

# **WESTCAS – Section 7 Consultation and NPDES**

Presented by:

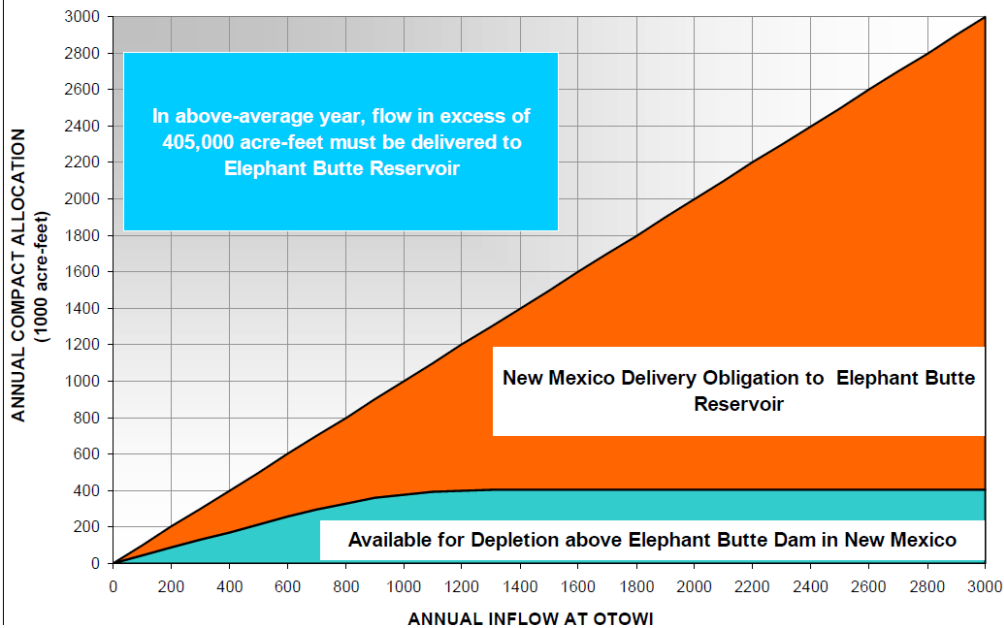
**John M. Stomp III, PE,**  
*Chief Operating Officer*  
*Albuquerque Bernalillo County Water Utility Authority*  
*February 2010*

