

RECLAMATION

Managing Water in the West

Refuge Water Supply Program 3406 (d)(1), (2), & (5) 2009 Annual Work Plans

Bureau of Reclamation
U. S. Fish and Wildlife Service



U.S. Department of the Interior
Bureau of Reclamation

December 11, 2008

Refuge Water Supply Program CVPIA 3406 (d)

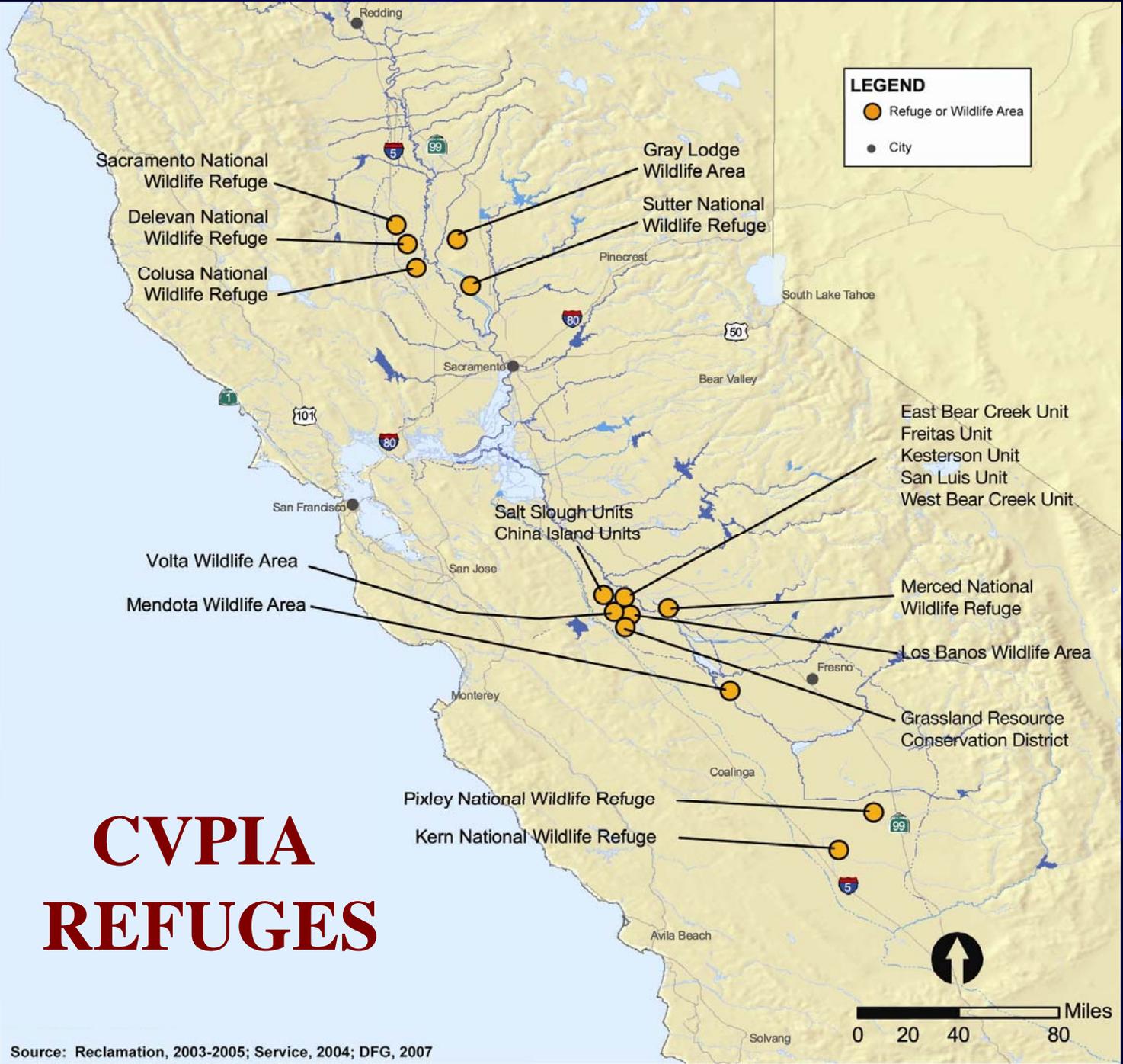


Gray Lodge Wildlife Area
Sutter Buttes Mountain Range
in Background

Provide firm and reliable water supplies of suitable quality to maintain and improve wetlands and wildlife habitat on 19 specific Central Valley wildlife refuges.

