Project POWER
Protecting Wetlands With Educators and Regulators

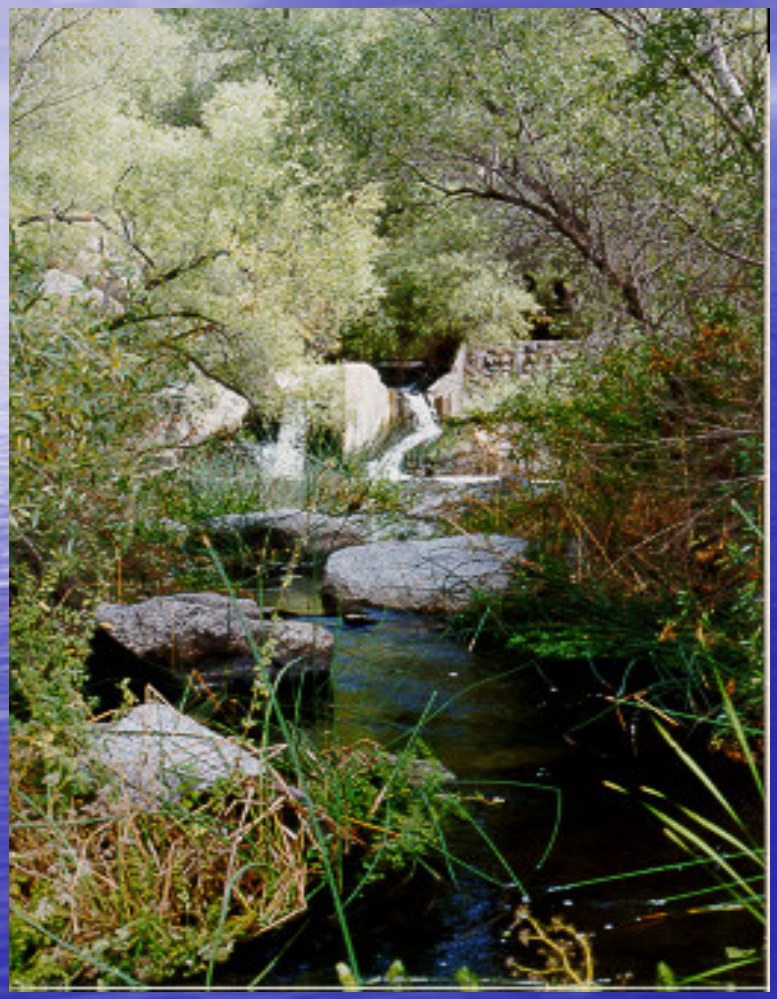
Introductions

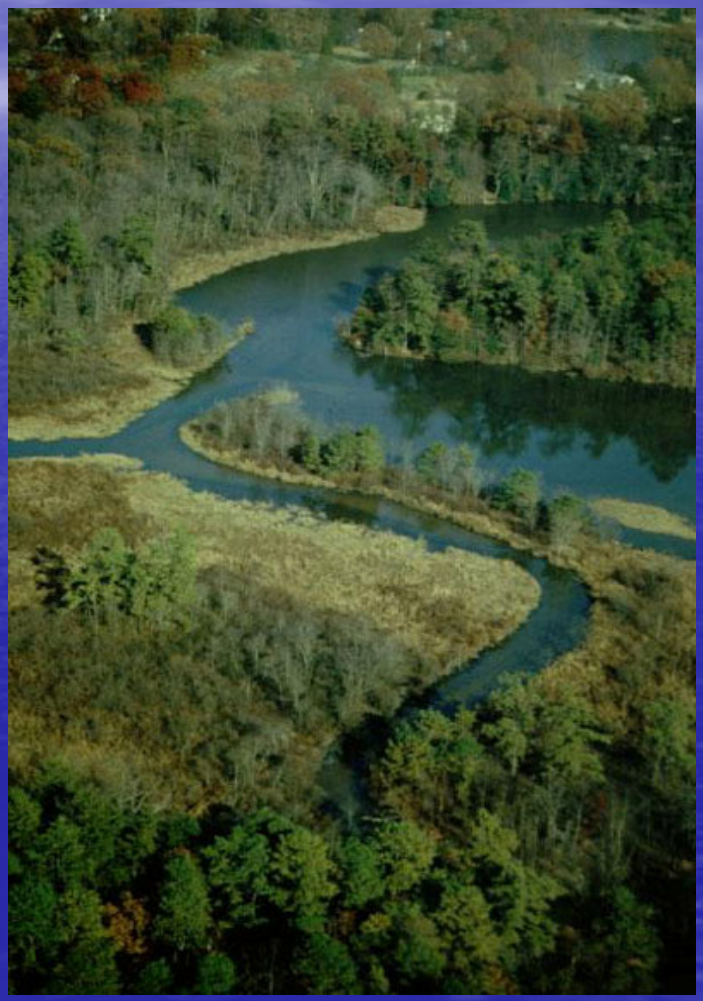
What are Wetlands?