# Outline

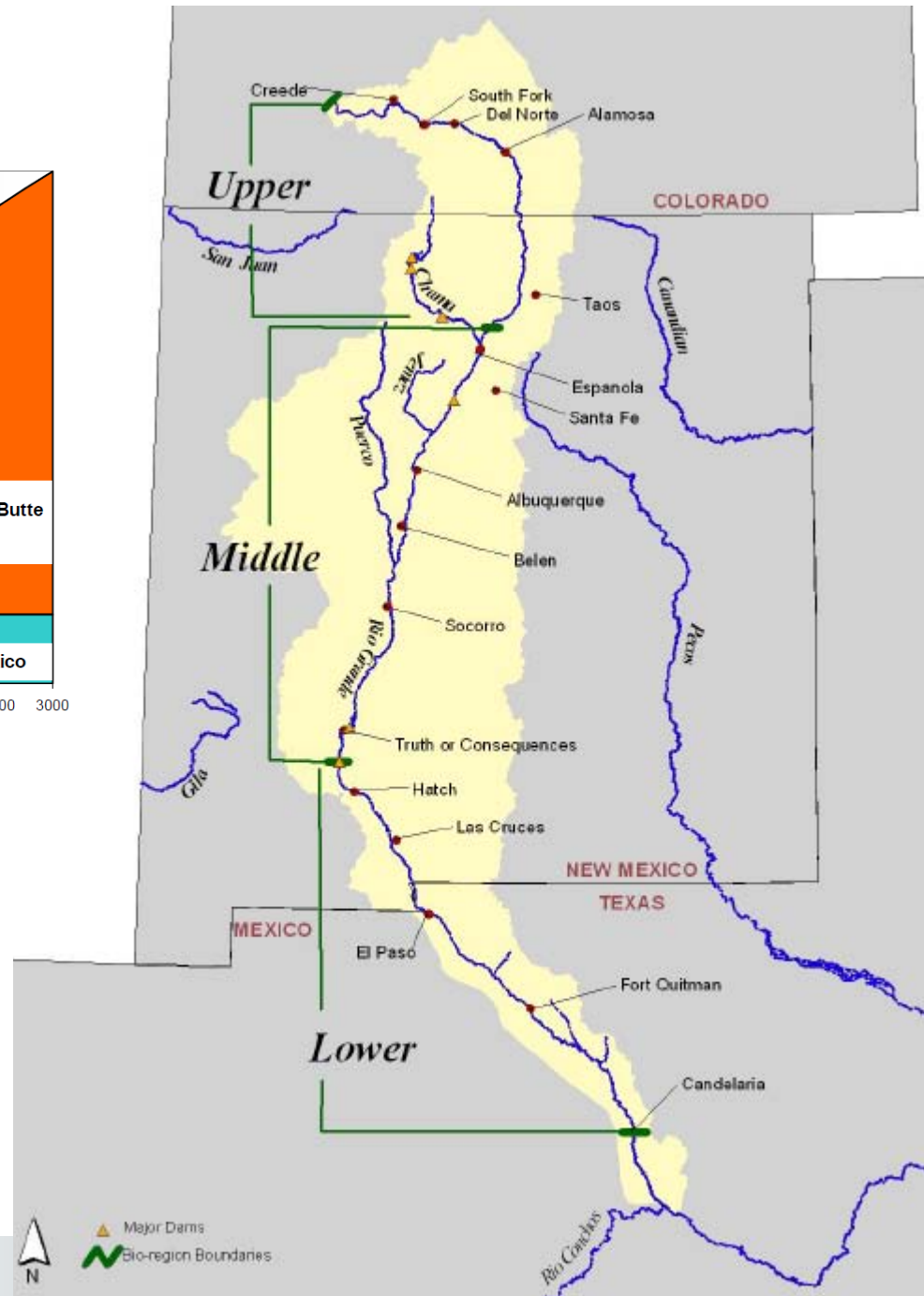
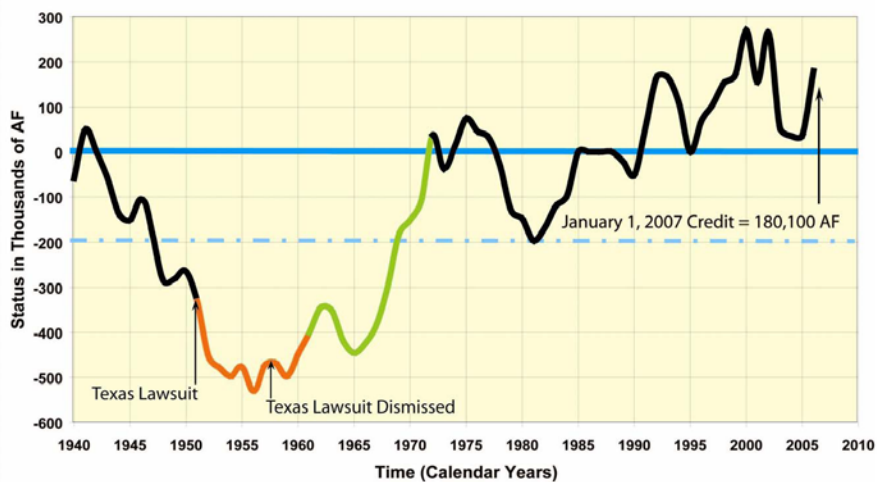
- Rio Grande Hydrology
  - *The Rio Grande System and rules*
  - *River Demands*
  - *ABCWUA Water supply*
    - *San Juan-Chama Project*
    - *Demand and Return Flow*
- Section 7 Consultation Process
  - *General provisions*
  - *ABCWUA NPDES Consultation*
- Rio Grande Silvery Minnow Recovery and Mitigation