CVPIA REFUGES

Source: Reclamation, 2003-2005; Service, 2004; DFG, 2007



Refuge Water Supply Program

CVPIA Work Plans



Canada Goose and Brood

Refuge Water Conveyance Program
CVPIA Sections 3406 (d)(1), (2) and (5)

Refuge Facilities Construction Program
CVPIA Section 3406 (d)(5)

San Joaquin Basin Action Plan Construction Program
CVPIA Section 3406 (d)(5)

Water Acquisition Program
CVPIA Sections 3406 (b)(3), (d)(2)



Refuge Water Conveyance

Program Objective



**Sacramento National
Wildlife Refuge**

To comply with CVPIA Sections 3406(d)(1), (2) and (5) to provide and deliver firm and reliable water supplies of specified quantity and suitable quality annually to 19 specific Central Valley refuges and managed wetlands.

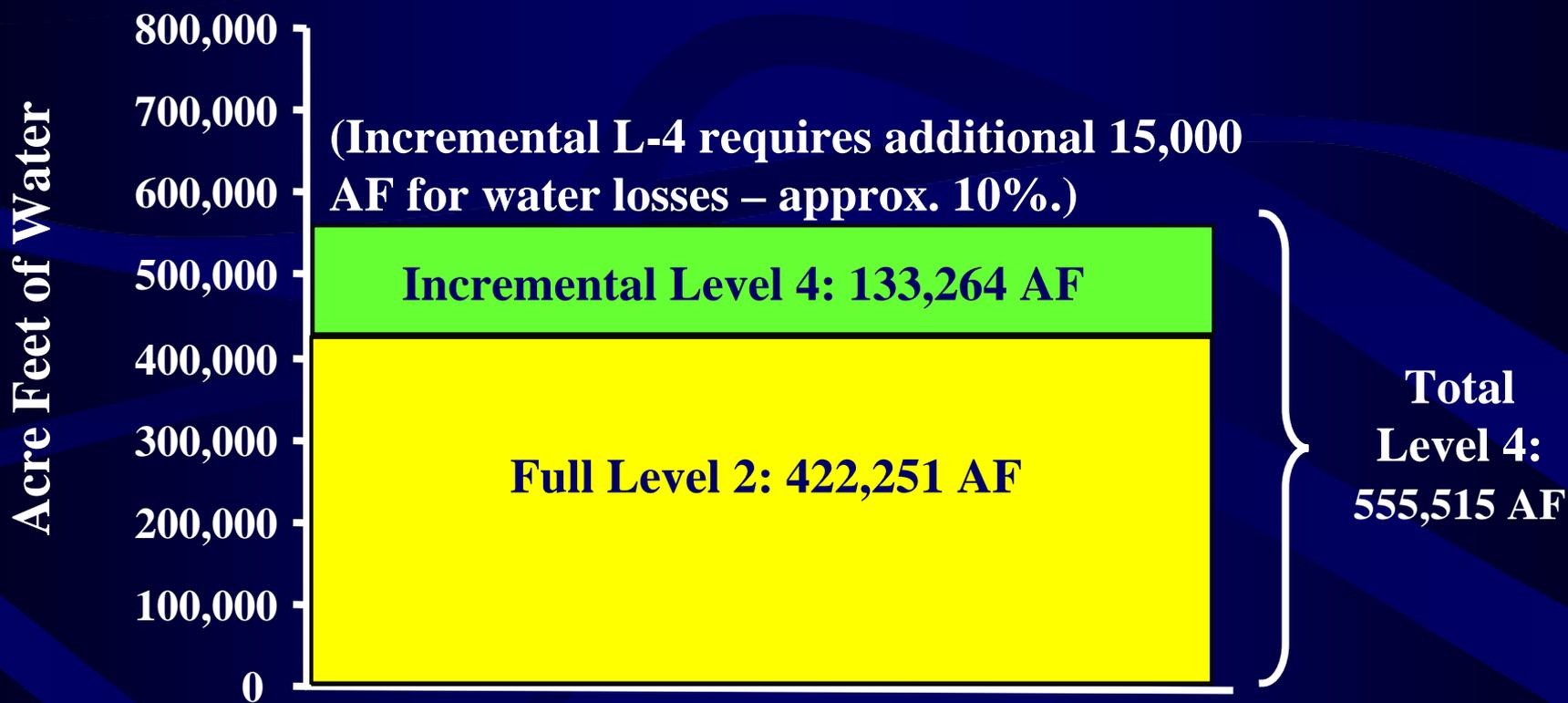
Contact: Sonya Nechanicky, Refuge Water Supply Program Manager

