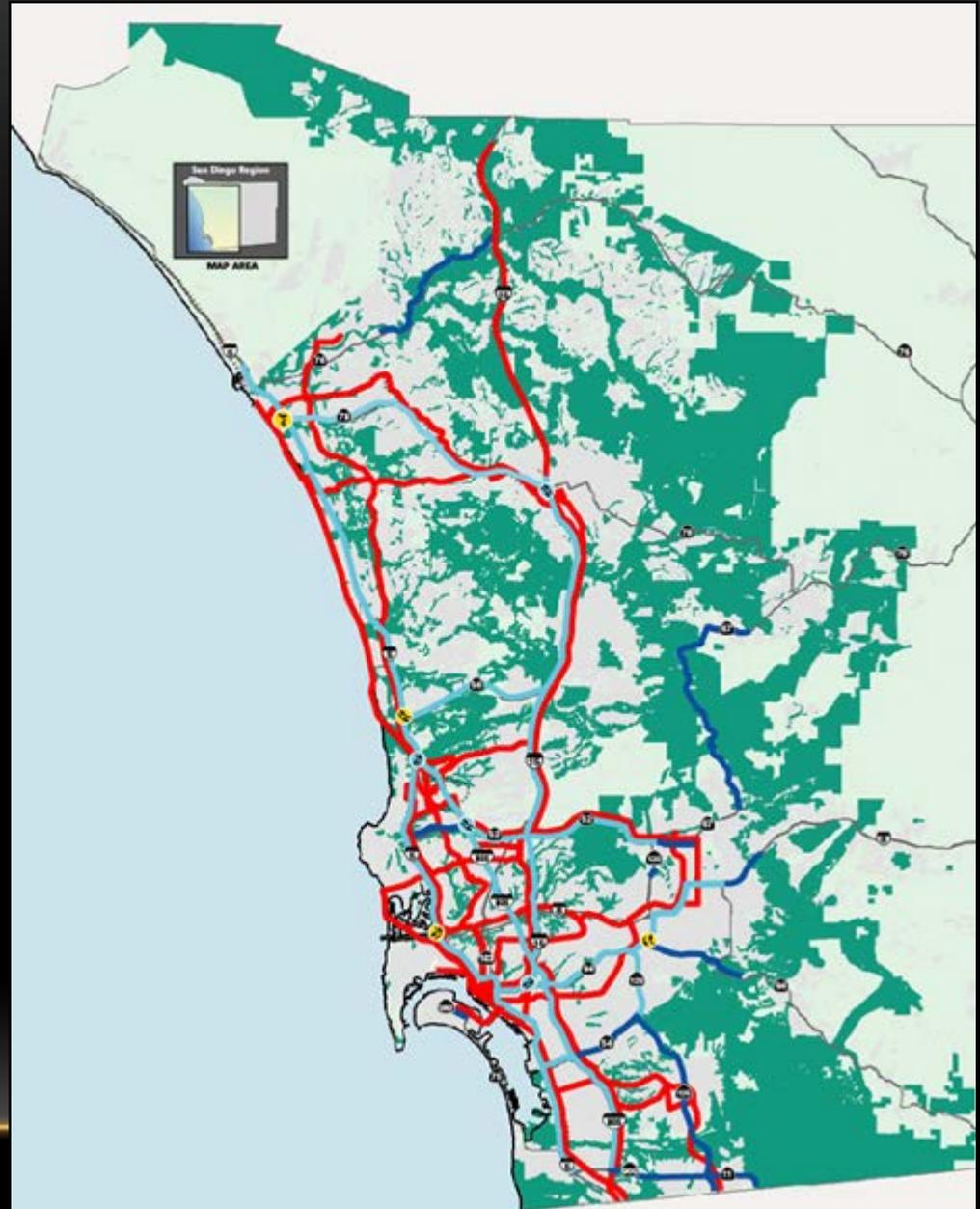
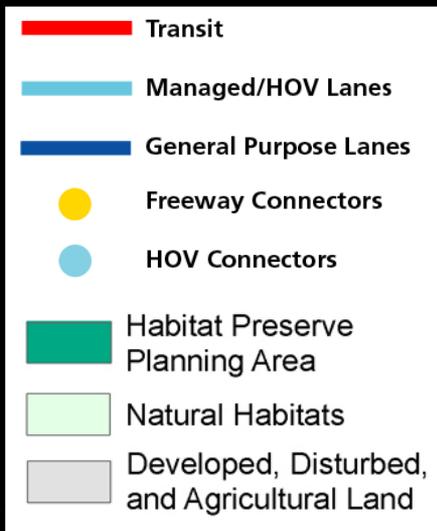
NATURAL COMMUNITIES CONSERVATION PLANNING ACT (1991)



REGIONAL HABITAT PRESERVE PLANNING AREA



REGIONAL HABITAT PRESERVE PLANNING AREA WITH MOBILITY NETWORK





Large scale acquisition
and management



Reduced cost
Accelerated delivery
Implement habitat plans
↓ Listing of species

TransNet Extension EMP

“The intent is to establish a program to provide for large-scale acquisition and management of critical habitat areas and to create a reliable approach for funding required mitigation for future transportation improvements thereby reducing future costs and accelerating project delivery. This approach would be implemented by obtaining coverage for transportation projects through existing and proposed multiple species conservation plans. (Section D)”

EARLY MITIGATION FOR NET ENVIRONMENTAL BENEFIT
 Meaningful Off-Setting Measures for Unavoidable Impacts