# Rio Grande

ANNUAL COMPACT ALLOCATION



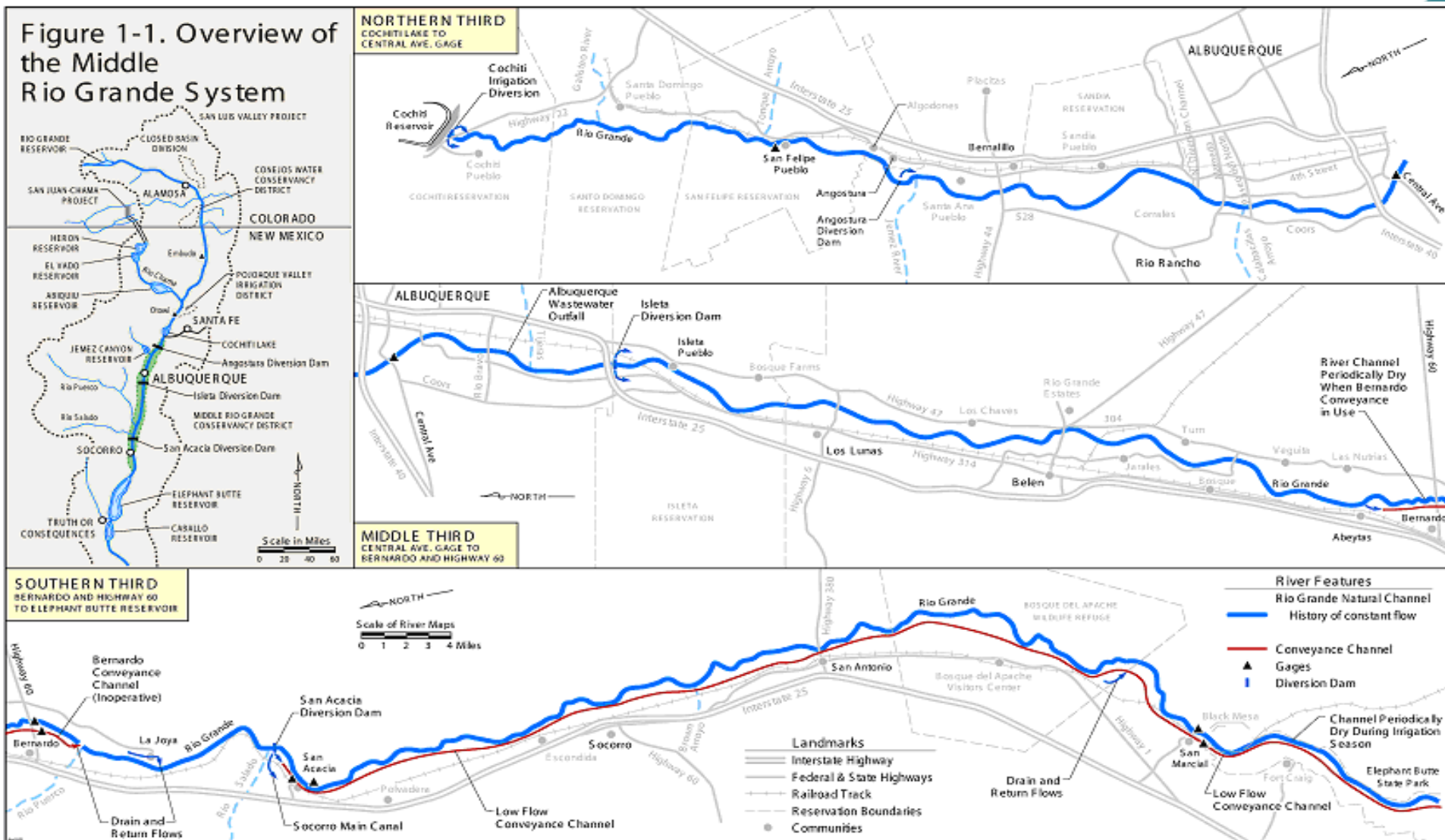
Rio Grande Compact Compliance 1940 - 2006



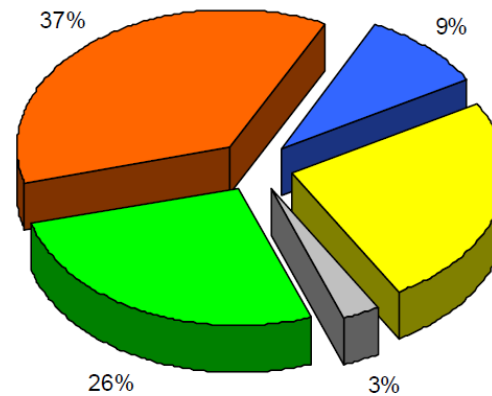


# Middle Rio Grande

Figure 1-1. Overview of the Middle Rio Grande System



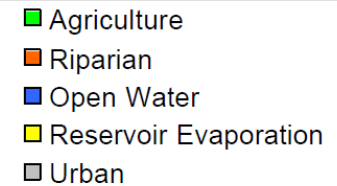
# Surface Water Use in the Middle Rio Grande



