

North American Waterfowl Management Plan

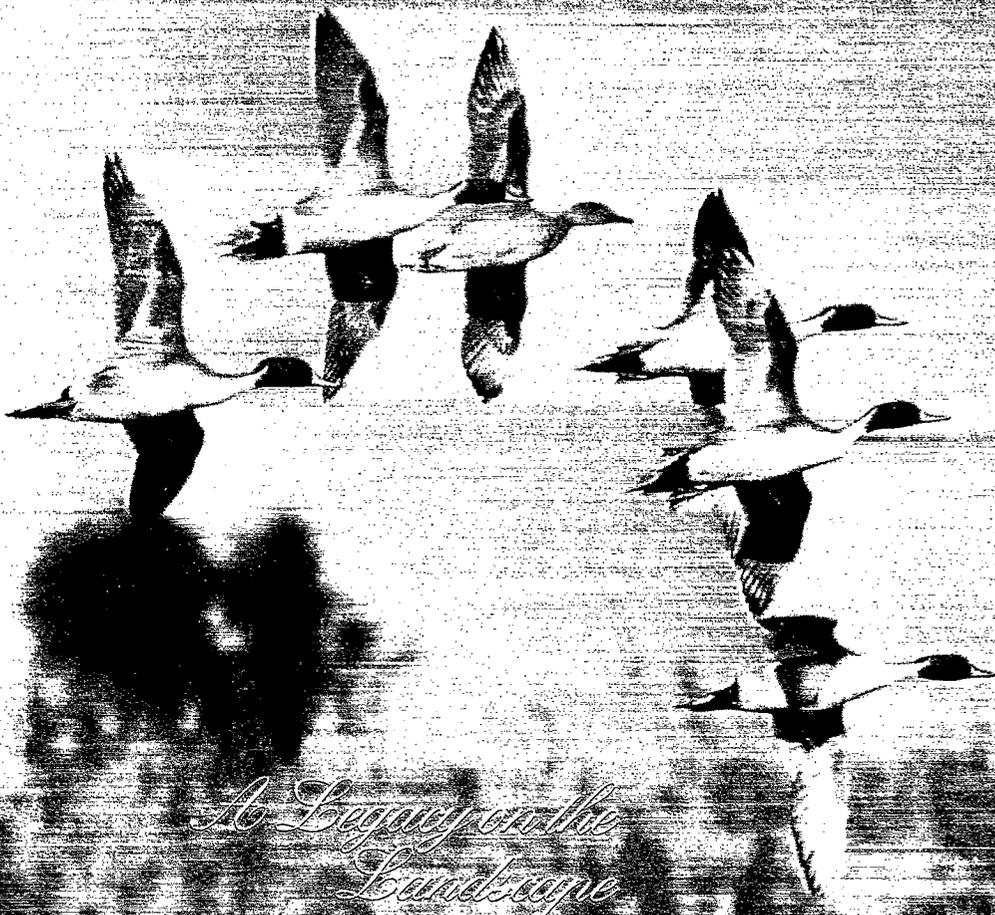


Central Valley Habitat Joint Venture

1986-1996

Things

O V E R T H E V A L L E Y



*A Legacy on the
Landscape*

P PARTNERS FOR CONSERVATION

The Central Valley Habitat Joint Venture (CVHJV) is a public-private partnership formed in 1988 to implement the North American Waterfowl Management Plan in the Central Valley of California. The Joint Venture includes the following partners:

Although it is impossible to list all of the partners and cooperators who have helped the CVHJV, the Management Board acknowledges the contributions of the following cooperators with grateful thanks:

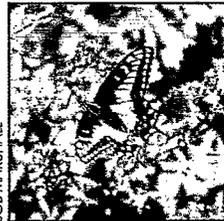
- American Farmland Trust
- California Department of Fish and Game
- California Department of Water Resources
- California Waterfowl Association
- California Wildlife Conservation Board
- Defenders of Wildlife*
- Ducks Unlimited, Inc.
- National Audubon Society
- The Nature Conservancy
- The Trust for Public Land
- U.S. Army Corps of Engineers
- U.S. Bureau of Land Management
- U.S. Bureau of Reclamation
- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service
- U.S. Natural Resources Conservation Service



GARY W. KRAMER

- California Association of Resource Conservation Districts
- California Rice Industry Association
- Central Valley Resource Conservation Districts
- Chris Steele
- Conaway Conservancy
- David and Lucile Packard Foundation
- Dow Chemical
- Grassland Resource Conservation District
- Harvey L. and Maud C. Sorensen Foundation
- Ken Hofmann Foundation
- National Fish and Wildlife Foundation
- Paul J. Wattis Foundation
- Suisun Resource Conservation District
- Tulare Basin Wetland Association
- Yolo Basin Foundation

*Charter member from 1988 to 1993.