Requested by: American Association of State Highway and Transportation Officials (AASHTO) Standing Committee on the Environment

Prepared by: Marie Venner, Venner Consultants
 In association with Parsons Brinckerhoff

September 2005

The information contained in this report was prepared as part of NCHRP National Cooperative Highway Research Program, Transportation

2005



An Ecosystem Approach to Developing Infrastructure Projects

Eco-Logic

2006

DRAFT STATEWIDE FRAMEWORK FOR Regional Advance Mitigation Planning IN CALIFORNIA

Prepared for:
 California Department of Water Resources
 FOCUS/SAFE Environmental Stewardship and Statewide Resources Office
 P.O. Box 942036
 Sacramento, CA 94296-0001
 Contact: Natasha Nelson
 (916) 652-6003

Prepared by:
 Regional Advance Mitigation Planning Workgroup
 California Department of Water Resources
 California Department of Transportation
 California Department of Fish and Game
 California State Parks
 California Wildlife Conservation Agency
 U.S. Environmental Protection Board
 U.S. Fish and Wildlife Service
 U.S. Army Corps of Engineers
 National Oceanic and Atmospheric Administration Fisheries Service
 The Nature Conservancy
 University of California, Davis
 Resources Legacy Fund

Technical Assistance Provided by:
 AECOM
 2001 L Street, Suite 400
 Sacramento, CA 95811
 Contact: Vance Howard
 (916) 414-5800

April 2011
 P-08-10206-02

2012

Statewide Advance Mitigation Funding and Financial Strategies
 The Business Case for Advance Mitigation in California

Task 3 Report:



November 20, 2014

Statewide Advance Mitigation Funding and Financial Strategies (SAMFFS)
 Project for the California Department of Transportation

Prepared by:
 Dr. Gian-Claudia Sciarra, AICP
 Elizabeth Strykowski
 Jacquelyn Bjorkman
 Dr. Jim Thorne
 Melanie Schlotterbeck

Principal Investigator:
 Dr. Gian-Claudia Sciarra, AICP

ITS UC DAVIS
 INSTITUTE OF TRANSPORTATION STUDIES

Information Center for the Environment

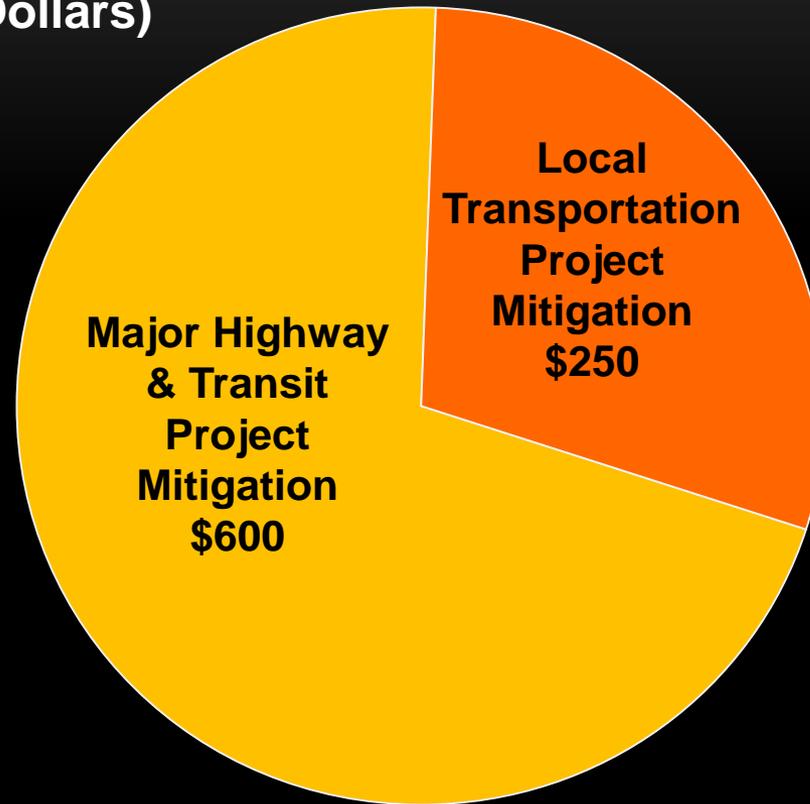
2014

Promoting Advance Mitigation

Environmental Mitigation Program Costs

(In Millions, 2002 Dollars)