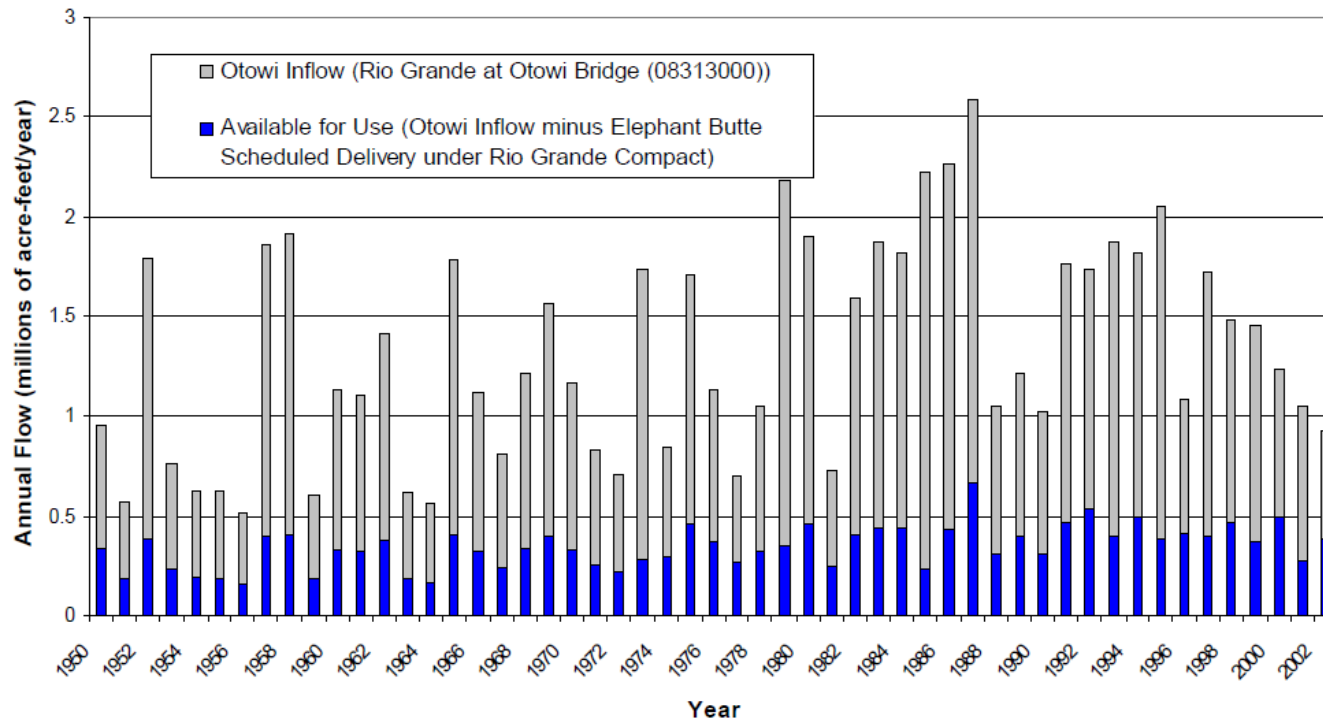
Note: Shown are percentages of total mean river depletions of approximately 680,000 acre-feet per year