Refuge Water Conveyance Program

Two primary Performance Goals, specifically, starting with Water Year 2002 forward:

- Annually provide/deliver Level 2 water supplies by specified amounts to the refuges totaling 422,251 acre-feet;
- Annually deliver Incremental Level 4 acquired water supplies by specified amounts to the refuges totaling 133,264 acre-feet.

Defining Level 2 and Level 4 Refuge Water Supply



Refuge Water Conveyance Program

Constraints in meeting the primary Performance Goals:

- Inadequate external conveyance capacity for delivery of full Level 4 water supplies;
- Availability of water on the open market by willing sellers;
- Insufficient funding – e.g. using an average price/AF of \$200, the program would need \$26,652,800 to acquire 133,264 AF annually for Incremental Level 4 supplies on the open market

Refuge Water Conveyance

FY2008 Accomplishments

Accomplishments under primary Performance Goals:

- **Level 2 Water** - Provided/delivered approximately 388,521 AF during Water Year 2007 (3/1/2007-2/29/2008) including:
 - Approx. 57,727 AF of Level 2 water provided from diverse sources *other than Central Valley Project yield* including groundwater, State water rights water, gravity flows, and mitigation water thru a FERC license;

Refuge Water Conveyance

FY2008 Accomplishments

Accomplishments under primary Performance Goals
(continued):

- **Incremental Level 4 Water** – Delivered approximately 45,049 AF during Water Year 2007 (3/1/2007-2/29/2008), as follows:
 - Approx. 38,194 AF acquired through the WAP (after losses);
 - Approx. 5,355 AF from Reclamation's purchase of permanent partial water rights reassignments NOD;
 - Approx. 1,500 AF of mitigation water thru FERC license SOD.

Refuge Water Conveyance

FY2008 Accomplishments

Further accomplishments:

- Negotiated extension of Level 2 groundwater agreement with CDFG;
- Negotiated 3-party water accounting agreement between CDFG, BWGWD, and Reclamation;
- Negotiated substantial language modification to conveyance agreement with BWGWD;
- Continued CVPIA mandated cost share development;
- Continued funding support for the Grassland Wetlands Modified Hydrology Study;
- Developed draft 10-year implementation plan (2009-2018).



Mallard

Refuge Water Conveyance

FY2009 Planned Activities

- Deliver Level 2 and acquired Incremental Level 4 quantities of water to refuges;
- Negotiate new Level 2 groundwater reimbursement agreement with DFG;
- Continue funding support for the Grassland Wetlands Modified Hydrology Study;
- Complete CVPIA mandated cost share development for fiscal years 2001-2007.



**Salt Slough Unit
North Grasslands Wildlife Area**

Refuge Water Conveyance FY2009 Work Plan

Tasks, Costs and Funding

| Task | Total Cost Funding Source – Restoration Fund |
|------------------------------|---|
| Program Management | \$772,326 |
| Conveyance Agreements | \$8,127,674 |



Refuge Facilities Construction Program Objective

Under CVPIA Section 3406(d)(5) the Secretary is authorized and directed to acquire or construct needed water conveyance facilities for delivery of Level 4 supplies to certain Central Valley refuges.

Contact: Chuck Jachens, Project Manager

Refuge Facilities Construction Program

Primary Performance Goal:

- Improve and/or construct needed conveyance facilities for delivery of full Level 4 water supplies by 2002 to those CVPIA refuges identified in the Report on Refuge Water Supply Investigations Central Valley Hydrologic Basin (3/1989).



**Belding Outlet at Division 2 Head Gates
Biggs-West Gridley Water District**

Refuge Facilities Construction Program

FY2008 Accomplishments

- Published Final EA/IS for the Mendota Wildlife Area;
- Continued work on Design Data Report for BWGWD facilities improvement construction project;
- Completed two HEC-RAS model alternatives for the conveyance facilities improvements at BWGWD.