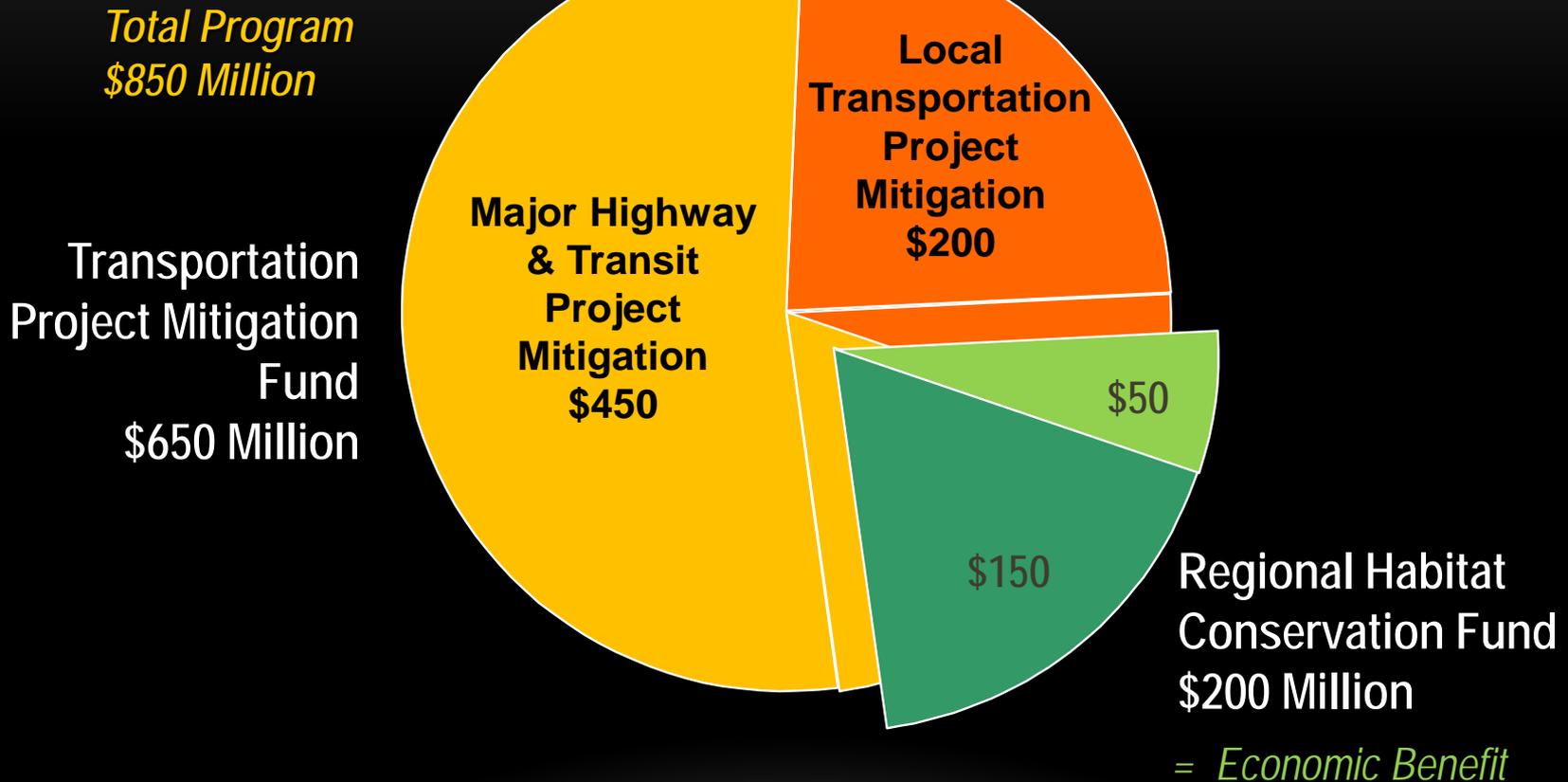
Total Program
\$850 Million



6.2% of TransNet Annual Net Revenue

Environmental Mitigation Program Costs

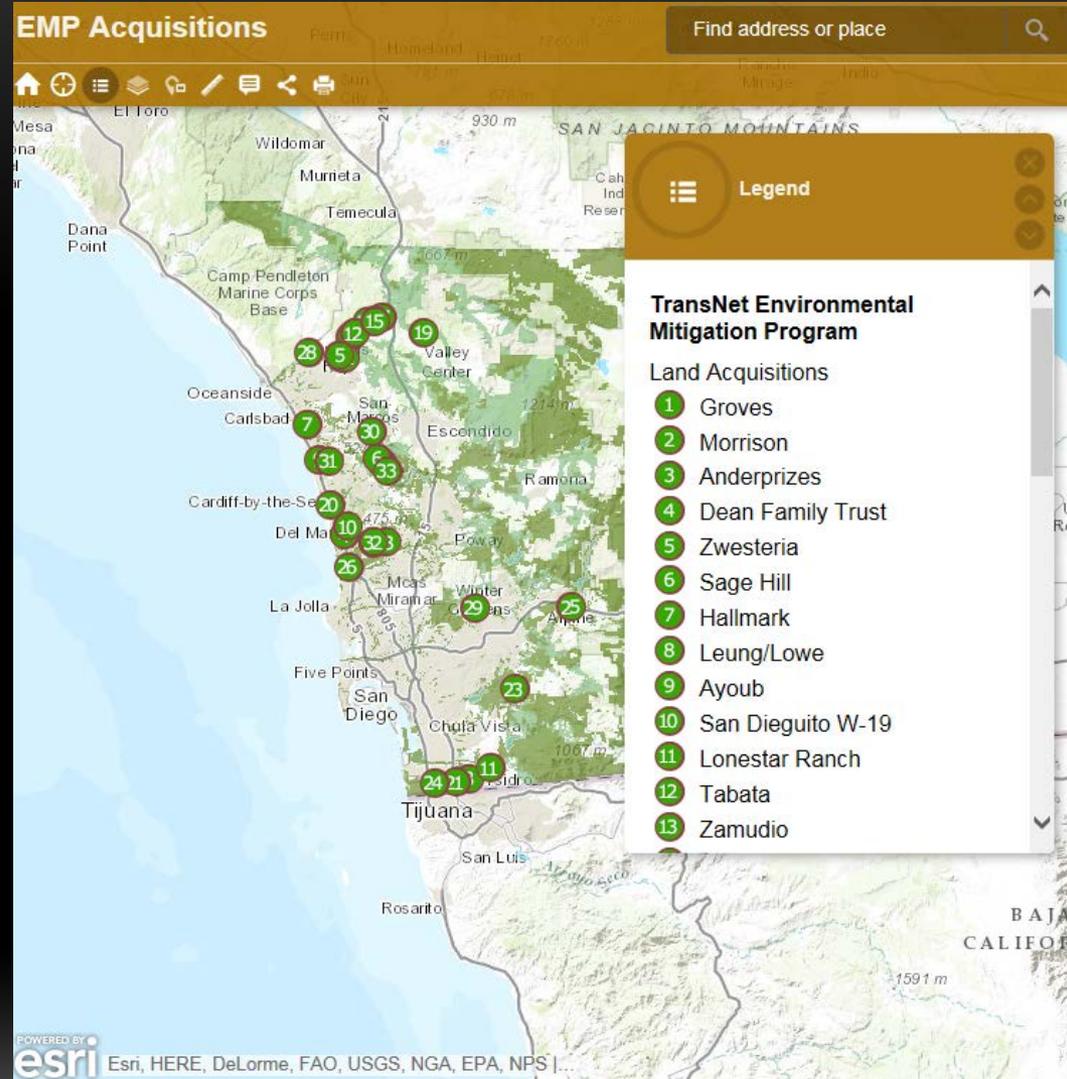
(In Millions, 2002 Dollars)