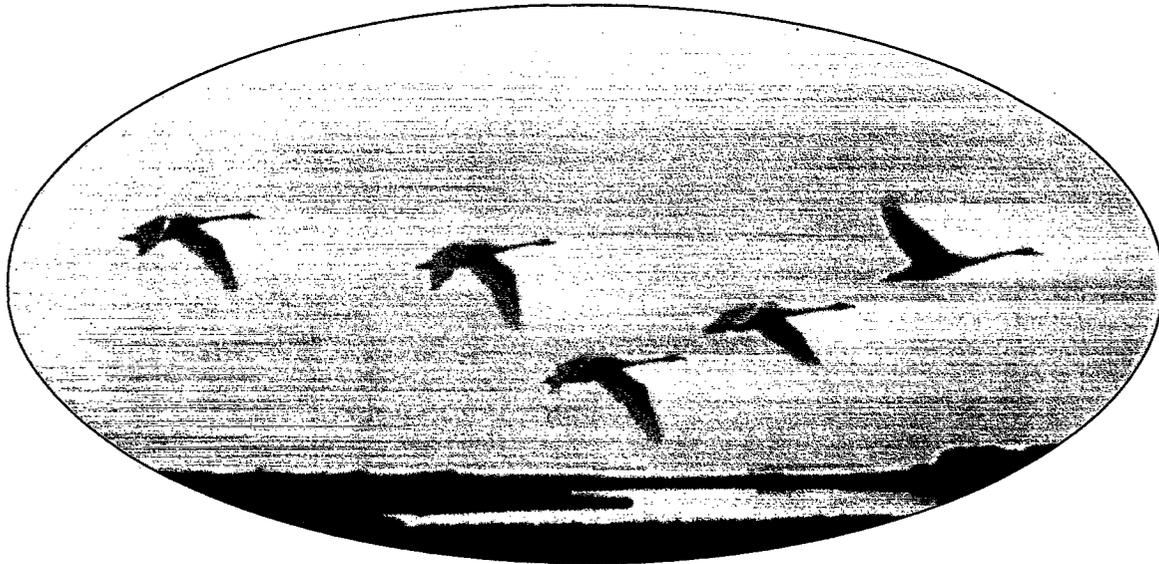


BOB MARSHALL

The CVHJV extends our sincere thanks to all of our unnamed partners and cooperators, including hundreds of farmers and landowners across the 19 counties of California's Central Valley.

COVER PHOTO: GARY W. KRAMER

A VISION FOR THE FUTURE



Throughout California's Central Valley, the CVHJV partners are striving to protect, restore, and enhance a diverse landscape where wetlands and wildlife can co-exist with agriculture and burgeoning urban populations for the enrichment of all people.

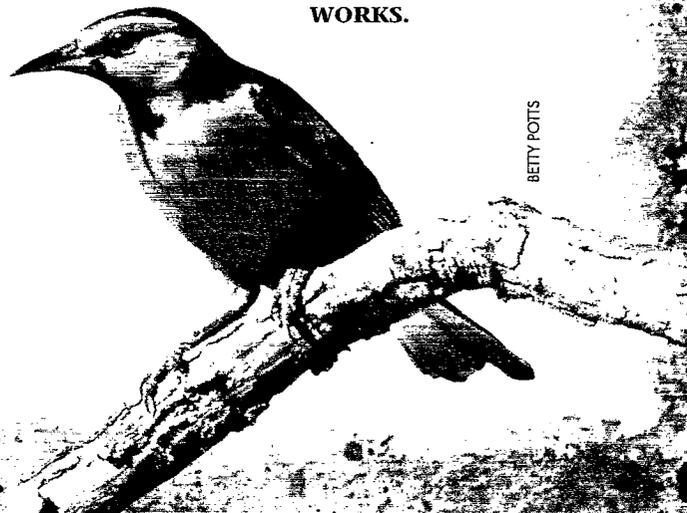
Wetlands play a vital role in maintaining the health, vitality, and stability of the nation's environment, economy, and communities. Their functions and values include flood control, ground water recharge, off stream water storage, wildlife habitat, and improved water quality. In addition, they provide valuable recreational opportunities for hunters, fishermen, boaters, bird watchers, and artists as well as learning centers for students and researchers.

WETLANDS ARE FOR PEOPLE AND WILDLIFE.

The CVHJV has been successful in implementing the North American Waterfowl Management Plan in

California largely through its diverse partnerships. It is the Joint Venture's vision that waterfowl, wetlands, and all wetland dependent species enrich our lives and that it is in our collective interest to conserve these resources for future generations to enjoy. With the continued support of the CVHJV partners and cooperators, our goals and objectives will be met.

OUR APPROACH WORKS.



BETTY POTTS

A FRAMEWORK FOR SUCCESS

In response to prolonged droughts in the 1980's that decimated continental waterfowl populations, Canada and the United States signed an unprecedented agreement in 1986: The North American Waterfowl Management Plan (Plan). The Plan, which has been co-signed by Mexico, provides a broad cooperative framework for wetland and waterfowl conservation into the 21st Century. The Plan identifies 32 high priority focus areas that are critical to the long term needs of North American waterfowl. The Central Valley of California is one of those critical areas.

The Central Valley: Cornerstone of the Pacific Flyway. The Central Valley, from Redding to Bakersfield, is the single most important waterfowl wintering area in the Pacific Flyway, supporting 60 percent of the total migrating population. Each fall, ducks, geese, swans, sandhill cranes, and numerous other bird species funnel into the Central Valley from Siberia, the Arctic tundra, and the Canadian prairies to winter in the fertile wetlands and croplands of California. Historically, the Central Valley contained more than four million acres of wetlands, but merely 300,000 remained by the late 1980's. It has been said that nowhere in North America are so many birds using so few acres as the Central Valley wetlands.

The Central Valley Habitat Joint Venture: The CVHJV was formed in 1988 with a goal: *"To protect, maintain and restore habitat to increase waterfowl populations to desired levels in the Central Valley of California consistent with objectives of the North American Waterfowl Management Plan."* The goal will be

reached through the following objectives: 1) Protect 80,000 acres of existing wetlands through fee acquisition or conservation easement. 2) Restore and protect 120,000 acres of former wetlands. 3) Enhance the existing public and private wetlands of the Central Valley. 4) Enhance waterfowl habitat on 443,000 acres of private agricultural land. 5) Secure a firm water supply for the National Wildlife Refuges (NWR's) and State Wildlife Areas (WA's) of the Valley, plus Grassland Resource Conservation District (GRCD). 6) Secure Central Valley Project Power for NWR's, WA's, GRCD and other private lands dedicated to wetland management.