Freshwater Marsh

Coastal Marshes

Riparian Corridor Wetlands





Isolated Wetlands

- Vernal Pools
- Pot Hole Ponds

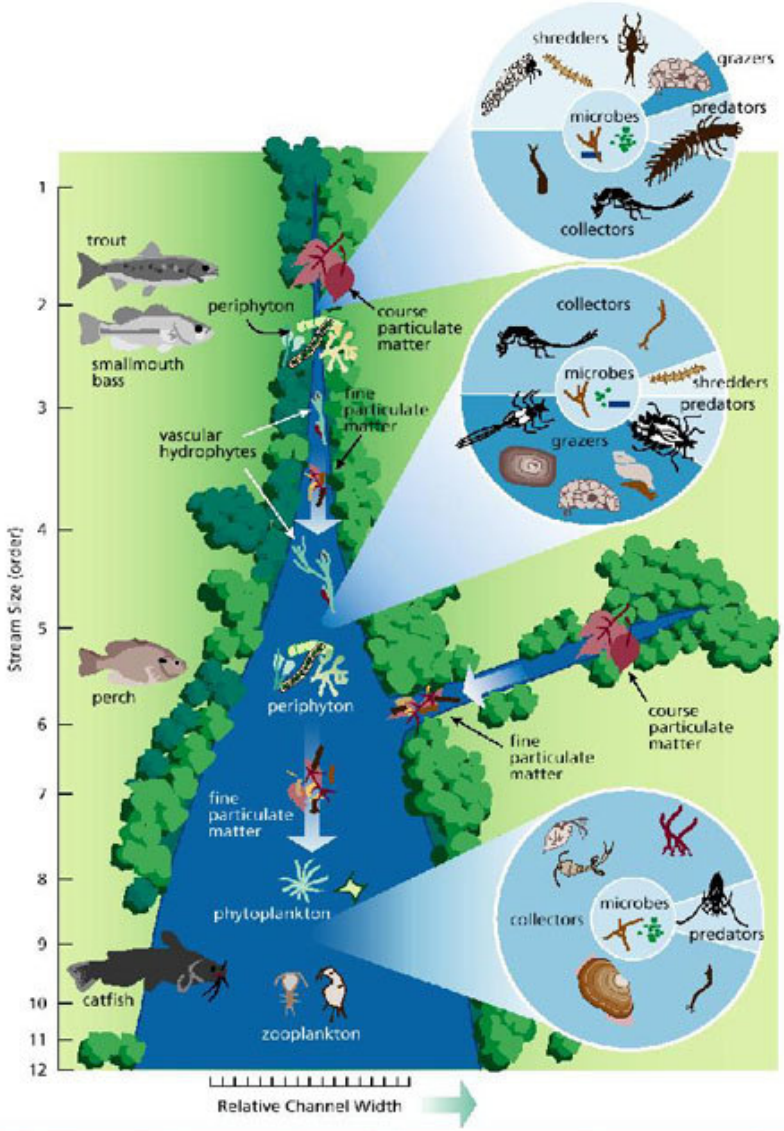
Wetlands Structure

Freshwater Marsh

Coastal

Streams

River Continuum Concept



The River Continuum Concept

(Source: Vannote et al. 1980. Used with permission of NRC Research Press)

Isolated Wetlands

- Vernal Pools
- Other(s)

- Biodiversity – a case for isolated wetlands
- ***Bacillus thuringiensis* subspecies *israelensis***

What They Have in Common

Why Protect Wetlands

- Values
- Benefits (Beneficial Uses)
  - Habitats (WARM & COLD)
  - Recreation (REC1 & REC2)
  - Aesthetics (REC2)
  - Flood Control
  - Pollutant Assimilation (ALL)
  - Wildlife Values (WILD, RARE, SPAWN, MIGR)
  - Longitudinal habitats (megafauna corridors)
  - Fire breaks and wildlife refugia
- There's not much left

Wetland Ecology

- Macro-ecology – landscape scale values and assessment
- Micro-ecology – local values and assessment
- Assessment Techniques
  - California Rapid Assessment Method
  - Index of Biotic Integrity

Threats to Wetlands

“Undergrounding”

Unauthorized Fill

Unauthorized and Unnecessary
Channel Clearing "Erosion Control"
First they cleared the channel of all vegetation...

Then they did “erosion control”