Plus up to \$30 million in financing costs for advanced habitat acquisition and \$82 million in intra-program borrowing

STATUS OF EMP 2015

- 32 properties
- 3,472 acres
- Restoration 300 acres
- \$113 million *TransNet* funds
- \$17.4 million matching funds



STATUS OF EMP MITIGATION 2015



2003, 2007 & 2014 WILDFIRES

Regional Monitoring and Land Management



2007 Poomacha fire

HABITAT CONSERVATION FUND



Habitat Recovery



Wildlife Movement



Exotic Spec



Species Recovery



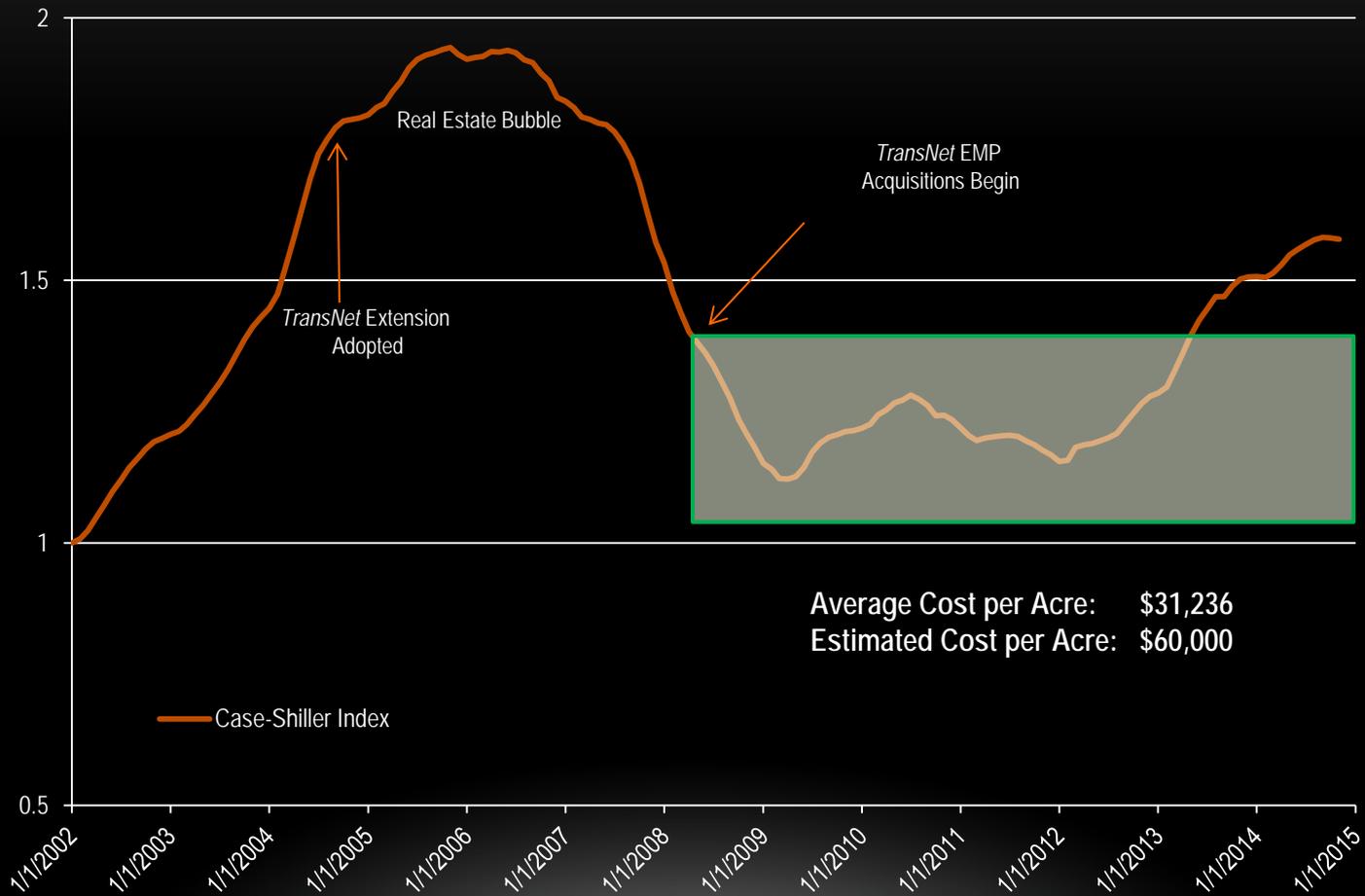
PRELIMINARY METRICS OF SUCCESS

TEN-YEAR COMPREHENSIVE PROGRAM REVIEW (2018)