Refuge Facilities Construction Program

FY2009 Planned Activities



**Nugent Flume at Traynor Lateral
Biggs-West Gridley Water District**

- Complete HEC-RAS model of composite alternative for the conveyance facilities at BWGWD;
- Complete Final Design Data Report for BWGWD facilities improvement construction project;
- Coordinate with BWGWD on design phase for the facilities improvement construction project.

Refuge Facilities Construction Program

FY2009 Work Plan

Tasks, Costs, and Funding

| Task | Total Cost Funding Source – Restoration Fund |
|---|---|
| Program Management | \$271,000 |
| Implementation/ Construction | \$4,423,000 |



San Joaquin Basin Action Plan

Program Objective

Under CVPIA Section 3406(d)(5) the Secretary is authorized and directed to acquire or construct needed water conveyance facilities for delivery of Level 4 supplies to certain Central Valley refuges identified in the San Joaquin Basin Action Plan/Kesterson Mitigation Plan.

Contact: Chuck Jachens, Project Manager

San Joaquin Basin Action Plan Program

Primary Performance Goal:

- Improve and/or construct needed conveyance facilities for delivery of full Level 4 water supplies by 2002 to those CVPIA refuges identified in the San Joaquin Basin Action Plan/Kesterson Mitigation Plan (12/1989).

San Joaquin Basin Action Plan Program

FY2008 Accomplishments



**East Bear Cr. Unit
View of Pump Station Manifold
(During Construction)**



**East Bear Cr. Unit
View of Future Pump Pedestals,
Check Valve, and Pump Coupling**

- Completed major construction and preliminary testing of the East Bear Creek Unit Phase I Pumping Plant & Pipeline.

San Joaquin Basin Action Plan Program

FY2009 Planned Activities



**East Bear Cr. Unit
View of 700,000 Gallon
Regulator Tank**



**East Bear Cr. Unit
15-Foot Diameter Surge Tank**

- Complete East Bear Creek Unit Phase I Construction Project, initiating water deliveries to the refuge;
- Coordinate construction of automated trash rack on Newman Canal to benefit deliveries to China Island Unit.

San Joaquin Basin Action Plan Program

FY2009 Work Plan

Tasks, Costs and Funding

| Task | Total Cost | Funding Sources | |
|--------------------|------------|-----------------|-----------|
| | | RF | W&RR |
| Program Management | \$541,000 | \$390,000 | \$151,000 |
| Construction | \$800,000 | \$610,000 | \$190,000 |

Water Acquisition Program Objective



White-faced Ibis

To comply with CVPIA Section 3406(d)(2) to provide supplemental water to meet full Level 4 supplies for refuges for optimum wetlands and habitat development.

Contact: Mike Heaton, Water Acquisition Program Manager

Water Acquisition Program

Primary Performance Goal:

The Secretary is authorized to develop and implement a program for the acquisition of a water supply to meet the Level 4 obligations set forth in the Report on Refuge Water Supply Investigations (3/1989) and the San Joaquin Basin Action Plan/Kesterson Mitigation Plan (12/1989).

Water Acquisition Program

FY2008 Refuge Water Acquisitions

| Program Objectives | Delivery Period | Contractor | Quantity (AF) | Cost | Unit Cost per AF | Purpose |
|----------------------------------|-----------------|--|----------------------|--------------------|------------------|---|
| Incremental Level 4 Water | Oct 08 - Feb 08 | Stevinson Water District | 6,563 | \$656,300 | \$100 | Contract Water Year 2008 Level 4 Refuge Water |
| Incremental Level 4 Ground Water | Sep 08 – Feb 08 | Grassland Water District | 10,000 | 750,000 | \$75 | Contract Water Year 2008 Level 4 Refuge Water |
| Incremental Level 4 Water | Mar 08 - Nov 08 | San Joaquin River Exchange Contractors | 24,132 | \$4,879,494 | \$198 | Contract Water Year 2008 Level 4 Refuge Water |
| Totals | | | Approx 40,695 | \$6,285,794 | | |

Water Acquisition Program

FY2009 Activities

- Purchase Incremental Level 4 supplies;
- Groundwater investigations;
- Additional water quality monitoring.



Wood Duck Pair

Water Acquisition Program

FY2009 Work Plan



**Black-crowned
Night Heron**

Tasks, Costs and Funding

| Task | Total Cost Funding Source - Restoration Fund |
|-----------------------------|---|
| Program Management | \$216,000 |
| Planning | \$100,000 |
| Level 4 Refuge Water | Up to \$7,000,000 |

QUESTIONS?