Upon completion of these CVHJV objectives, the Central Valley will support on average, 4.7 million wintering ducks, 865,000 geese and swans plus a breeding population of 400,000 ducks, including 300,000 mallards.



WOODY SCHON

THE CVHJV TOOL BOX

How the CVHJV Gets it Done

The complex business of habitat protection, restoration, and enhancement requires innovative partnerships and a variety of funding mechanisms. The CVHJV utilizes all of the following to get the job done:

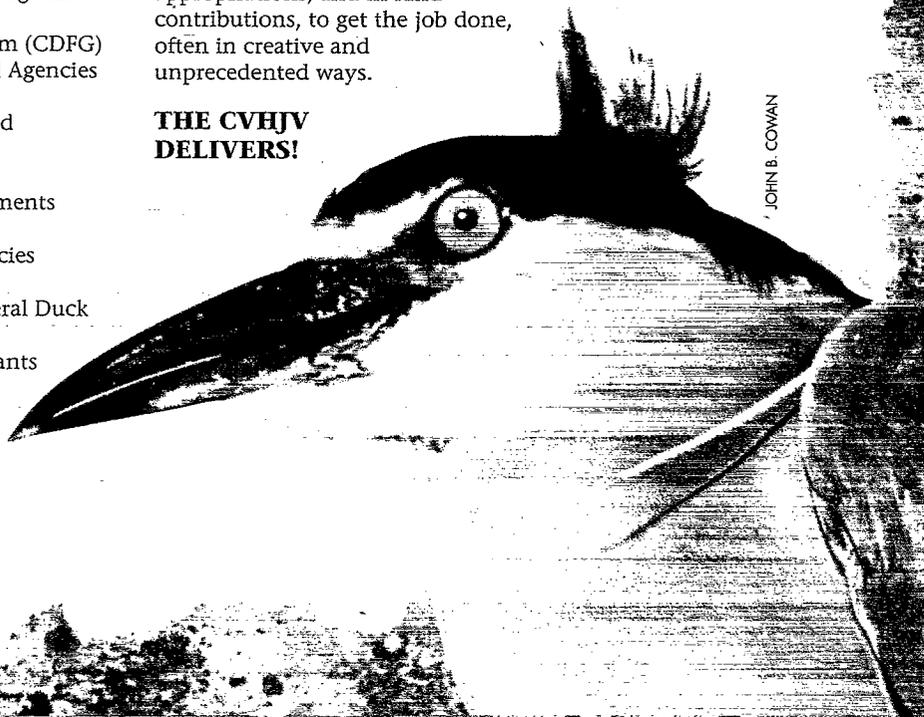
- Agricultural Conservation Program (USDA)
- CALFED Bay Delta Category III Program (DWR)
- California Habitat Conservation Fund (WCB)
- California Wildlife, Coastal, Parkland Conservation Fund (WCB)
- California Inland Wetlands Conservation Program (WCB)
- California Wood Duck Program (CWA)
- California Mallard Program (CWA)
- California Duck Stamp Program (CDFG)
- California Waterfowl Habitat Program (CDFG)
- California Environmental License Plate Fund (WCB)
- California Wetlands Conservation Easement Program (CDFG)
- Canada Goose Program (CWA)
- Central Valley Project Improvement Act (USFWS, BOR)
- Cigarette & Tobacco Products Surtax Fund (WCB, CDFG)
- Coastal Wetlands Conservation Grant Program (USFWS)
- Comprehensive Wetland Habitat Program (CDFG)
- Congressional Appropriations to Federal Agencies
- Conservation Reserve Program (USDA)
- Federal Land & Water Conservation Fund (USFWS, WCB, BLM)
- Geographic Initiative Fund (EPA)
- Land Exchanges through Pooling Agreements (BLM, WCB)
- Legislative Appropriations to State Agencies
- MARSH Program (DU)
- Migratory Bird Conservation Fund (Federal Duck Stamps) (USFWS)
- National Fish & Wildlife Foundation Grants
- North American Wetlands Conservation Fund Grants
- Partners for Wildlife Program (USFWS)
- Pintail Program (CWA)

BLM = Bureau of Land Management
 BOR = Bureau of Reclamation
 CDFG = California Department of Fish and Game
 COE = Corps of Engineers
 CWA = California Waterfowl Association
 DU = Ducks Unlimited
 DWR = Department of Water Resources
 EPA = Environmental Protection Agency
 USDA = U.S. Department of Agriculture
 USFWS = Fish and Wildlife Service
 WCB = Wildlife Conservation Board

- Private Fund Raising (Individuals, Foundations & Corporations)
- Section 1135 of the Water Resources Development Act of 1986 (COE)
- Valley Care (DU)
- Water Bank Program (USDA)
- Wetlands Reserve Program (USDA)
- Wildlife & Natural Areas Conservation Fund (WCB, CDFG)

In addition to the funds above, the CVHJV agencies and organizations use general operations dollars, special legislative appropriations, and in-kind contributions, to get the job done, often in creative and unprecedented ways.

THE CVHJV DELIVERS!



JOHN B. COWAN



The CVHJV Provides Important Habitat for a Diversity of Species

WETLAND WILDLIFE

The Central Valley is blessed with diversity of wetland types. The wetlands range from brackish-water tidal wetlands in the Suisun Marsh and deep water "tule" marshes in the Sacramento-San Joaquin Delta, to seasonal freshwater wetlands and scattered shallow ephemeral ponds known as vernal pools. In general, seasonal wetlands derived from fall-winter rains and floods provide habitat for most wintering

species, while the permanent and semi-permanent wetlands provide habitat for resident species to reproduce in the spring and summer. Unfortunately, many wildlife species dependent on these wetlands are now threatened or endangered, as the abundance of these wetland systems has been greatly diminished through land use changes.