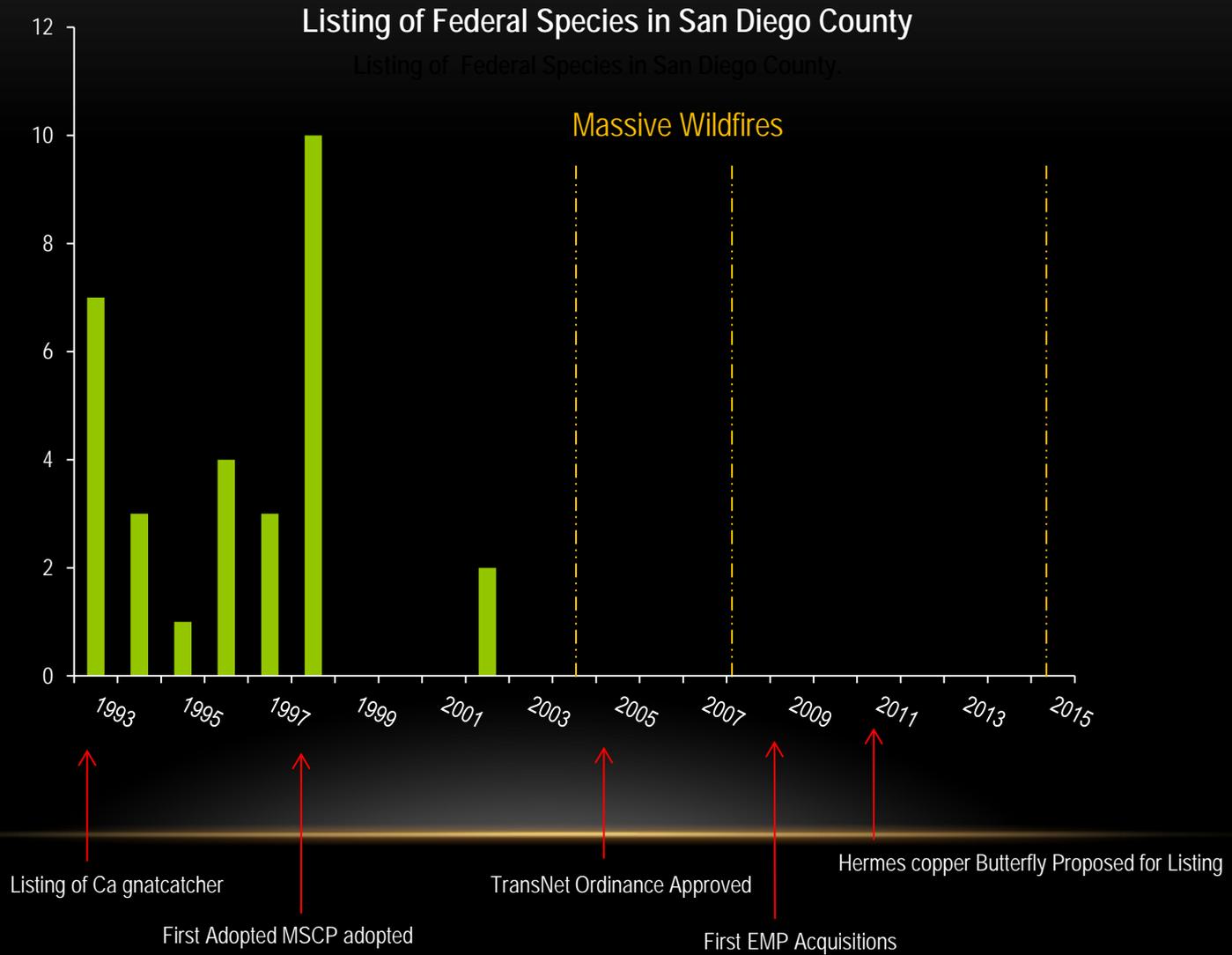
- Reduced Mitigation Cost
- Reduce Listing of Species
- Implement Habitat Plans
- Accelerated Project Delivery

