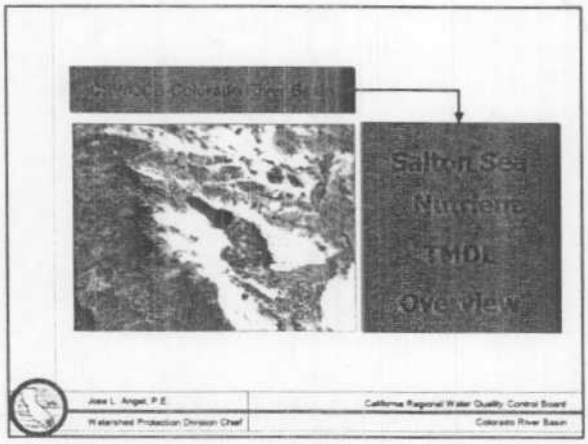
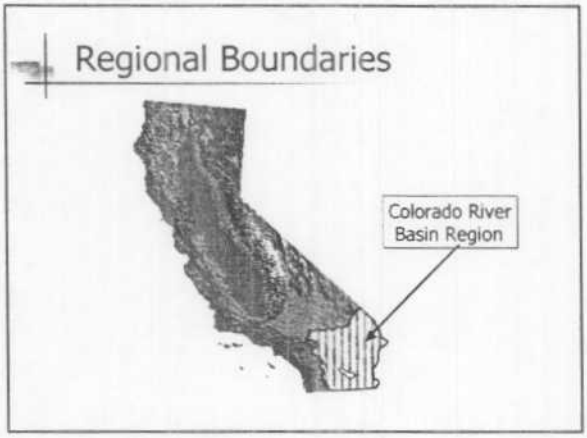
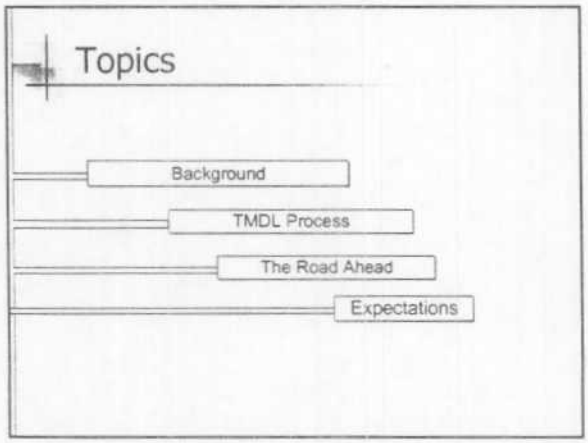

Salton Sea
Nutrients
TMDL
Overview
Jose L. Angel, P.E.
Watershed Protection Division Chief
California Regional Water Quality Control Board
Colorado River Basin


Regional Boundaries
Colorado River
Basin Region

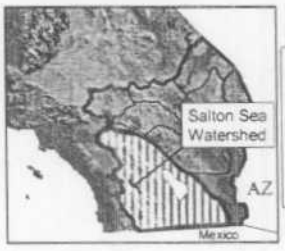

Topics
Background
TMDL Process
The Road Ahead
Expectations

Background

Regional Board

- California Water Code
  - Protect and restore water quality
- Water Quality Control Plan (Basin Plan)
  - Establishes water quality standards, enforcement programs
- Full regulation of point sources of pollution
- Tiered approach for nonpoint sources of pollution
  - Self-determined controls
  - Regulatory encouraged controls
  - Regulation

Region Overview



- Priority watershed
  - Largest watershed
  - Watershed impaired
  - NPS greatest TTWQ
  - Transboundary issues

Beneficial Uses

	New River	Alamo River	IV Drains	CVSC	Salton Sea
Wildlife Habitat	✓	✓	✓	✓	✓
Warm water fishery	✓	✓	✓	✓	✓
Recreation	✓	✓	✓	✓	✓
Rare/endangered species	✓	✓	✓	✓	✓
Fresh water replenishment	✓	✓	✓	✓	

Sensitive Species in Watershed

Common Name	Status
Desert pupfish	SES/FE
California brown pelican	SES/FE
Southwestern willow flycatcher	SES/FE
California least tern	SES/FE
Least Bell's vireo	SES/FE
Greater sandhill crane	FT
Yuma clapper rail	STS-FP/FE
Southwestern willow flycatcher	SES/FE
Tri-colored blackbird	SSSC
Burrowing owl	SSSC

Sensitive Species (cont.)

Common Name	Status
Least bittern	*FSSC*
Loggerhead shrike	*FSSC*
Yellow warbler	*FSSC*
Van Rossem's gull-billed tern	SSSC
Caspian tern	SSSC
Black skimmer	SSSC
California black rail	STS-FP
Cooper's hawk	SSSC
Sharp-shinned hawk	SSSC
Short-eared owl	SSSC
Long-eared owl	SSSC

Salton Sea Avian Diversity

- Over 350 avian species
- Some sensitive avian species
  - Yuma clapper rail
  - California black rail
  - Southwestern willow flycatcher
  - Brown pelican
  - Burrowing owl

Salton Sea Fish Diversity

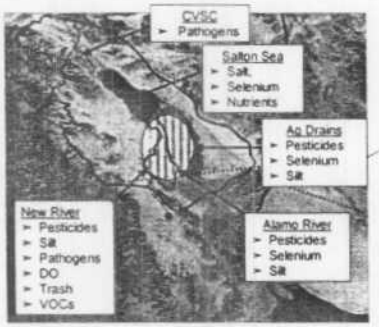
- Desert pupfish
  - Inhabits drainages, near shore pools
- Salton Sea saline environment

TMDL Process

What Does CWA Require?