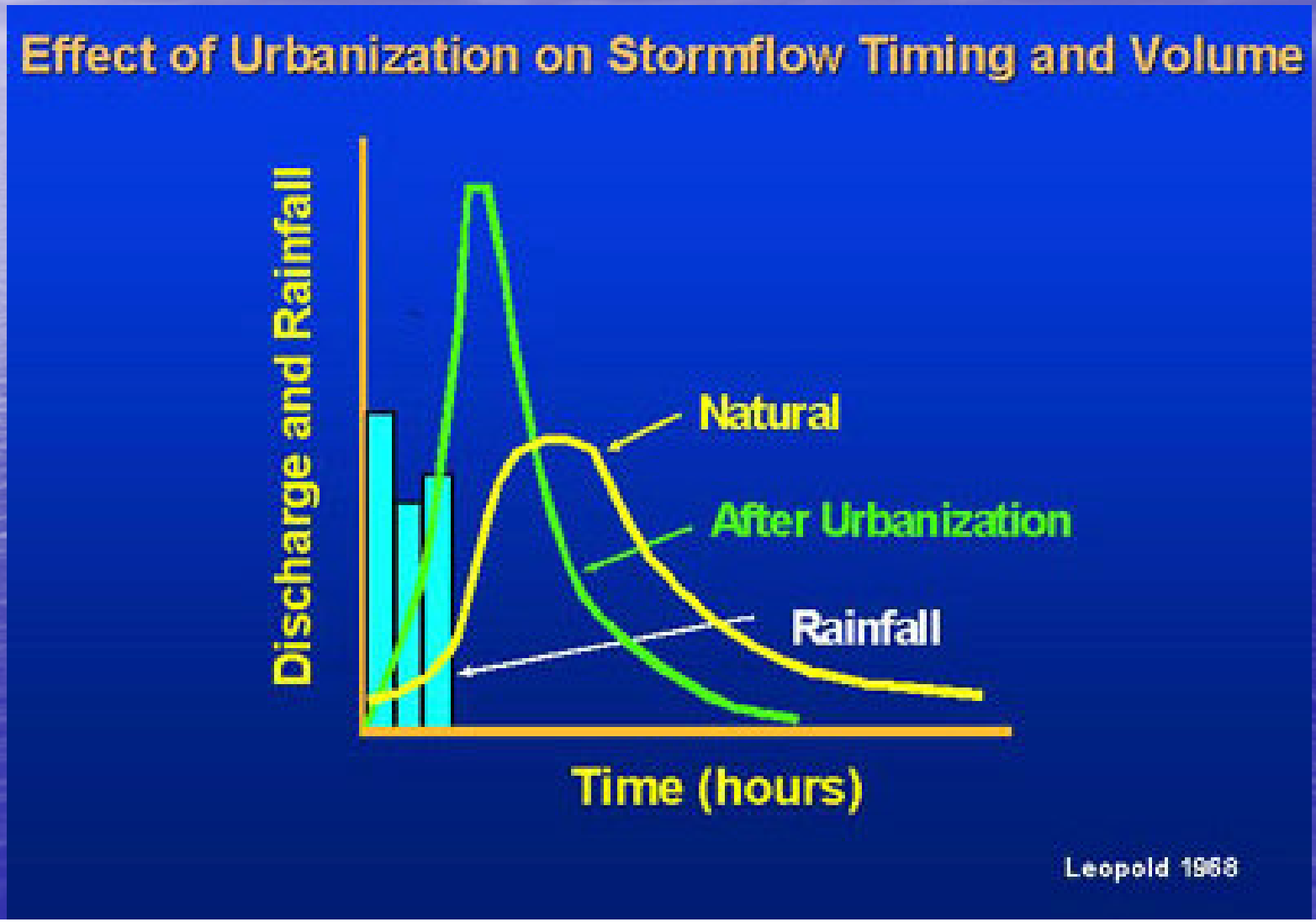
Exotic Invasive Species

Development, Utility Corridor, Flood Control & Transportation Projects

Hydromodification

Both a consequence and cause

Stormwater Runoff and Hydromodification



Hydromodification

Other Unauthorized Impacts

- Encroachment
- Neighborhood bike tracks
- Fill to expand property
- Clearing & grubbing
- Disposal of wastes

Consequences of Wetland Loss

- Flooding
- Hydromodification
- Water Quality
- Loss/Conversion of Critical Habitats

How Do We Protect Wetlands?

- Community Based
  Wetland Conservation and Protection
  - Non-regulatory approaches
  - Conservancies and Foundations
  - Wild Animal Park - CRES and ZSSD
- Governmental Tools & Local Approaches
  - Conservation Easements
  - Public Parklands
  - Wetland Regulation

Wild Animal Park Master Plan

Wetlands – The Regulatory Craft

- Terms
- Authorities
- Discretion
- Exclusions, Exceptions, and Excuses
- Permitting
- Enforcement

The Laws

a *very* brief introduction

- 1215 Magna Carta - regulated fish weirs
- 1787 US Constitution - Commerce Clause
- 1888-1899 Rivers and Harbors Act(s).
- 1972 Clean Water Act (section 404 enacted)
- 1990 ACOE & EPA - mitigation requirements
- 2000 Nationwide Permits
- 2001 SWANNC Ruling
- 2006 Rapanos and Carabell decisions

Discretion, Exclusions, Exemptions, and Excuses

- Permitting as an art form
- Considering unintended consequences
- Cumulative impacts
- The changing playing field
  - Legal challenges
  - Technical issues

How Do We Identify Wetlands?

- Federal jurisdiction
  - Waters of the United States
- State jurisdictions
  - Porter-Cologne Water Quality Control Act
    - § 13260, 13264, 13376, 13385
  - Fish and Game Code
    - § 1600 – Streambed alteration

Identification of Wetland Types

Diagnostic environmental characteristics

- Soils
- Hydrology
- Vegetation

The Nitty Gritty of the pigpens….