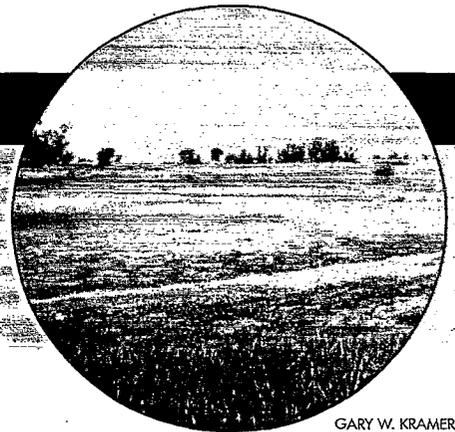
CVHJV projects benefit numerous threatened and endangered species such as:

Animals

- Giant Garter Snake
- Aleutian Canada Goose
- Delta Smelt
- Longhorn Fairy Shrimp
- Tule Elk

Plants

- Solano Grass
- Palmate-bracted Bird's Beak
- Butte County Meadowfoam
- Fleshy Owl's Clover
- Slender Orcutt Grass



GARY W. KRAMER

Neotropical Migrants: Birds at Risk

Neotropical Migrants are birds that breed in North America and winter in Mexico, the Caribbean, and Central and South America. Numbering approximately 350 species, many of them are declining, some precipitously. Many neotropical

species use CVHJV projects for breeding, feeding or resting:

- Shorebirds
- Hummingbirds
- Hawks and Owls
- Songbirds

NATIONAL AUDUBON SOCIETY



CVHJV PROJECTS BENEFIT MANY NEOTROPICAL SPECIES

As a wintering area, the Central Valley is unsurpassed in the Pacific Flyway. In an average year it will support:



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- 100% of the world's population of Aleutian Canada Geese (Federally threatened species).
- 100% of the world's population of Pacific Tule Geese.
- 80% of North America's Ross' Geese and Cackling Canada Geese.
- Two-thirds of North America's Tundra Swans and Pacific White Fronted Geese.
- 60% of Pacific Flyway pintail ducks.

Riparian Areas: The Central Valley Wetland Connection

Riparian areas are woody vegetated corridors of shrubs, trees, and vines that grow along watercourses. In the Central Valley, riparian areas are often interwoven in a braided fashion amongst wetlands making them an important component of many CVHJV projects. Today, 98% of the Valley's riparian areas are gone, making them even scarcer than Valley wetlands.

Because of their scarcity, many wildlife species dependent upon this habitat are threatened, endangered, or declining. CVHJV projects benefit many threatened and endangered riparian species including:

- Rawson's Flaming-Trumpet
- Riparian Brush Rabbit
- Swainson's Hawk
- Valley Elderberry Long-Horned Beetle
- Western Yellow-Billed Cuckoo
- Willow Flycatcher



RAMON VEGA, USFWS



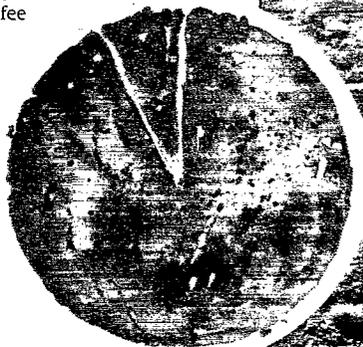
CVHJV Objective #1:
Protect 80,000 Acres of Existing Wetlands

WETLAND PROTECTION

Protection involves either fee acquisition or a perpetual conservation easement placed on the land by a CVHJV partner. The CVHJV has attained 84% of its wetland protection objective. Future efforts will focus on filling in the habitat "gaps" in the

Central Valley by protecting habitat in new basins and counties. This will facilitate better distribution of waterfowl throughout the Valley, improve habitat diversity and abundance, and enrich the lives of all Valley residents.

-  67,000 existing wetland acres protected by the CVHJV through fee acquisition or conservation easements
-  13,000 acres remaining to meet objective



A GOOD INVESTMENT

The 67,000 acres of wetlands protected by the CVHJV cost approximately \$93,000,000. This figure excludes the annual operations and maintenance costs, which can range from \$40 to \$100 per acre annually.

Wetland Protection Costs:
Federal: \$68,000,000
State: \$19,500,000
Private: \$5,500,000

Project File: Llano Seco Ranch

The Llano Seco Ranch is located along the Sacramento River in Butte County. The ranch was the largest remaining Spanish land grant in the Central Valley when the CVHJV, in 1991, joined forces in an innovative partnership to protect, with conservation easements and fee acquisitions, 14,000 acres of wetlands, uplands, croplands and riparian forests. While habitat restoration efforts are continuing on this important area, over 400,000 ducks have been counted on the area since the CVHJV became involved. When fully restored this project will add 4,000 new acres of wetlands to the Sacramento Valley.