REDUCE MITIGATION COST

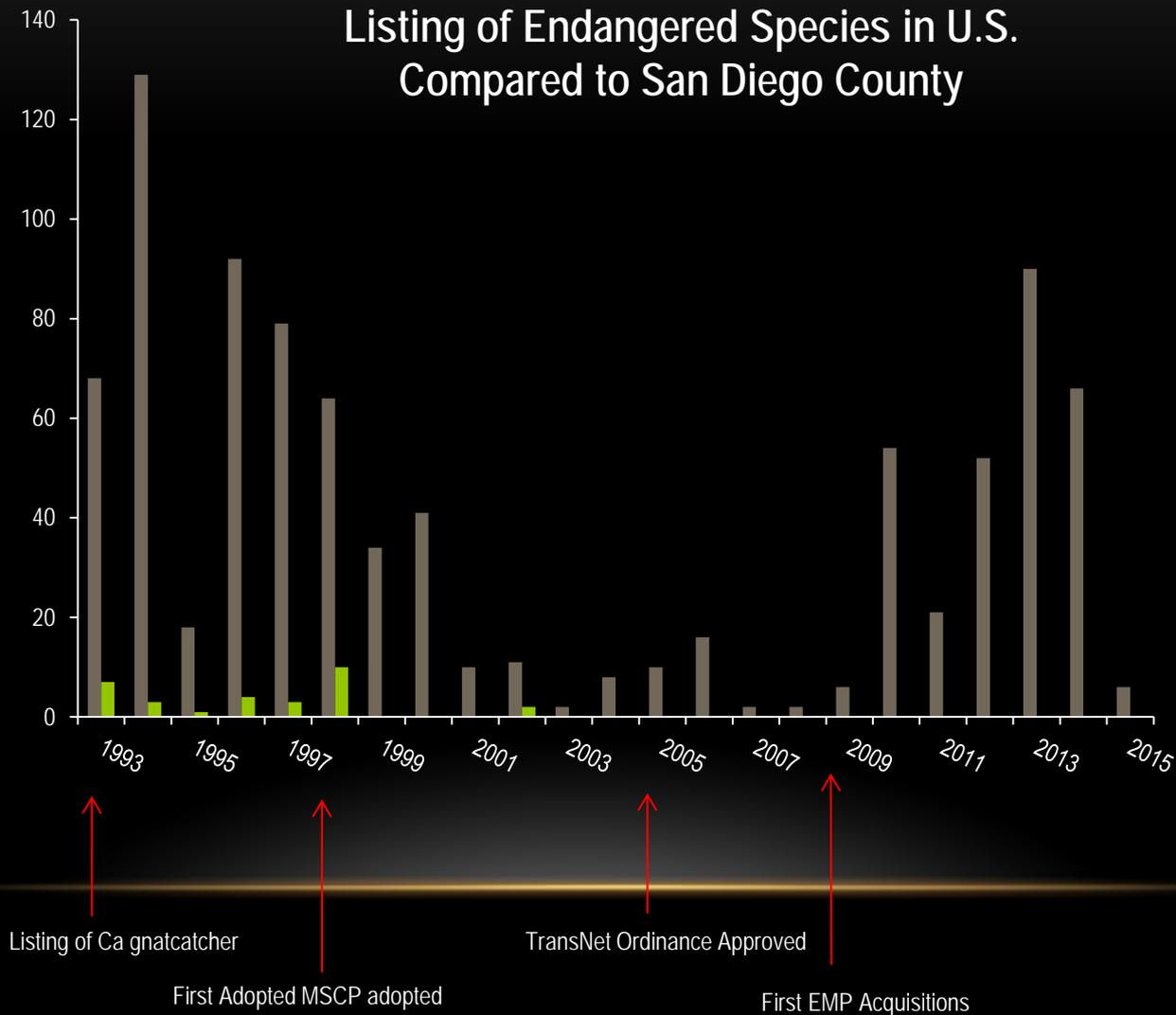
TransNet EMP Land Acquisitions



REDUCE LISTING OF SPECIES



REDUCE LISTING OF SPECIES



IMPLEMENT HABITAT CONSERVATION PLANS

- Dark green circles are acquisitions under EMP
- Light green polygons are areas within regional Habitat Conservation Plan Areas
- State and federal wildlife agencies confirm in writing that the acquisition promotes HCP and will be acceptable for future mitigation of transportation projects.
- \$40 million of EMP funds will go toward regional management and monitoring over 10 years under pilot program



ACCELERATE PROJECT DELIVERY

- To date 12 projects have received all their permits
- How it takes to get a project to receive all its permits?
There are lots of variables: Size and complexity of project, availability of funding, politics, etc....
- Many projects have jointly mitigated with same property, saving time on appraisals and review by wildlife agencies
- Premature to draw a conclusions
- More work is needed as part of 10-year review, but....

IS THERE A BUSINESS CASE FOR ADVANCE MITIGATION?

1. Available **evidence provides optimism** that advance mitigation could lead to financial and time savings.
2. Cautious optimism is advised. To definitively measure possible cost savings involves significant methodological challenge. It's easier to be confident about the **potential for than about the magnitude** of potential savings.
3. Advance purchase of mitigation land is a **promising approach** to advance mitigation in CA. Yet, real estate markets can be quirky.

Lead Researcher: Gian-Claudia Sciara, PhD, AICP

FINAL THOUGHTS

- I have a solid belief that advance mitigation is the most effective and efficient way of providing project delivery from both a cost and time standpoint, and provides other critical ancillary benefits.
- I do not have the data to support this belief, but we should in a few years.
- SANDAG is tasked by Feb 2018 to comprehensive evaluate the EMP and make an assessment of the cost saving and benefits of advanced mitigation.
- Advanced mitigation programs need to be tailored to the user's economic, social and political realities

For more information: keepsandiegomoving.com



MID-COAST CASE STUDY



\$1.72 billion extension
Agency's top project
FED completed...