Non Wetlands

Hydric Soils

Hydrology Indicators

Hydrology Indicators

Hydrophytic Plants

Regulatory Protection of Wetlands

- No Net Loss Policy
  - Federal Policy
  - California Wetlands Conservation Policy (Executive Order W-59-93)
- Loss of wetlands habitat still occurring
- Loss of functionality vs. loss of acreage

State Jurisdiction

How Does the Regional Board protect wetlands?

- Assessment
- Grants – restoration & enhancement
- Regulatory Program – Permitting and Enforcement

Basin Plan
Rules and Rulemaking

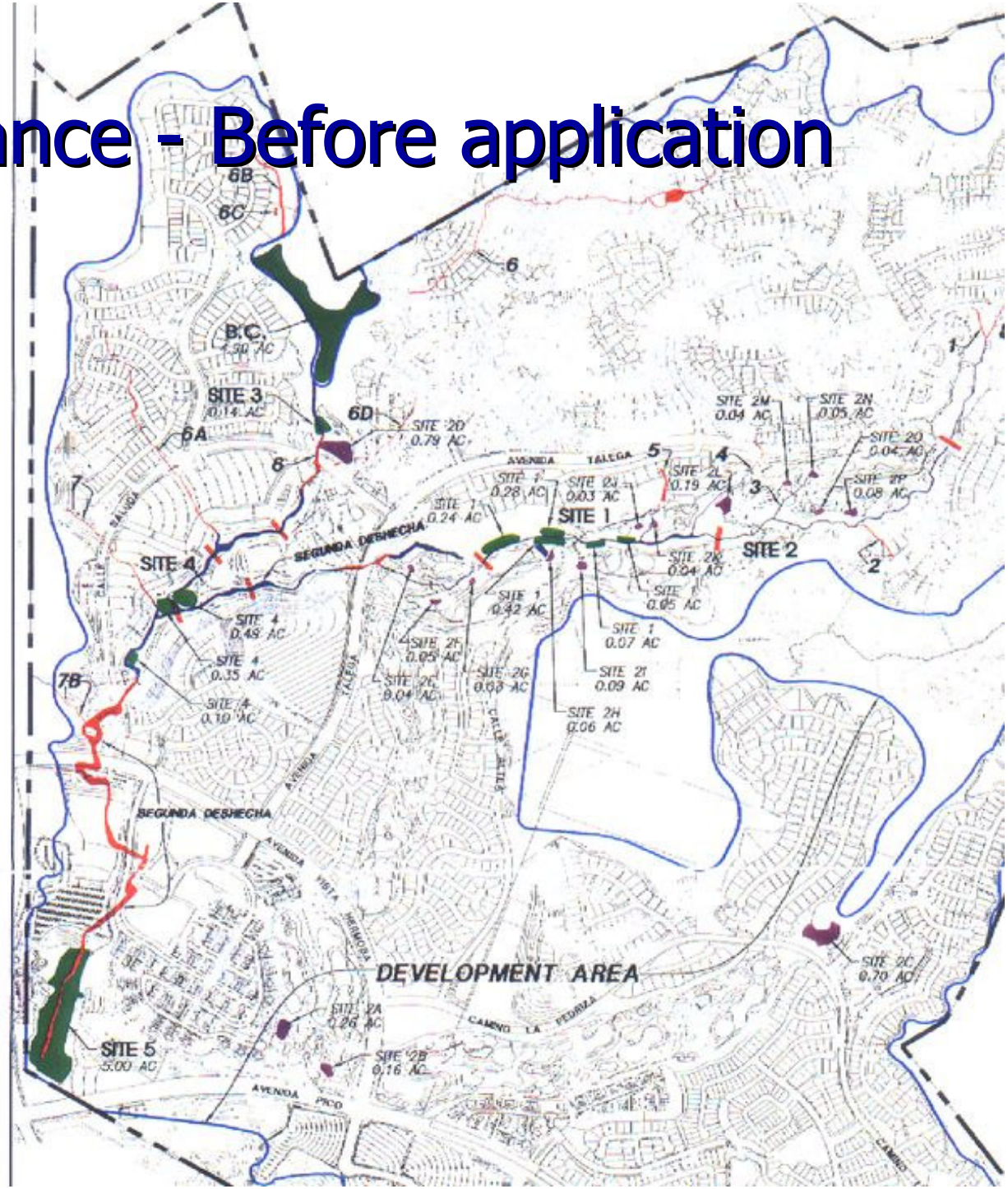
- Water Quality Standards
  - Beneficial Uses
  - Water Quality Objectives
  - Antidegradation Policy
- Putting the Standards and Basin Plan into practice:
  - Policies and Permits
  - Enforcement

How Do I Comply?
Dredging and Filling Wetlands

- Avoidance
- Permits
  - State 401 Certification
  - State Waste Discharge Requirements
  - ACOE 404 Permit – Individual or Nationwide
  - DFG Streambed Alteration Agreement
  - Local Permits
- Mitigation and Monitoring