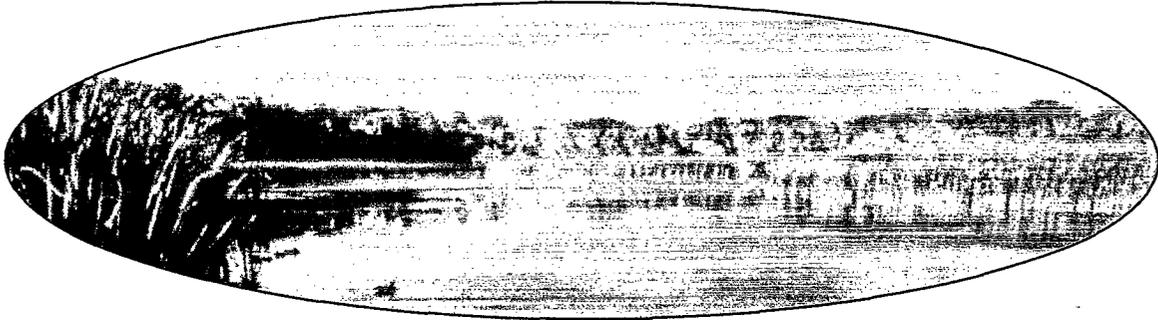


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CVHJV Objective #2:
Restore and Protect 120,000 Acres of Former Wetlands.

WETLAND RESTORATION



Restoration is the re-establishment of wetland functions and values on lands that have been converted to other uses. To count toward this objective, wetlands must be restored AND protected in perpetuity with a fee acquisition or conservation easement. The CVHJV has protected and restored

over 42,000 acres of wetlands and adjacent uplands, or 35% of its objective. In addition, there are 6,000 acres of lands acquired and protected that are slated for restoration. Private wetlands totalling 2,400 acres have also been restored but are not protected with perpetual conservation easements.

A GOOD INVESTMENT

Restoration to date has cost approximately \$66,000,000.

Federal: \$22,000,000

State: \$38,000,000

Private: \$6,000,000

Accomplishments to Date

 42,000 acres restored and protected

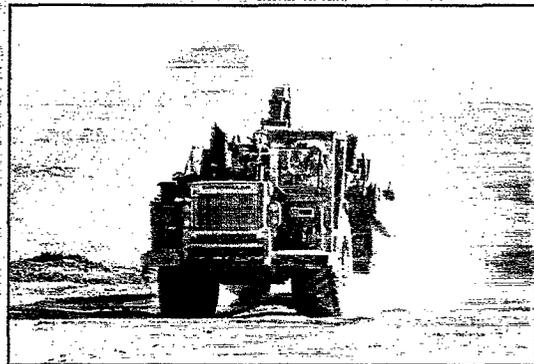
 6,000 acres acquired restoration pending

 72,000 acres left to protect and restore



Project Profile: The Yolo Bypass Wildlife Area

The Yolo Bypass Wildlife Area is a 3,700 acre wetland restoration project located in the Yolo Bypass, an important flood control feature for the Sacramento-Yolo County area. When completed in 1996, it will represent the largest wetland project of its type in the Western United States, demonstrating that wetlands are compatible with flood control needs in a large metropolitan area.



TOM MYERS PHOTOGRAPHY



CVHJV Objective #3:
Enhance Existing Public and Private Wetlands

WETLAND ENHANCEMENT

Managed wetlands are dynamic and often require routine maintenance and repair to offset the impacts of flood damage, weed infestations, rodent burrows, erosion, and general wear. Wetland enhancement involves the alteration of existing habitat to increase benefits for fish and wildlife. The CVHJV has helped private and public wetland owners and managers complete 494,000 acres of enhancement in the Central Valley. In many cases, wetlands have received multiple, sometimes annual, enhancements because of their location or participation in various

CVHJV programs. Future efforts will focus on keeping existing wetlands in optimum condition on a sustained basis.

Accomplishments to Date

Year	Acres
86	64,000
87	24,000
88	25,000
89	39,000
90	37,000
91	45,000
92	64,000
93	53,000
94	51,000
95	58,000
96	33,000



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A GOOD INVESTMENT

Wetland enhancements are generally short lived; however, they are critically important to maintaining wetland values for wildlife. Without periodic maintenance and rehabilitation, managed wetlands often deteriorate and wildlife benefits decline. To date the CVHJV has spent \$15.4 million on wetland enhancement efforts.

Federal: \$7,900,000
State: \$4,900,000
Private: \$2,600,000

Project Profile: The Grasslands Ecological Area

Today, the Grasslands Ecological Area in Merced County represents the largest single block of wetlands, uplands, and riparian areas in California. Comprised of 4 National Wildlife Refuges, 3 State Wildlife Areas, 1 State Park, and approximately 200 private duck hunting clubs, it is the wetland cornerstone of the San Joaquin Valley, covering 160,000 acres. Through the strategic use of fee and easement acquisitions, coupled with restoration and enhancement efforts, the CVHJV has been actively involved in most of the Grasslands Ecological Area.



CVHJV Objective #4:
Enhance 443,000 Acres of Private Agricultural Land

AGRICULTURAL ENHANCEMENT

Many species of waterfowl of the Central Valley are dependent upon private cropland for part of their annual life cycle. Rice, corn, and other small grains

are important food for winter migrants, and winter wheat and perennial pasture grasses are important cover for local nesters in the spring and summer. The CVHJV works with farmers and ranchers providing technical assistance, workshops, and cost-sharing to promote **WILDLIFE FRIENDLY AGRICULTURE** on private land. While cost-sharing and incentive payments have been the traditional mechanism used to promote wildlife friendly farming practices, the CVHJV has been innovative and creative at implementing unique partnerships with the agricultural community. An example has been the evolution of rice rollers as an alternative to traditional fall burning of rice fields. The CVHJV worked with rice growers to field test the rollers which flatten rice stubble into shallow water, where it is broken down by decomposition and the feeding activity of waterfowl. Farmers, birds, and the air quality all benefit! Once viewed as experimental, rice rolling has been accepted by many growers as a viable stubble management alternative. In 1995-1996, over 152,000 acres of Central Valley riceland were rolled and flooded.