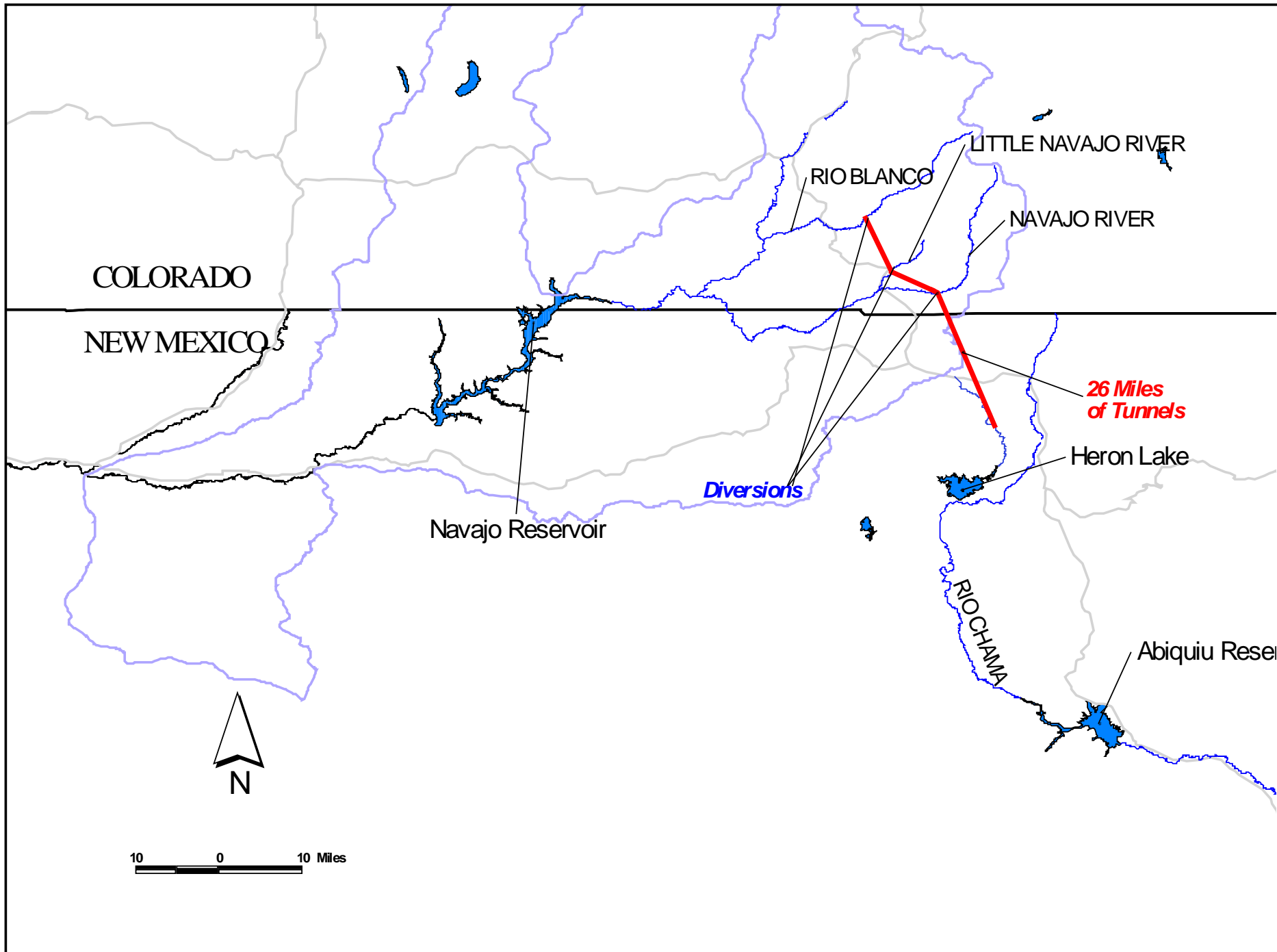
Additional depletions of 71,000 acre-feet per year are presently occurring to aquifer

25%



**Limitation: Base Supply to the Middle