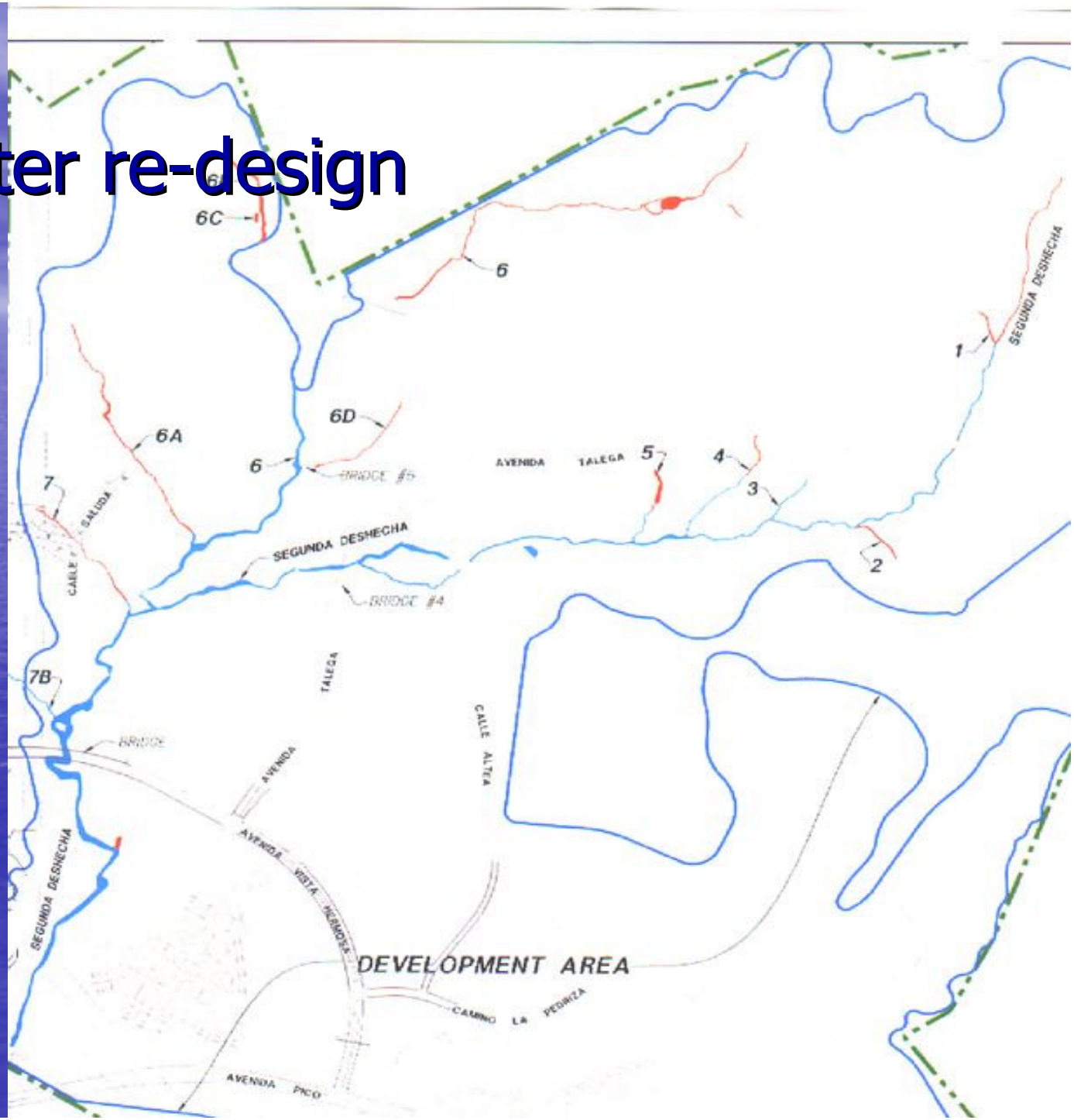
Impact Avoidance - Before application

- 7 acres of impacts
- Poor mitigation
- Three culvert road crossings



Project after re-design

- Bridges replaced culverts
- 50% reduction in impacts



Can't Avoid?
Then Get Permits,
Comply with Them,
and be Prepared to Mitigate

To get your 404 permit from the Army Corps, you'll need a 401 Certification.

To get a 401, well, you have your work cut out for you…

The 401 Certification
Certifies that over
the life of your project,
that you will not adversely impact
water quality standards

The 401 Certification

- Application
- Completeness Review
  - 23 CCR 3856
- Evaluation of project impacts and mitigation
- Public Notice (20 days)
- Actions
  - Certification
  - Denial without Prejudice
  - Denial (with Prejudice)

What We Consider

- What is the entire project?
- What are the expected pollutants?
- What are the long-term impacts of the project?
- What is being done to lessen/avoid long-term water quality impacts?
- What are the impacts to the duration, volume, and intensity of flow?