when endangered fairy
shrimp found in rut within
rail alignment



MID-COAST CASE STUDY

SHRIMP COULD DELAY REVIEW FOR TROLLEY

Animal's presence near planned extension will require extra attention

By **Chris Nichols** 5:08 A.M. MAY 10, 2014

 PRINT  COMMENTS **0**

"Fairy shrimp could delay \$2 billion dollar trolley expansion by a year or more"

- November 11, 2008 – SANDAG bought 43 acres for future vernal pool mitigation
- April 30, 2014 – SANDAG notifies USFWS regarding impacts to fairy shrimp
- May 6, 2014 – USFWS agrees that SANDAG can mitigate within 43 acre site

"1 week between notification and verbal approval of mitigation"

Florida Department of Transportation Approaches to Mitigation

**SHRP-2 Eco-Logical Mitigation Approaches Webinar
September 1, 2015**

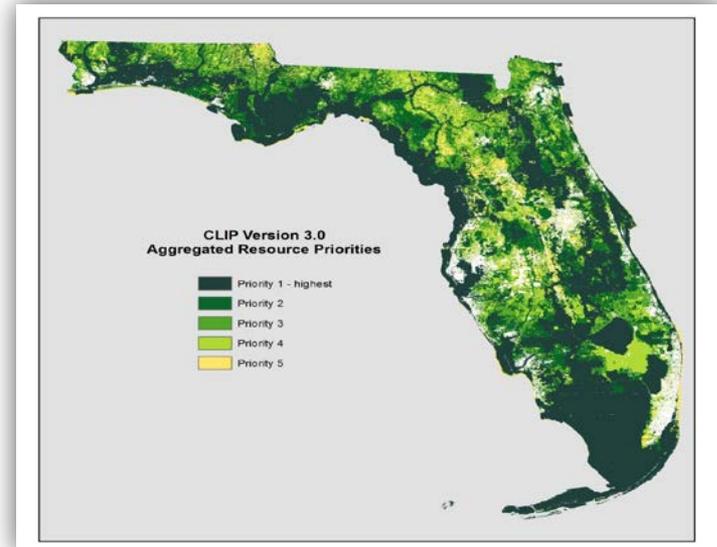


Outline

- Florida's data rich environment (Step 1)
- Wetlands
 - Florida Statute (Step 3 – 6)
 - Coordination and Implementation (Step 1 – 4)
 - Regional General Permit
- Species and Habitat
- Project Implementation
 - Planning phase – Mitigation opportunities (Step 2)
 - Project Development & Environment phase – Coordination/consultation (Step 8)
 - NEPA – Conceptual mitigation
 - Design – Final mitigation, Permitting (Step 8)
 - Construction - Compliance

Data, data, data...

- Florida Geographic Data Library (FGDL) <http://www.fgdl.org>
 - GIS data collected from various state, federal, and other agencies
 - Source of layers for the FDOT Environmental Screening Tool (EST)
- Critical Lands and Waters Identification Project (CLIP) <http://fnai.org/clip.cfm>
 - GIS database of statewide conservation priorities for natural resources
- Peninsular Florida Landscape Conservation Cooperative (PFLCC) <http://peninsularfloridalcc.org/>
 - Federal, state & local agencies, NGO's, etc.



Chapter 373, Florida Statutes, Water Resources

- Part I – State Water Resource Plan
- Part II – Permitting of Consumptive Uses of Water
- Part III – Regulation of Wells
- ***Part IV – Management and Storage of Surface Waters***
- Part V – Finance and Taxation
- Part VI – Miscellaneous Provisions
- Part VII – Water Supply Policy, Planning, Production, and Funding

Part IV – Management and Storage of Surface Waters

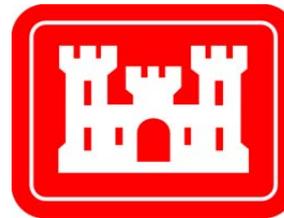
- Includes:
 - Additional Criteria for Activities in Surface Waters (s. 373.414)
 - Statewide Environmental Resource Permit (s. 373.4131)
 - Requirements of mitigation banks (s. 373.4135)
 - Establishment and operation of mitigation banks (bank instrument permits) (s. 373.4136)
 - Mitigation requirements for specified transportation projects (s. 373.4137)

373.4137, Mitigation requirements for specified transportation projects

- Codified in 1996
- Regional approach to mitigation rather than postage stamp
- FDOT must mitigate for project impacts to wetlands by funding Florida Department of Environmental Protection (FDEP) and 5 Water Management Districts (WMDs) implemented mitigation
- Mitigation based on impact acres rather than wetland function
- Mitigation developed for 3 years of the FDOT Work Program – Project Inventory
- WMDs develop annual mitigation plans
- WMD driven process

Public/Private Partnership

- Challenges to statutory approach raised by 2008 Wetland Mitigation Rule
- FDOT coordinated an approach with FDEP, WMDs and Mitigation Bankers to make statute current
- Clear, concise and consistent statewide application
- Open communication and coordination to ensure smooth development implementation of amendment
- Agency liaisons stay on project throughout the process
- Fully accountable process with defined milestones



New s. 373.4137

- Enrolled May 2014, effective July 1, 2014
- FDOT can use any mitigation option meeting state and federal requirements
- Mitigation based on resulting wetland functional loss
- Florida's Uniform Mitigation Assessment Method (UMAM) [ss. 373.414(18)] described in Florida Administrative Code, Rule Chapter 62-345 -
<http://www.dep.state.fl.us/Water/wetlands/mitigation/umam/index.htm>
- Functional loss = credits
- Advance mitigation through mitigation banks
- Coordinated process – FDEP, WMDs, mitigation banks and Army Corps
- FDOT leads process incorporated into Planning and NEPA