Rio Grande Region (Rio Grande at Otowi Bridge minus Elephant Butte Scheduled Delivery)**



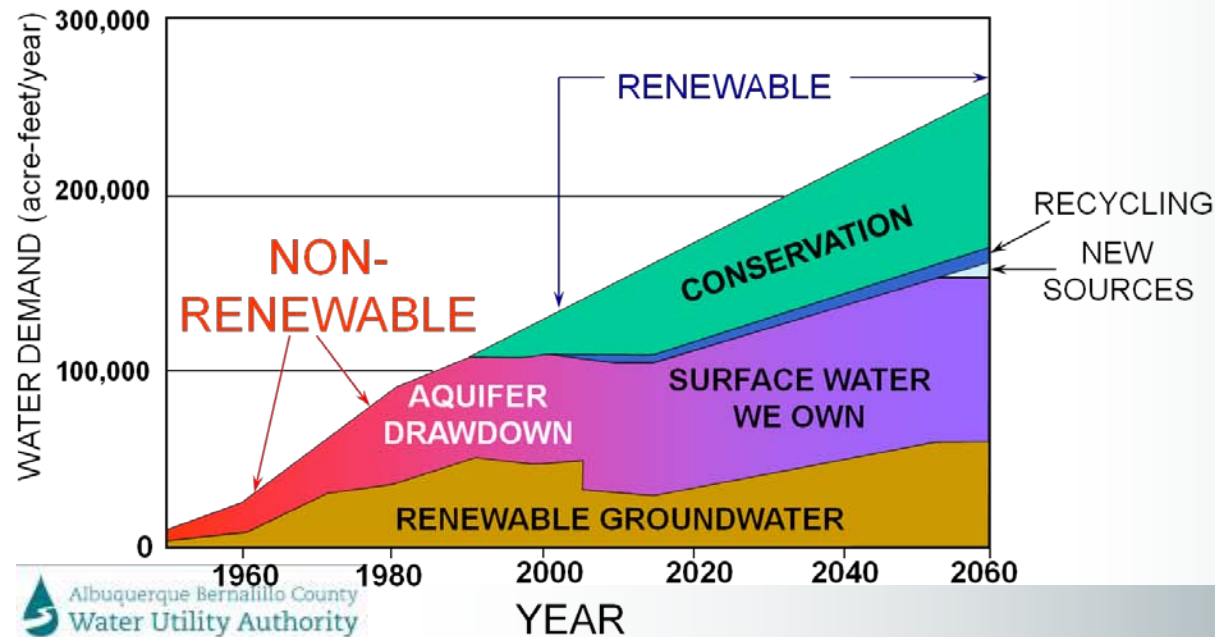
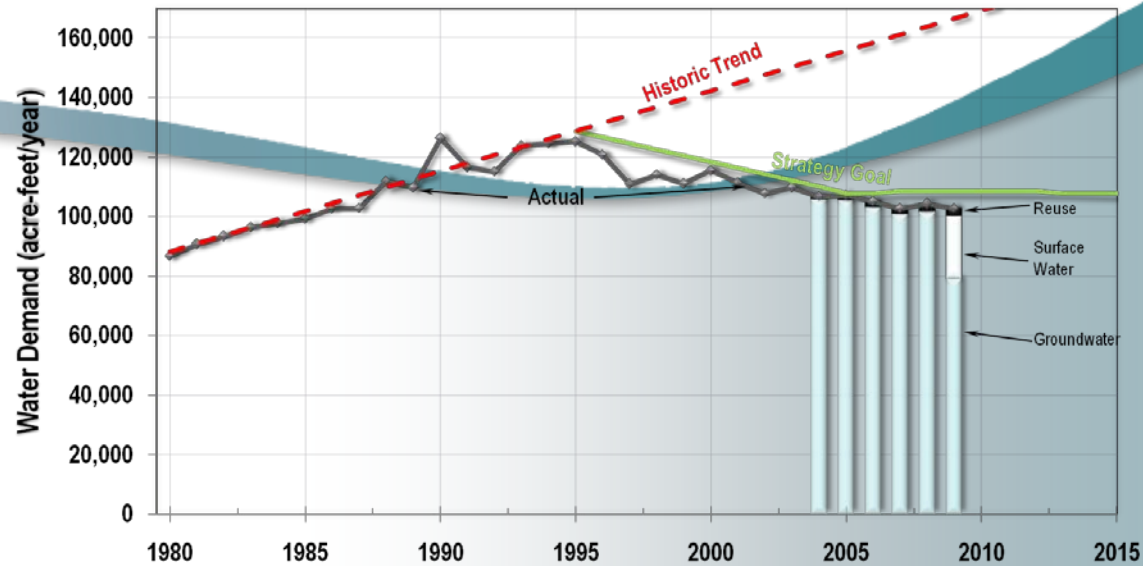