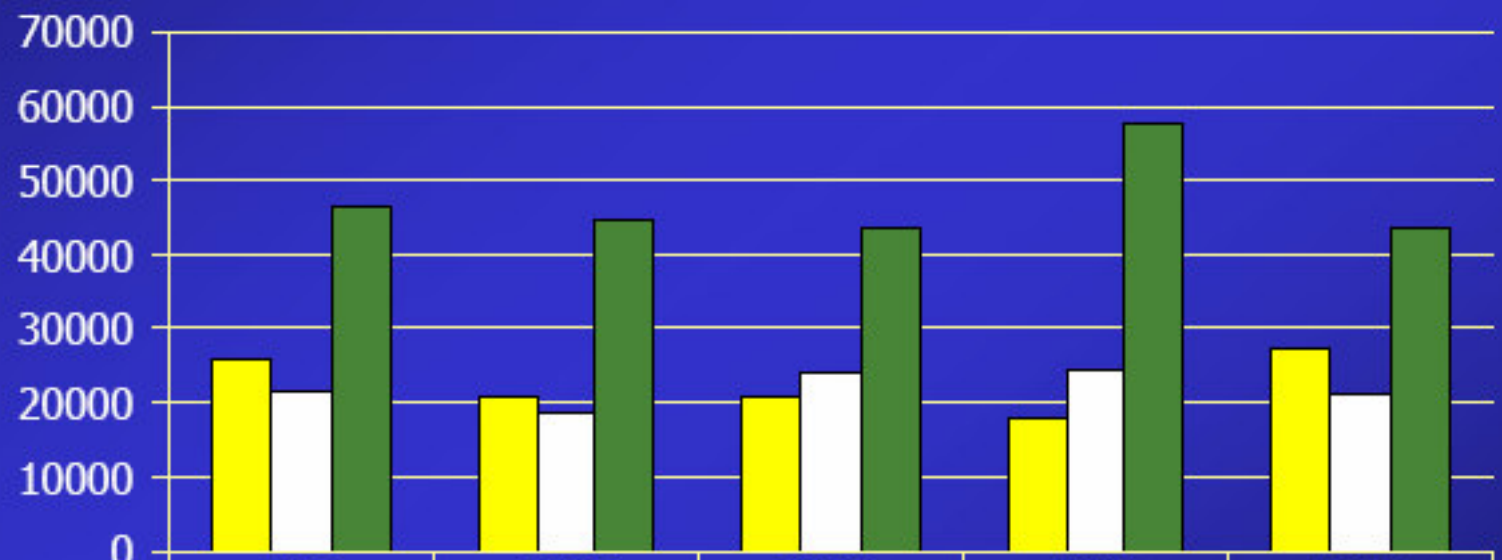
What We Consider

- Resources onsite and surrounding the site
- Beneficial uses
- Pre-and post-construction drainage patterns
- Best Management Practices
- Mitigation