CA WILDLIFE CONSERVATION BOARD



USFWS

A GOOD INVESTMENT

To date the CVHJV partners have spent over \$3.7 million on agricultural enhancement. Because many of these activities are annual in nature, the CVHJV is focusing on actions that will be accepted and sustained by agriculture as part of the routine crop management practices without subsidies.

Federal: \$1,200,000
State: \$600,000
Private: \$1,900,000

Calendars

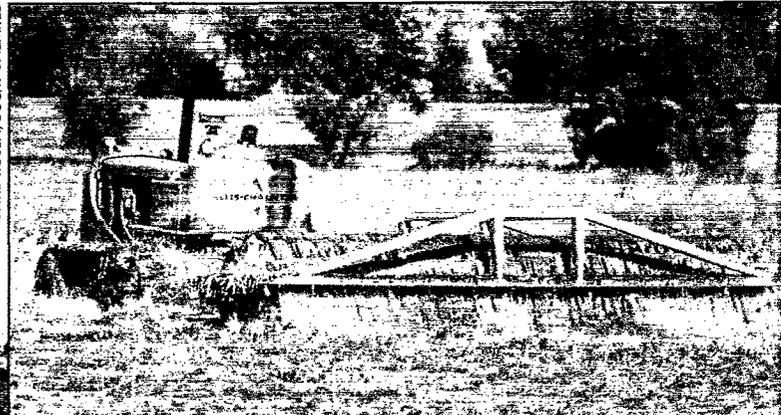
One of the primary tools the CVHJV uses with farmers is outreach and technical assistance. In 1996, the CVHJV produced and distributed 10,000 *Farming for Wildlife* conservation planners/calendars to valley farmers which promote practical wildlife enhancements on the farm. The calendars, a huge success, have been well received, and now the words are being put into action, as many farmers begin implementing these suggestions.

Goal: Annually Enhance 443,000 acres

-  152,000 acres enhanced in 1995-96
-  291,000 acres remaining

CVHJV PUTS WORDS INTO ACTION ON THE FARM

DAVID ROSEN, DUCKS UNLIMITED

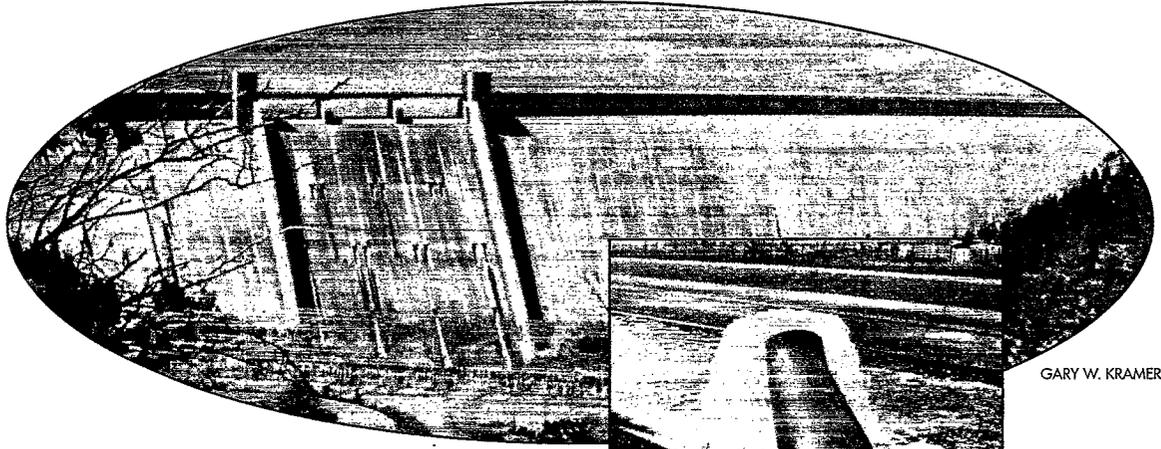




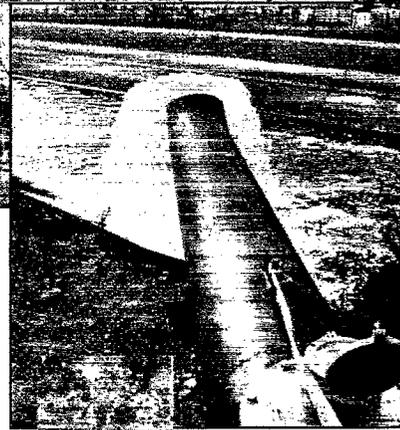
CVHJV Objective #6:

Secure Firm Water Supplies and Project Power for Public and Private Wetlands.

WATER AND POWER



GARY W. KRAMER



US BUREAU OF RECLAMATION

WATER SUPPLIES

Prior to 1992, most of the 13 Central Valley National Wildlife Refuges and state Wildlife Management Areas (Refuges), and Grassland Resource Conservation District (Grassland) had to rely on water deliveries on an "if and when available" basis. The lack of a dependable quantity of water, delivered at the time of need, prevented these areas from being managed for optimum wetland benefits. All of that changed in 1992 with the signing of the Central Valley Project Improvement Act (CVPIA) (P.L. 102-575). The CVPIA mandates that a firm water supply be delivered to the Refuges, Grassland, and newly acquired public wetlands in Merced County. The mandate calls for yearly incremental increased supplies to each wetland area until a total supply of 556,000 acre feet is achieved in the year 2002.