# Surface Diversion



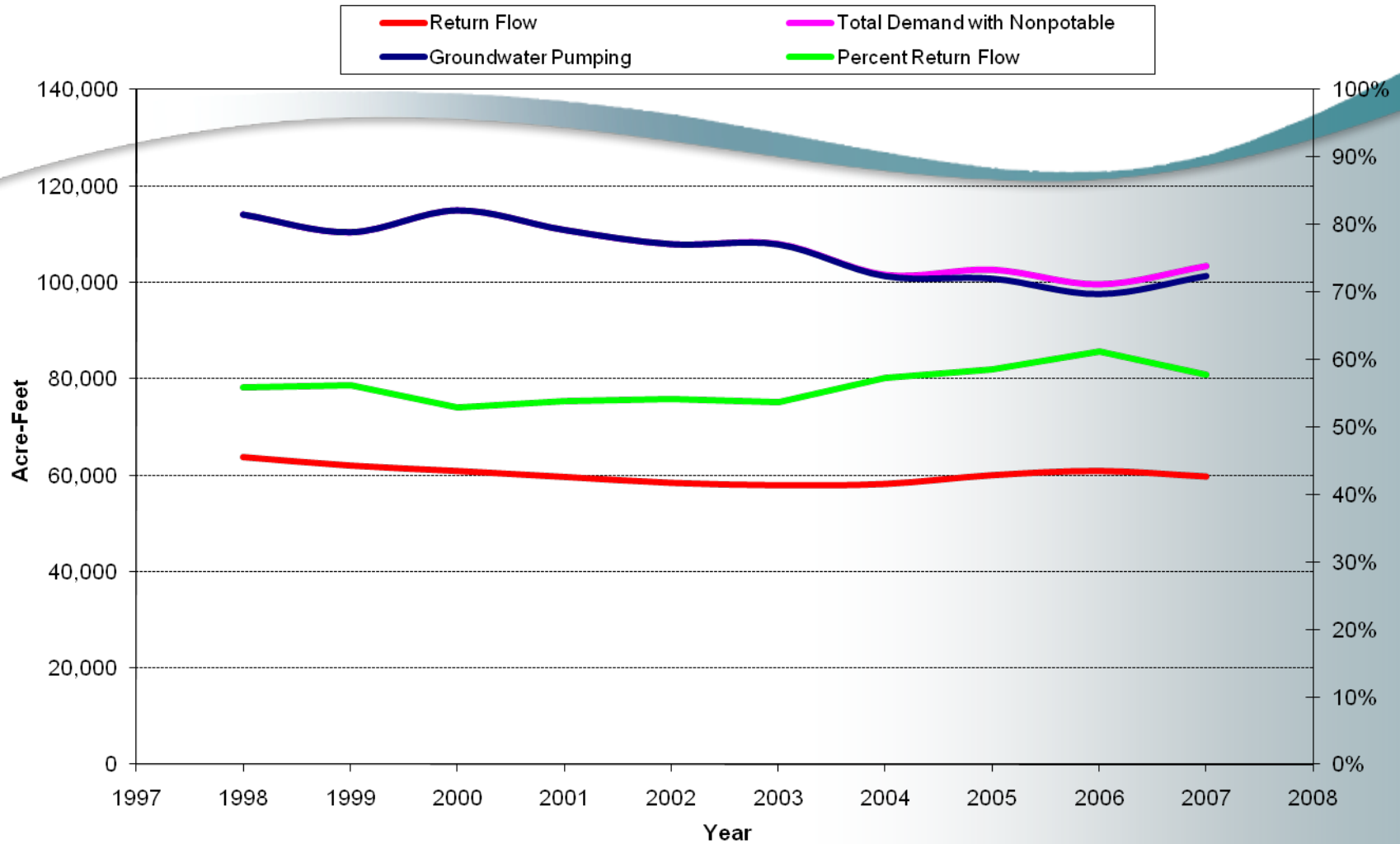
# Water Supply Balance

CONSERVATION PROGRAM STATUS





## ABCWUA Water Production and Return Flow



Notes: North I-25 Recycle & Nonpotable Plant on line 7/2003.

Effective September 1, 2005 no reported return flow credited to NMUI Permit No. RG-4462; begin reporting net return flow.

# Southside Water Reclamation Plant





# Wastewater: Influent and Effluent

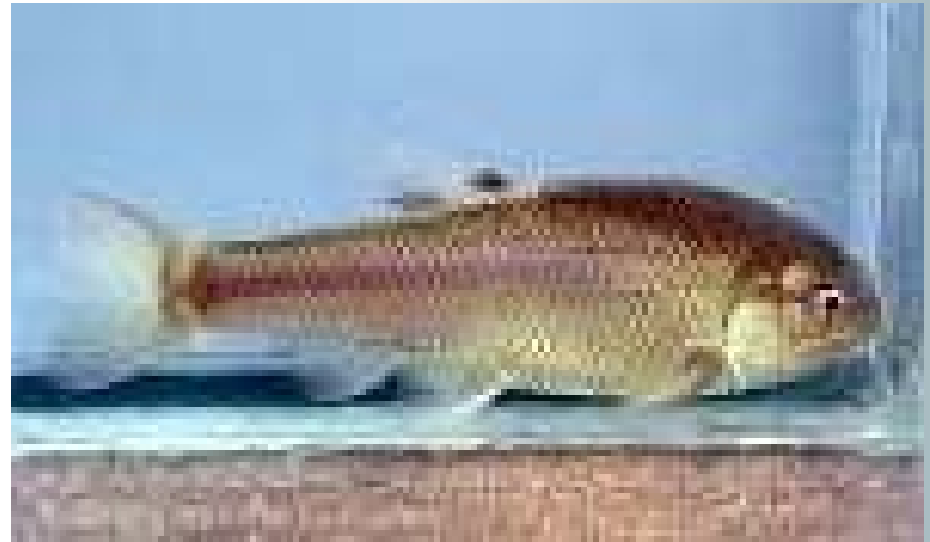


# NPDES Permit Limits Summary:

Contaminant	30 Day Average	Daily Maximum
Fecal Coliform	100 Colonies/100 ml	200 Colonies/100 ml
Total Residual Chlorine	No Measurable	No Measurable
Ammonia	1 mg/L as N	1.5 mg/L as N
Total Inorganic Nitrogen	9.71 mg/L	14.56 mg/L
Dissolved Oxygen	4 mg/L	NA
Total Suspended Solids	30 mg/L	NA
Carbonaceous BOD5	15	NA



# Whole Effluent Toxicity (WET) Test



- Survival of organisms at 100%, 69% and 29% dilution
- Minnows susceptible to ammonia
- Water Fleas susceptible to pesticides

# ABCWUA Water Supply

## ● Historically

- Pump groundwater
  - offset effects with *return flow* and water rights
- Participate in the ESA Collaborative Program
- Provide water and storage for Rio Grande Silvery Minnow