- CWA 303(d)
  - Identify impaired waters
  - Establish priority list of impaired waters
  - Develop TMDLs for impaired waterbodies
  - USEPA must develop TMDLs if State fails to act

Impairing Pollutants (303(d) List)



What are TMDLs?

- **Assimilative Capacity of a Waterbody =**


Allowable Pollution from point sources

+


Allowable Pollution from nonpoint sources

+


Pollution from Natural Sources (wind, runoff, etc.)

+ MOS

Margin of Safety (uncertainty)

"Pollution Budget"

TMDL Process Elements

TMDL Components

- What's the problem?
- What's causing the problem?
- What numeric standard addresses the problem?
- What's the allowable pollutant load under the standard?
- What is the link between the standard and loads?
- What actions must be taken to attain the TMDL?

TMDL Approval Process

Water Body Assessment -> Listing -> TMDL Development-> TMDL Adoption -> TMDL Implementation

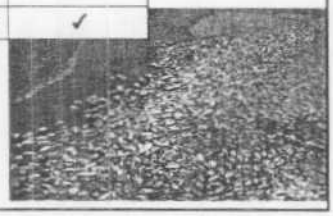
The Road Ahead

WQOs Affected by Nutrients

- Aesthetics (3.II.A)
  - "...Waters shall be free from substances...matter than may cause nuisance...objectionable odor..."
- Biostimulatory Substances (3.II.J)
  - "...Waters shall not contain biostimulatory substances in concentrations that promote aquatic growth...Nitrate and phosphate limitations will be placed on industrial discharges...on a case-by-case basis..."
- Chemical Constituents (3.II.N)
  - "...No individual chemical or combination of chemicals shall be present in concentrations that adversely affect beneficial uses..."

Salton Sea Nutrient Impairments

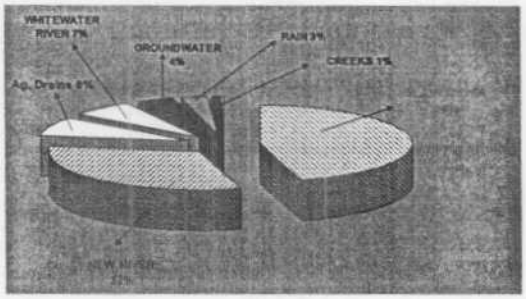
	Impairments
Wildlife habitat	✓
Warm water fishery	✓
Recreation (I and II)	✓
Rare/endangered species	✓



What Needs to be Done

- Establish TMDL that translates current narrative standards into quantitative standards
- Establish TMDL via Basin Planning process (CWC §13241)
- Must be peer reviewed (HSC §57004)
- Must include an implementation plan (CWC §13242)
- Process "functionally equivalent" under CEQA (14 CCR §15251)
- Other considerations (CWC §13141, §13241)

Salton Sea Inflows (1.3 MAF)

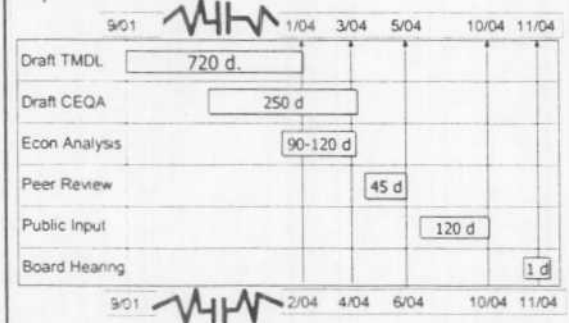


Salton Sea Authority, Feb 2000

Expertise/Resources

- Logistical support for meetings
- Monitoring program for nutrients
  - Developing QAPP
- Contracted out nutrient model (UCR)
- Watershed Protection Division
  - TMDL Development Unit
  - TMDL Implementation Unit
  - Basin Planning Unit
  - Compliance Assurance and Enforcement Unit

Board's Timeline Goals



Expectations

Roles/Responsibilities

- Nutrient TMDL TAC
  - Provides recommendations
  - Brings in expert resources
  - Provides scientific evaluation
  - Can shape TMDL (all components!)
- Regional Board
  - Ultimately responsible for TMDL

Critical Needs

- Monitor nutrient, inflow inputs
- Establish numeric target
- Develop list of BMPs, BATs
- Outreach and education
- Coordinate watershed efforts
  - SSA/USBR
  - Farm Bureaus, Water Districts, Counties
  - Grassroots groups

Where does the TAC Fit?

Task	Responsible Party
Draft Technical Elements of TMDL • Data gap monitoring • Source Analysis, Target, Allocations • BMPs, BATs	Regional Board, TAC
Outreach/Education	Regional Board, TAC
Peer Review	Contracted Out
Implementation Plan • Actions to be taken • Timeline for actions • Surveillance program	Regional Board, TAC
Economic costs and potential sources of financing	State Board (Economics Unit), TAC
Environmental Review • CEQA Checklist	Regional Board, TAC

Expectations/Recommendations

- Establish bylaws
  - Meetings open to public
  - Select TAC officers
  - Majority vote
  - Minority should have option to provide report
- Cooperation from all TAC members
- Move process forward
  - Technically and legally defensible recommendations
  - Goal is to meet deadlines

How Everything Fits

Questions