-  399,000 Acre-feet of water delivered through 95-96 season
-  157,000 Acre-feet of water balance remaining to be delivered by the year 2002

PROJECT POWER

The Joint Venture Implementation Plan identified as an objective securing Central Valley Project Power to the Refuges, Grassland, and other public and private lands dedicated to wetland management. The Bureau of Reclamation (Reclamation) is currently developing criteria for the application of project power. Among the issues being considered is

Reclamation's contractual ability to deliver project power; the obligation of the Central Valley Project relative to water acquisition; and economics of providing project power relative to other power sources. The use of project power, as it relates to these issues will be evaluated on a site-specific basis during the course of various on-going CVPIA wetland-related investigations.

THE LANDSCAPE IS CHANGING

Collectively, the CVHJV has affected over 500,000 acres of wetlands, uplands, and croplands in the Central Valley through protection, restoration, and enhancement activities. Projects range in size from less than one acre to over 14,000 acres. Cumulatively, the projects are beginning to change the landscape for the benefit of wildlife and the enrichment of people.

THE CVHJV MAKES A DIFFERENCE!

Project Profile: Cosumnes River Preserve

Located in South Sacramento County, the Cosumnes River Preserve is a 6,000 acre area of wetlands, uplands, and riparian corridors lying along the Cosumnes River floodplain. Current expansion plans will increase the Preserve to over 10,000 acres. This important wildlife habitat is becoming an increasingly important outdoor classroom for school children in the Sacramento Metropolitan area.



DAVID ROSEN, DUCKS UNLIMITED

WATTIS SANCTUARY

WILLOW CREEK-LURLINE EASEMENTS

COSUMNES RIVER PRESERVE

LLANO SECO RANCHO

UPPER BUTTE BASIN WILDLIFE AREA

BUTTE SINK EASEMENTS

YOLO BYPASS WILDLIFE AREA

STONE LAKES NWR

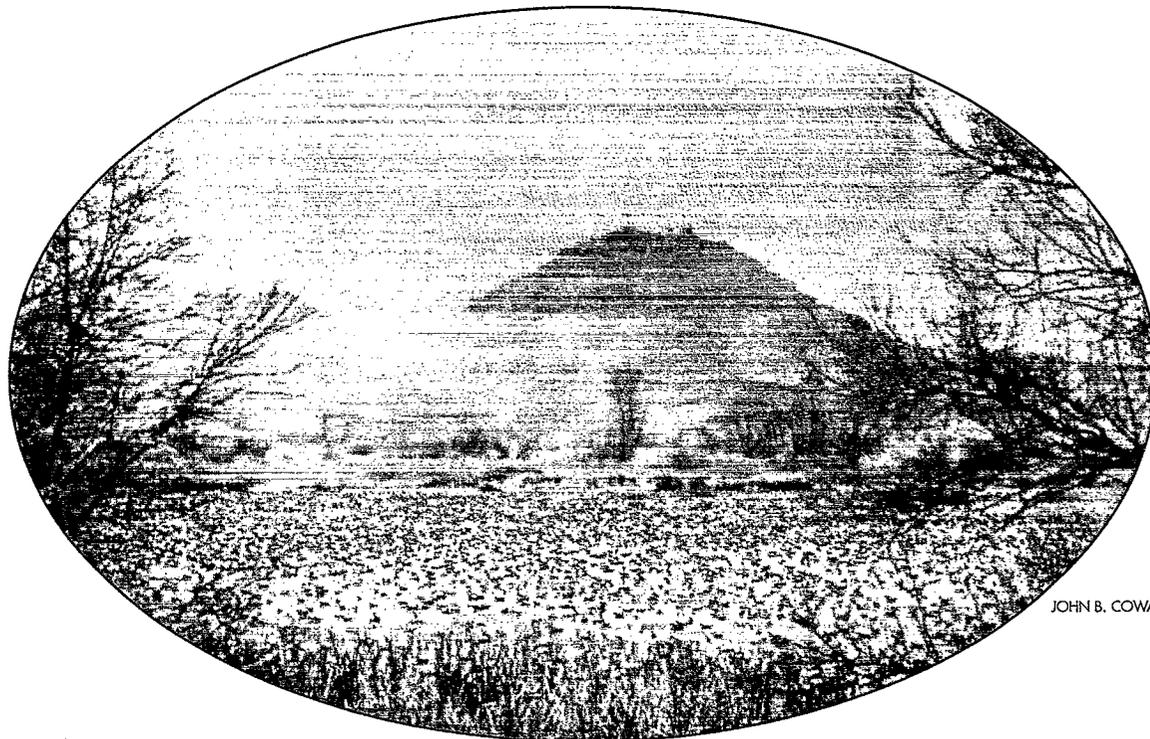
SAN JOAQUIN RIVER NWR

NORTHERN SAN JOAQUIN VALLEY ACTION PLAN



WOODY SCHON

A BRIGHT FUTURE



JOHN B. COWAN

In a few short years, the CVHJV has helped to dramatically change the landscape of the Central Valley. Wetlands and riparian forests are beginning to reappear in places where they were lost nearly 100 years ago. More importantly, the waterfowl and other wildlife species are coming back too!

The CVHJV takes great pride in these unprecedented achievements, but we acknowledge that most of this would not be possible without the broad-based support of its partners and cooperators. The CVHJV has made new inroads into building bridges of cooperation and communication. We have formed important alliances with agriculture, municipalities,

water districts, business, conservation organizations and others in innovative, non-traditional partnerships. **THE CVHJV APPROACH WORKS!**

To all of our partners and cooperators, the CVHJV extends a sincere **THANK YOU** for past support and cooperation. With your continued support, we are confident that **WE WILL ACHIEVE OUR GOAL**. With that, we will move into the 21st Century having a legacy on the landscape that will enhance wildlife and enrich the lives of Californians for generations to come.