US Army
Corps of Engineers

U.S. Army Corps of Engineers Regulatory Program

Wetland Acreage Impacts
Includes Verified General Permits

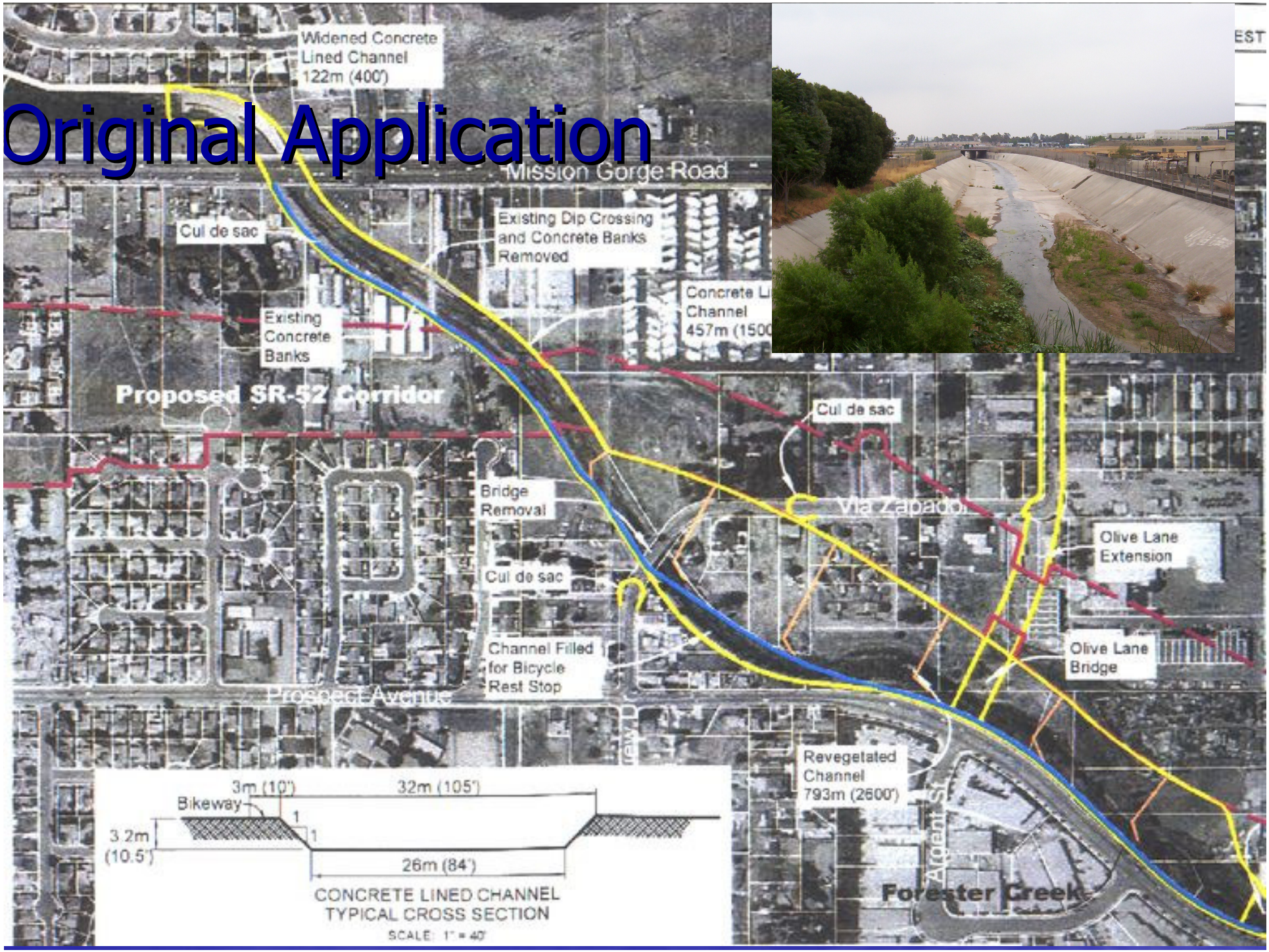


	FY 99	FY 00	FY 01	FY 02	FY 03
Requested	26158	20886	20886	18169	27154
Permitted	21556	18900	24089	24651	21330
Mitigated	46433	44757	43832	57821	43379

Requested Permitted Mitigated

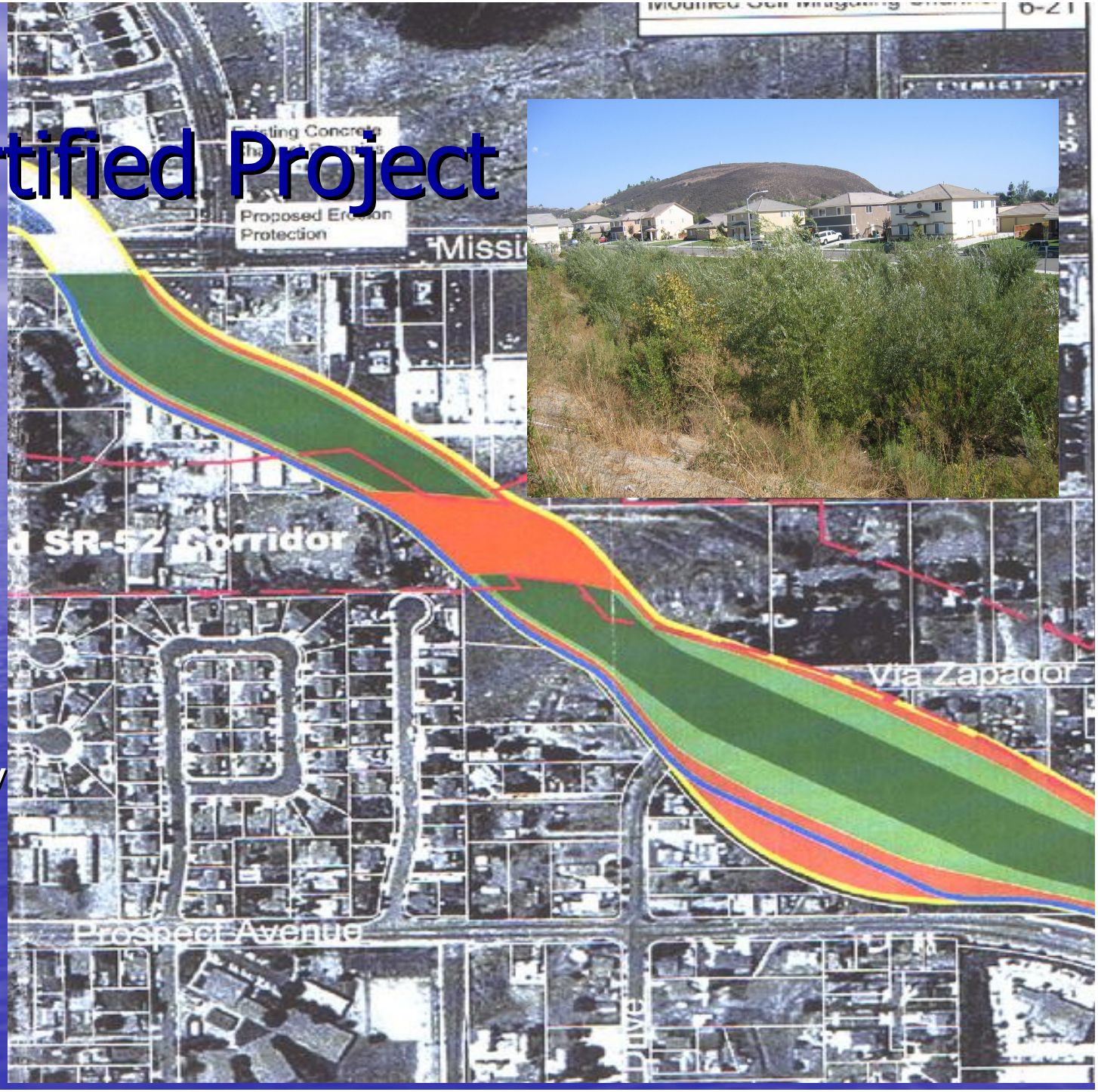
Forester Creek

Original Application



The Certified Project

- 14 acres wetland created
- Flood Capacity
- Improves Water Quality and Functionality