## ● Today and the Future

- Preferentially use imported SJC Water, pump less groundwater, reuse wastewater, and store water through ASR
  - Offset effects with *return flow*, water rights, and storage
- Continue to balance supply and demand and *keep the river whole*
- Participate in ESA Collaborative Program
- Provide water and storage for minnow recovery

# Section 7 Consultation

## ● Process

- *Section 7 of the Endangered Species Act is triggered by Federal Action*
- *If listed species are present then a determination of effect is required*
- *If potential for an adverse effect exists then a formal consultation begins and a biological opinion is prepared by the Fish and Wildlife Service (FWS) with input (biological assessment) from the consulting agency*

## ● How does consultation work?

- *Meetings with FWS*
- *Biological Assessment – what is the impact to endangered species*
- *Baseline – monitoring and assessment (how do you know if there is an effect)*

# Section 7 Consultation

- What is a Biological Opinion?
  - *FWS determination of impacts on endangered species*
    - *Derived from analysis of biological assessment*
    - *Data collection and understanding of baseline data and ecosystem is critical*
      - *Hydrology*
        - » *Base stream conditions, typical seasonal changes*
      - *Fish studies*
        - » *Toxicity, swim studies,*
      - *Plant data*
      - *Etc.*





# Section 7 Consultation

- Jeopardy or no Jeopardy – that's the question
  - *FWS determines jeopardy from the weight of the information*
    - *No jeopardy – action results in few issues*
      - *May still be recommendations to minimize impacts*
    - *Jeopardy – RPA/RPM*
      - *Will require issues are addressed*
      - *May require mitigation*

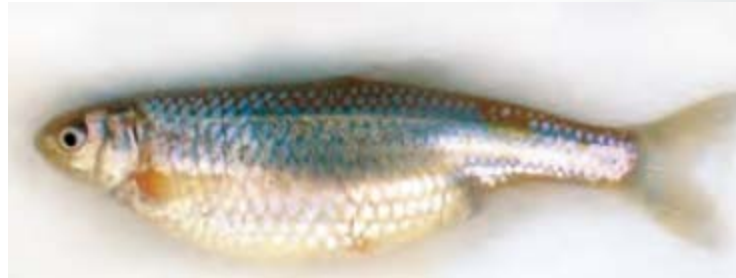
# ABCWUA

## NPDES Section 7 Consultation

- Primary Species?
  - *Rio Grande Silvery Minnow*
- Lead Federal Agency?
  - EPA - NPDES discharge to critical habitat
- BA – BO
  - Data collection
- Conclusion?
  - No jeopardy
- How did we get here?



# The Rio Grande Silvery Minnow



# Albuquerque Biopark Refugium





# ABCWUA NPDES Section 7 Consultation

## ● Problem

- *How will ABCWUA NPDES permit affect the Rio Grande Silvery Minnow?*

## ● People

- *Early meetings with regulators helped shape issues*
- *Data collection and testing program was developed from these meetings*

## ● Data

- *How do you know you won't affect the species?*
- *Direct testing...*

# ABCWUA NPDES Section 7 Consultation

## ● USGS Studies

- *Three on-site toxicity studies were conducted with Rio Grande Silvery Minnows (RGSM)*
- *The tests were designed to assess suitability of water for RGSM sanctuary*
- *Results*
  - *No adverse affect on survival growth in three different life stages.*
  - *Minnow appears to prefer 100% effluent to 100% river*
- *Implications*
  - *Used by USBR to assess use of water in RGSM recovery efforts*
  - *Used by Fish and Wildlife to assess wastewater discharges to the Rio Grande during upset events*

# ABCWUA NPDES Section 7 Consultation

## ● Parsons Study

- *Core Mix Study of NH<sub>3</sub>, CL<sub>2</sub>, etc.*
- *Study showed that changes could mitigate potential effects*
  - *dechlorinate – removes potential Cl effects*
  - *Change discharge line – increase mixing, reducing concentrations and potential effects*

# NPDES Lessons and Issues

- Understand the ESA process and how it works
  - *ESA resolution can take significant time. Plan!*
- Know your regulators
  - *Meet them face to face*
- Support your arguments
  - *Do the studies and have the data to make good decisions*
- Negotiate fairly
  - *Admit when your wrong and find a solution*



# What's Next for NPDES

- Water Authority NPDES permit renewal sent Fall 2009
- Region VI – Consultation Request to FWS
- Data needs for next consultation/permit?
- UV Project coming on-line Fall 2010 – no more Chlorine

# Questions?

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