

Central Valley Joint Venture

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- Yolo Bypass is w/in the Primary Focus Area in the CVJV's Area of Influence
- 2006 implementation plan (www.CVJV.org) describes habitat goals and objectives for each of the 9 planning basins in the Area of Influence in detail.
- 6 major bird groups
 - Wintering and Breeding Waterfowl
 - Wintering and Breeding Shorebirds
 - Waterbirds
 - Riparian Songbirds
- Agriculture is a major part of the CVJV Program in the Central Valley, providing significant food supply
- Strategies:
 - Restoration, Protection, Enhancement, Wildlife-friendly Easements
- Water needs for wetlands and winter-flooded Ag in Yolo:
 - Seasonal Wetlands – 58,640 af
 - Semi-Permanent Wetlands – 14,948 af
 - Agricultural Winter Flooding – 7,500 af
 - Total Water – 81,088 af
- Between 76% and 100% progress in meeting seasonal wetland restoration objectives for wintering waterfowl in Yolo.
- Significant positive bird response since the CVJV initiated
- Important that we retain the ability to manipulate water levels for desired species and plants and inhibit the growth of undesired plants
- There's been a tremendous investment of time, talent and money in the Yolo area, estimated to be around 42 million in State, Federal and private money.
- Hopeful that we can work together to achieve mutually beneficial goals.

Mosquito & Vector Control

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- 20 to 25 mosquito species in Delta region – differing habitat requirements
- 4 stages to mosquito life cycle
 - All need standing or stagnant water
 - All use water for majority of lifecycle (just under water surface or on water surface)
 - Like dense or dry vegetation for harborage
 - In warm temps, can complete life cycle in 5 days
- Mosquito Response Plan – main focus is to protect public health
- CA Health and Safety Code says
 - The person or agency claiming ownership, title, or right to property or who controls the diversion, delivery, conveyance, or flow of water **shall be responsible** for the abatement of a public nuisance that is caused by, or as a result of, that property or the diversion, delivery, conveyance, or control of that water
- Integrated Pest Management Plan / Mosquito Response Plan
 - Surveillance
 - Public Education
 - Physical Control (BMPs) (Marty's department)
 - Look at specific actions on individual properties (private, state, fed)
 - Site modification, planning review, management plans – partner with property owners to reduce mosquito breeding
 - Biological Control
 - Chemical Control
- Successful BMP Principles
 - Provide deep open water (wave action, less vegetation)
 - Provide quick and complete dewatering
 - Prevent flooding for longer than 7 days during warm weather months
 - Landowner communication
 - Annual routine maintenance
- DPC Policy P-10 outlines mosquito control BMPs, which should be included in any long term management plan within the Delta area as an integrated portion of the BDCP

Flood Control

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- Fremont Weir and Yolo Bypass are the responsibility of the State of CA to manage, levees managed by State or by local maintaining agencies
 - Flood easements held by the Sacramento San Joaquin Drainage District (Central Valley Flood Protection Board) allow land to be flooded at certain frequency based on original design of bypass
- Major water sources:
 - Overflow from Sacramento River and all tributaries north of Fremont
 - American River and all its tributaries when Sacramento Weir is open
 - Cache, Willow, Putah, and Ulatis Creeks
- Flood Maintenance Issues
 - Capacity issues at bottom end complicated by deepwater ship channel
 - Erosion issues along borrow and irrigation canals
 - Windwave erosion of levees during storm events
 - Ongoing sediment build up
 - Influx of mercury laden soils from tributaries on the West
- Key Issues
 - Flood protection and public safety are the primary function of the Yolo Bypass
 - Improved habitat function and value, including increased vegetation or inundation frequency, cannot interfere with maintenance access or activities, or otherwise make maintenance more difficult
 - Yolo Bypass is a very important piece of the flood control system, and it must continue to safely pass the design flow for flood carrying capacity – maintain integrity and capacity of the system
 - Any work needs to be documented by a valid model that demonstrates that the bypass will continue to function as designed
- Important Notes:
 - Footprint of Yolo Bypass and Yolo Basin are not the same. Sometimes flood waters are running over land that would not historically have flooded prior to the Bypass
 - Erosion potential adjacent to levees in some areas b/c of the soils there
 - In the lower Yolo Bypass the system isn't currently at design carrying capacity – about 2.1 feet above design – related to work done to construct the deepwater ship channel. There is a substantial potential for surcharging levees above design, and some areas are at risk in flood events.
 - The system works b/c of habitat friendly agriculture. Farming provides vegetation maintenance that would otherwise have to be implemented by other means at significant cost. These benefits provided by agriculture are not replaceable.
 - Public safety is the number one priority. There is a very real potential for unintended consequences.
 - Future flood protection will require a dynamic system that can respond to changing conditions upstream and downstream.