Species and Habitat

- Coordinated approach
- Substantial agency partnerships
- Leverages and improves existing FDOT processes
- Expedites project delivery



Agency Liaisons

- Determined via interagency agreement
- NMFS – Currently two liaisons
- FWC – Currently two liaisons
- USFWS – Currently three liaisons
 - New agreement calls for five liaisons



USFWS Liaisons

- Liaisons in all three offices
 - Panama City
 - Jacksonville
 - Vero Beach
- NEW: one liaison dedicated to the development of Programmatic Agreements/approaches as well as training for FDOT
- NEW: one liaison dedicated to assist the other three with work load

Approaches

- Constant and consistent agency communications
- Implementing aggressive scoping strategies leveraging existing FDOT processes and staff
- Developing strategies with agencies to better assess impacts and mitigation
 - Currently working with Florida Fish and Wildlife Conservation Commission (FWC) in the use the Uniform Mitigation Assessment Method (UMAM) to determine functionality of habitat and appropriate science-based mitigation

Wildlife Crossing Guidelines

- Considerations:
 - Capacity improvement, add travel lanes
 - Science based
 - Look for financial partnerships
 - Road kills in the area
 - Public lands or perpetual conservation easement on both sides
 - Private property access maintained
- Guidelines are currently under review

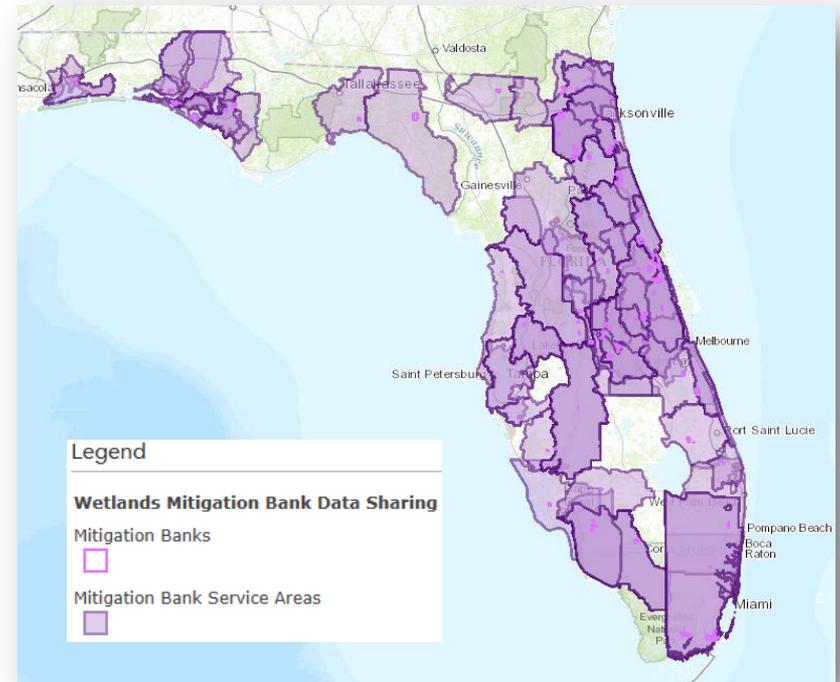


Planning phase

- Coordination with agencies at management and project level
- Environmental screening
- Florida has 27 MPO/TPO
- Actionable agency commentary
- Identification of wetland and species mitigation **opportunities**
- Statute ensures wetland mitigation is considered and funded (TIPs) during plan development

Project Development Process

- Screening information used to develop project scope
- Identified opportunities for mitigation are carried forward and refined to **options**
- Initial functional assessment (UMAM) to determine amount of mitigation projected
- Coordination with agencies to refine mitigation options – commitments?
- Potential for advance mitigation credit purchase from banks
- Agreement from agencies with Army Corps, WMDs, USFWS, NMFS...



Regional General Permit SAJ-92

- For screened projects and those that completed state project development process or NEPA document
- Linear transportation projects
- Exclusions
 - Tidal waters (all of Monroe County, aka Florida Keys)
 - New alignments
 - Jeopardy opinions under ESA
- 5 acres of wetland impacts per mile of project length up to 10 mile long project
- Mitigation completed via s. 373.4137

Design and Permitting

- Final functional assessment performed
- Jurisdictional determinations
- Permit coordination with same representatives that have been looking at the project since planning phase
- Final mitigation identified and can be implemented
 - If mitigation bank, FDOT purchases
 - By the time construction arrives it's well on its way to being **on the ground**

Summary

- Coordinated approach
- Opportunities to Options to On the Ground
- Public/Private Partnership
- Supported by state law
- Leverages and improves existing FDOT processes
- Integrates federal requirements
- Expedites project delivery



Florida Department of TRANSPORTATION

Marjorie Kirby

State Environmental Programs
Administrator
State Environmental Management Office
Florida Department of Transportation
605 Suwannee Street, MS-37
Tallahassee, FL 32399
marjorie.kirby@dot.state.fl.us
(850) 414-5209

Xavier Pagán

Natural & Community Resources
Administrator
State Environmental Management Office
Florida Department of Transportation
605 Suwannee Street, MS-37
Tallahassee, FL 32399
xavier.pagan@dot.state.fl.us
(850) 414-5260