Mitigation

- Used to compensate for unavoidable impacts to waters of the U.S.
- Accounts for spatial and temporal losses
- Success is dependent upon a number of variables

Effectiveness of Wetland Regulation and Mitigation

- Mitigation Success and Failures
- Public Acceptance
- Los Angeles vs. San Diego outcomes

Santa Margarita 401 Mitigation Success Assessment

- 93% of acres required were created
- 61% were assessed and found to be failures using CRAM.
- Only 39% were found to be partially successful
- No successful mitigation sites!
- Between 1997-2001, net loss of waters = 17.7 acres in Santa Margarita watershed

Report being reviewed and finalized for publication in 2007

Noncompliant, Nonfunctioning Mitigation

Compliant, Functioning Mitigation Site

Status and Preliminary Results

- Out-of-kind mitigation or preservation do not replace functions and values of impacted waters.
- Conceptual or poorly designed plans should not be accepted.
- Need 401 Basin Plan Policy to ensure adequate mitigation and consistent requirements.

Assessment of Wetlands

Measuring What is Where and How Functional Is It

- CRAM – California Rapid Assessment Methodology
- Biological Assessment
  - Southern California Index of Biotic Integrity
- Adaptive Management
  - Putting lessons learned into practice

The Biotic Integrity Index and wetlands protection

What If I Break the Rules?
Enforcement

- State Progressive Enforcement Policy
- Notice Of Violation
- Technical Report Orders
- Clean-up and Abatement Orders
- Administrative Civil Liabilities (Water Code)
  - § 13260, 13376, 13385 - $10,000 per day
  - § 13350 $5,000 per day
- Misdemeanor Complaint § 13265

Changing Legal Landscape

- "A return to the Pigpen" legal logic
- SWANNC Decision
- Rapanos & Carabell Decision

- The result – the states must assume more authority and act on it.

Waste Discharge Requirements

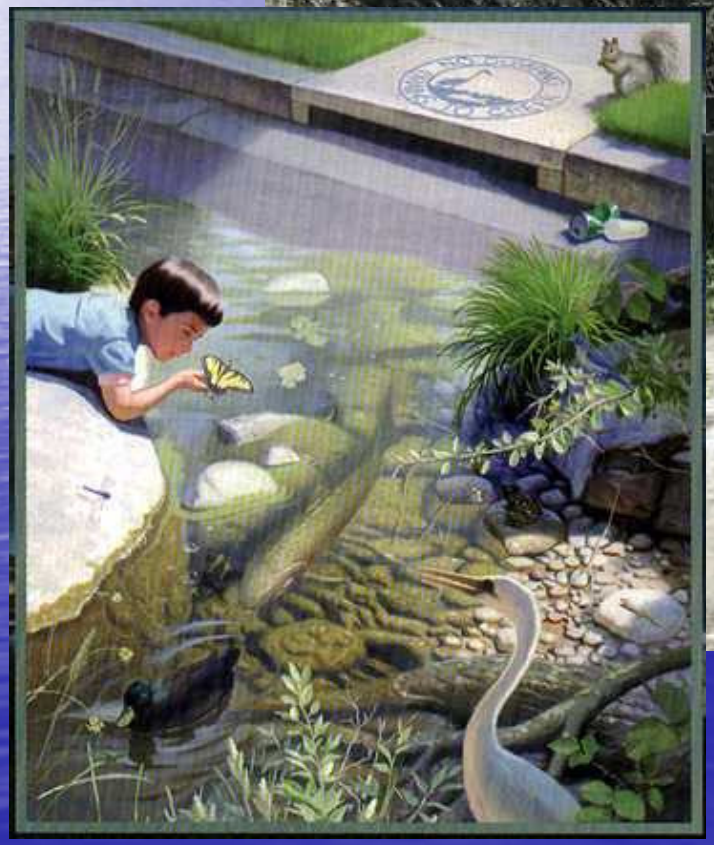
- Applied to "isolated" waters or complex 401 applications
- Allows for:
  - Closer tracking of project implementation and conditions
  - Tracking of mitigation success and failures
  - Greater enforcement authority

401/WDR Differences

- One-time vs. annual fee
- Public hearing
- Board approval
- Federal vs. State authority

Looking Forward
Community Based Watershed Management

- Watershed Management Plans
- Growth of NGO involvement
  - Conservancies
  - Foundations
- Wetlands in our Backyards
- Your Experience



David Gibson
858-467-4387
dgibson@waterboards.ca.gov