Agriculture

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- Trends:
 - Cultivated acres have declined since 1970s, replaced with grazing and/or habitat
 - Less intensive operations (green around the edges)
 - Increased public ownership
- Agricultural limiting factors affecting crop yields in the Bypass
 - Soil types, weather patterns (in non-flood years) and flood control (in flood years)
- Impacts to revenues/profitability in flood years
 - Additional reduced crop yields, limited crop choices, significant difficulty in crop substitution
- Benefits of Agriculture
 - Property tax, contributions to local economy, land management for flood protection
- Key Discussion Points
 - Property infrastructure / Property optimization – meets the property owner's needs
 - Timing of flooding affects timing of planting and availability of acres to be planted; dramatically affecting yield
 - Crop substitution nearly impossible – it's mostly rice ground, leveled for rice with very little fall; not ground that could be used to irrigate tomatoes or corn, for example
 - Reduced revenue
 - Tenant limitations
 - Rice production in wet years (not including flood years) can be reduced by 50% from cool nights and late planting.
 - Not really many alternative crops – after April 15th, very limited in what can be planted. Wild rice and organic rice may be alternatives, but limited by demand. Can't plant tomatoes too late b/c of risk of fall flooding.
 - Regarding time between flooding and planting, it depends on amount of water; how much of the Bypass has flooded. Hard to put a rule on it. Need modeling to show which properties are impacted by different types of flooding. Have to account for water moving off of land, then more time for land to dry enough to be workable.
 - Big differential in elevation in the Bypass, some properties stay wet much longer than others. Keep this in mind when talking about what type of agriculture is feasible.

Yolo Bypass Wildlife Area

Robin Kulakow – robin@yolobasin.org

- 16k acre Wildlife Area owned, operated and maintained by DFG, managed consistent with flood control being primary Bypass purpose
- 1997, Wildlife area open to public with DFG ownership – effort started in 1990 / +6,000 acres of new wetlands created since 2004
- Many successful partnerships to establish wetlands restoration through the North American Wetlands Conservation Act, Wetland Reserve Program and Wildlife Conservation Board
- In addition to publically owned property, many conservation activities done through DFG Management Programs, NRCS WRP 10-year agreements and easements, FWS easements, DFG easements
- The Wildlife Area is part of a regional restoration plan including projects by the Yolo Natural Heritage Program, the Yolo Land Trust, the City of Davis and Yolo County – all adjacent to the Bypass
- Since 1987, + 40,000 students have visited the Wildlife Area / ~ 30,000 people visit annually / active hunting and fishing program with 7k hunters and anglers annually
- Many events: monthly field trips, 2nd Saturday of every month, CA Duck Days, Tule Ranch Open House once each year
- Volunteers contribute over 4,000 hours per year. Yolo Basin Foundation and Wildlife Area share a volunteer coordinator
- Research conducted in the Wildlife Area: pollution studies, giant garter snake, bird banding, native fish habitat studies among others
- Many endangered species documented in Wildlife Area
- Known for spectacular views of migratory birds
- Wetland Management:
 - Most managed as seasonal wetlands, with a drawdown date of April 1st. Depth ranging from 6 inches to 2 feet with average ~1.5 feet. Need to keep emergent vegetation at less than 5%
 - Permanent wetlands are flooded all year, at ~ 4 to 5 feet deep – several hundred acres. Emergent vegetation kept at 50%
- Agriculture: ~\$500,000 per year directly for Wildlife Area operations / leases managed by Dixon RCD
 - White Rice: Ground work starts in early March with Planting by early April
 - Wild Rice: ground work can start as late as early May, with planting by late May; cannot plant wild rice every year
 - Grazing: water should be off fields by late March or invasive plants predominate; pregnant heifers brought to pastures in April
- The ability to control water is the key to maximizing habitat benefits; preventing proliferation of emergent vegetation that slows down flood water; minimizing mosquito production; reducing methylation of Mercury
- Yolo Basin Foundation – dedicated to the appreciation and stewardship of wetlands and wildlife through education and innovative partnerships
 - Discover the Flyway – 4,000 children per year – important environmental education throughout 5 county area
 - Docent program
 - Yolo Bypass Working Group – ad hoc Stakeholder group - improves communication and raises awareness among diverse community and interest groups
 - Yolo Wildlife Area Management Plan – one of the most important results of successful partnerships in the Bypass