FOR MORE INFORMATION CONTACT:

American Farmland Trust
1949 5th Street #101
Davis, CA 95616
(916)753-1073

CA Department of Fish and Game
1416 9th Street, 12th Floor
Sacramento, CA 95814
(916)653-7667

CA Department of Water Resources
1416 9th Street, Room 1121-2
Sacramento, CA 95814
(916)653-0562

California Waterfowl Association
4630 Northgate Boulevard, Suite 150
Sacramento, CA 95834
(916)648-1406

CA Wildlife Conservation Board
801 K Street, Suite 806
Sacramento, CA 95814
(916)445-8448

Defenders of Wildlife
1637 Laurel Street
Lake Oswego, OR 97034
(503)697-3222

Ducks Unlimited, Inc.
3074 Gold Canal Drive
Rancho Cordova, CA 95670
(916)852-2000

National Audubon Society
555 Audubon Place
Sacramento, CA 95825
(916)481-5332

The Nature Conservancy
1330 21st Street, Suite 103
Sacramento, CA 95814
(916)449-2852

Trust for Public Land
116 New Montgomery Third Floor
San Francisco, CA 94105
(415)495-5660

US Army Corps of Engineers
1325 J Street, Room 1320
Sacramento, CA 95814-2922
(916)557-7490

US Bureau of Land Management
2800 Cottage Way, E-2853
Sacramento, CA 95825
(916)979-2845

US Bureau of Reclamation
2800 Cottage Way, MP-152
Sacramento, CA 95825
(916)979-2479

US Environmental Protection Agency
75 Hawthorne Street, Mail Code W-3-1
San Francisco, CA 94105
(415)744-1001

US Fish and Wildlife Service
Central Valley Habitat Joint Venture
2233 Watt Avenue, Suite 375
Sacramento, CA 95825-0509
(916)979-2085

US Natural Resources Conservation Service
2121 C Second Street
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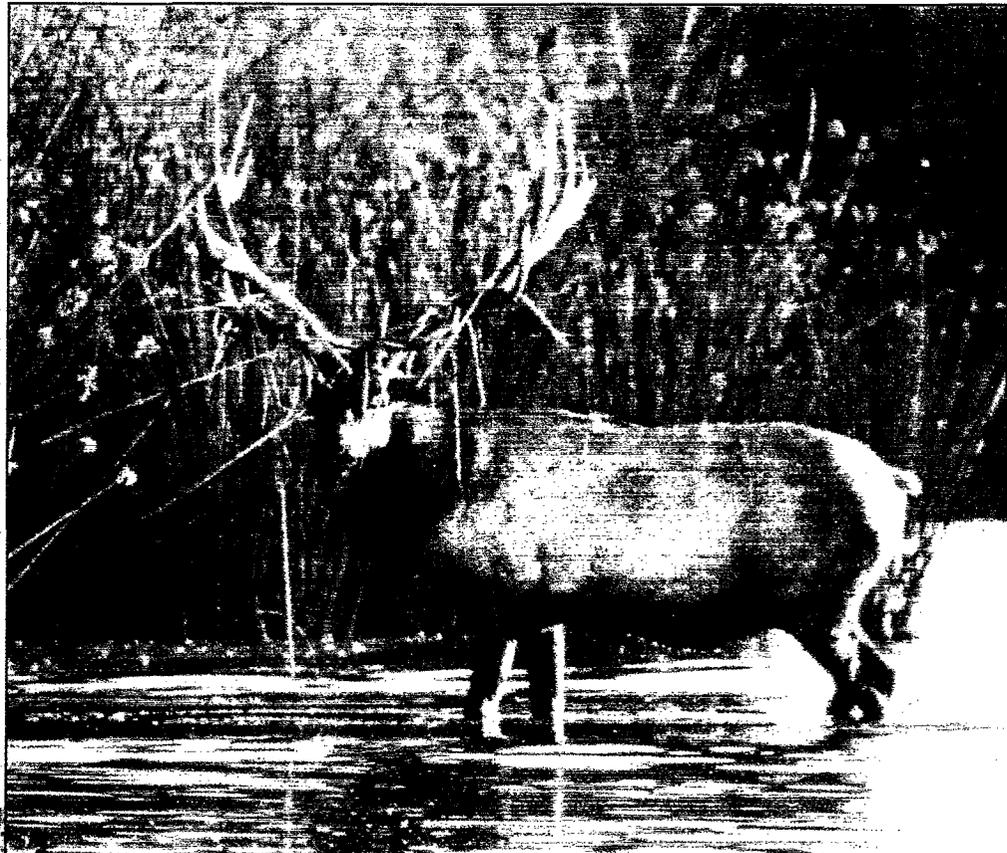
Public Outreach

The CVHJV recognizes that **WETLANDS ARE FOR WILDLIFE AND PEOPLE** and that an important element of our work is public awareness and education. To facilitate this in the classroom the CVHJV produced **Habitat Fun Packs**, which are environmental education curriculum packages for teachers. Targeted at three groups, K-3, 4-6, and Junior/Senior High, the kits help teachers convey to their students the value and functions of wetlands through a variety of games, quizzes, flashcards, and field exercises. Mari-Lu Marcus Langwell, a kindergarten teacher at Sacramento Country Day School says, "The Habitat Fun Packs were wonderful...they really got my students excited about wetlands and wildlife."

To date, over 19,000 packets have been mailed to Central Valley teachers at no cost to the schools and a second printing is underway.

BACK COVER PHOTO: GARY W. KRAMER

GARY R. ZAHM





Central Valley Habitat Joint Venture
US Fish and Wildlife Service
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