

LOCAL IMPACTS FROM HABITAT DEVELOPMENT AND DELTA INFRASTRUCTURE PROJECTS AND SUGGESTED SOLUTIONS

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Bay Delta Conservation Plan (BDCP) Conservation Measures (and other similar efforts / requirements) will include habitat development projects that may result in a number of economic and physical impacts to local governments, local districts, and landowners. Habitat development projects can include but not be limited to:

- Enhancement of existing private or public habitat
- Restoration of habitat on lands of historic similar habitat type
- Creation of habitat on lands that did not historically have such habitat
- Water delivery and operations

For the purpose of this document, any party(ies) (private or public) assuming the responsibility to design, fund, implement and/or maintain a habitat development project is referred to as the "Implementing Entity". All Implementing Entities will ensure that any proposed habitat project is consistent with existing and anticipated land use policies, guidelines, and agreements including but not limited to the most current (at the time of parcel-specific design and implementation) versions of the following:

- Delta Protection Commission's Land Use and Resource Management Plan,
- Department of Fish and Game (DFG) Yolo Bypass Wildlife Area Management Plan,
- Solano Habitat Conservation Plan (HCP)
- Yolo Natural Heritage HCP and Natural Communities Conservation Plan (NCCP)
- Solano County General Plan
- Yolo County General Plan
- Sacramento County General Plan
- City of West Sacramento General Plan
- City of Davis General Plan
- City of Woodland General Plan
- CALFED Record of Decision
- The existing statutory and regulatory framework between Yolo Bypass Reclamation Districts (RD) and the Department of Water Resources (DWR) and the US. Army Corps of Engineers (USACE) regarding levee maintenance and flood protection.
- Existing flowage, vegetation management, mineral management easement agreements and permits/regulations between private and public landowners and the DWR / Central Valley Flood Protection Board

- Existing conservation easements between private and public landowners and DFG, US Fish and Wildlife Service, the US Natural Resources Conservation Service / Farm Service Agency, local land conservancies, and others
- Central Valley Flood Protection Plan (CVFPP) (pending approval in 2012 and every five years thereafter.
- Delta Methylmercury Total Maximum Daily Load (potential approval in 2010)

As a rule and whenever possible, habitat development projects should avoid impacts first. This document is consistent with and should be considered as a precursor to any Conservation Measure prepared by BDCP or the Lower Yolo Bypass Planning Forum regarding the Yolo Bypass / Lower Yolo Bypass / North Delta region.

Section 1 - Habitat Development on Agricultural Land and Changes to Current Management of Private and Public Managed Wetlands

Implementing Entities of habitat development must not use condemnation to achieve habitat goals. All projects must be with willing landowners only.

Impacts to Private Landowners

For projects where the landowner will continue to hold fee-title on their parcel, Implementing Entities will be responsible for the following:

1. Provide a one-time, easement-type payment (amount to be determined at a later date) to the landowner.
2. Provide a yearly, per-acre fee (amount to be determined at a later date) to the landowner.
3. Design, fund, and implement all initial infrastructure required to successfully manage a habitat project and achieve habitat goals on the project parcel.
4. Design, fund, and implement all physical / structural / regulatory protections for adjacent landowners that are not part of a habitat development agreement.
5. In partnership with the landowner, develop a project-specific "Management Agreement" that will include but not be limited to the following topics:
 - All operations and maintenance agreements including target timeframes and specific responsibilities
 - Hold harmless clauses to protect the landowner and adjacent landowners from impacts related to the presence / introduction of endangered species.

- The amount and basis for the one-time easement payment, and yearly per-acre fee
 - Description of specific goals and objectives to be achieved with the respective parcel.
 - Parcel-specific restrictions including but not limited to acceptable timeframes to deliver flood waters, conduct onsite preparation and maintenance, and similar topics.
 - Adaptive management provisions to address unforeseen impacts (see below for additional discussion)
 - Vector control methods
 - Management of invasive species and agricultural / managed wetlands pests
 - Monitoring methods
6. For projects that include the delivery of additional flood flows from the upstream portion of the Yolo Bypass the following also apply:
- Isolate the project parcel such that water can be delivered and managed as per the seasonal willingness of the landowner.
 - Conduct all pre and post-flood field maintenance

Impacts to Yolo Bypass Wildlife Area

In partnership with State Department of Fish and Game land management staff and with outreach to Wildlife Area partners:

1. Design, fund, and implement all initial infrastructure required to successfully manage to achieve goals of the BDCP related habitat project.
2. Design, fund, and implement all necessary physical / structural protections for adjacent landowners that are not part of the habitat project.
3. Develop a plan and procure ongoing operations and maintenance funding.
4. Develop a project-specific "Management Agreement" that recognizes the goals and objectives of the Yolo Bypass Wildlife Area Land Management Plan and that will include but not be limited to the following topics:
 - All operations and maintenance activities including target timeframes and specific responsibilities
 - Description of specific goals and objectives to be achieved with the respective unit.
 - Unit-specific restrictions including but not limited to acceptable timeframes to deliver flood waters, conduct onsite preparation and maintenance, and impacts to surrounding units.
 - Adaptive management provisions to address unforeseen impacts
 - Vector control methods
 - Management of invasive species and agricultural / managed wetlands pests

- Monitoring methods
- Conduct of all pre and post-flood field maintenance
- Hold harmless clauses to protect adjacent landowners from impacts related to the presence / introduction of endangered species.

5, If increased inundation limits or prohibits existing public access and public use programs on the Yolo Bypass Wildlife Area, then additional acreage needs to be provided adjacent to the Yolo Bypass for those uses to continue. This land base should include access infrastructure, habitat development, funding to modify existing programs to fit new lands and ongoing management funds.

Lost Business Opportunity and Income

The Implementing Entity should pay a one time, per acre charge to the affected county to administer programs that help mitigate third party impacts of habitat development projects. Furthermore, funding should be made available to improve agricultural support facilities to maintain a sustainable agricultural infrastructure. Finally, habitat projects should also require offsetting preservation of agricultural land (ratio to be determined) through easements or fee title.

Loss of Property Tax to Local Governments

Parcels where the Implementing Entity acquires fee-title are often taken off property tax rolls if the new owner is a public entity (State, Federal agency or public district such as a Water District). In such cases, the new owner must provide a guaranteed source of “payment in lieu of tax” that is not dependent on State or Federal appropriations or General Fund revenues. Annual lump-sum payments may be preferred by local governments in some cases.

Loss of District Assessment Fees for Public Services

Similar to the loss of property taxes, fee-title acquisition can result in the loss of fees paid to fee assessing districts that support a range of responsibilities (i.e., water delivery, levee maintenance, emergency services, etc.). Prior to implementation of any habitat development project that requires the purchase of an interest in land or easements, the Implementing Entity must demonstrate its ability to pay in perpetuity all assessments, fees and charges due to local districts (unless it is subject to Proposition 218 restrictions).

Road / Transportation Impacts

Habitat development projects may impact local and State roads through one or more of the following scenarios:

- Temporary closure due to construction activities

- Damage due to construction activities
- Increased traffic and exceedance of service levels due to public visitation

If existing roads are impacted due to a habitat development project, the Implementing Entity will be responsible for one or more of the following:

- Provide new road alternatives and detours
- Conduct proper compliance and implementation steps to modify the service level of the road
- Repair all road damages

Adaptive Management

The BDCP as a program, and specific Implementing Entities must design and implement an adaptive process to address and resolve impacts caused by the implementation of habitat development projects. Potential negative impacts that could occur and require modification of a project may include but not be limited to: reduction of Yolo Bypass flood capacity as a result of extensive vegetation; erosion of, or seepage under levees adjacent to a project; human and environmental health risks from increased mosquito populations; increased water salinity impacting agricultural lands, freshwater habitats, and municipal, and industrial uses in the Delta; and reduced water surface elevations in sloughs and channels that might require relocation of Delta water diversion facilities.

Section 2 - Endangered Species Act (ESA) issues

Impacts to Adjacent Lands

As stated in Section 1, Implementing Entities should assume responsibility for all ESA impacts to lands adjacent to habitat developments such that the current landowners and managers are held harmless.

Local agricultural diversions and land management practices not already addressed in existing Federal Biological Opinions (BO) and/or State 2081 permits need ESA take coverage at no cost / impact to the local landowner / manager / agency providing such service. This will be achieved either through expanded inclusion in existing BOs, State assumption of ESA responsibility for local diverters, or agreements by an Implementing Entity to provide all financial coverage for avoidance structures such as fish screens, or the removal, relocation, consolidation of individual in-Delta, non-project diversions. The costs of moving / modifying / screening Delta water users' diversion facilities and the ongoing operation and maintenance costs of fish screens should be fully funded by the Implementing Entity.

If regulatory agencies require stricter water quality regulation due to the presence of new habitat and species, the State and or Implementing Entities shall be responsible for all costs of compliance in the watershed.

Section 3 - Flood Management

Maintenance and Improvements of Delta Levees

The Yolo Bypass does not currently provide capacity for 100-year flood flows. California law requires urban areas to have a minimum of 200-year flood protection. The CFVPP is being developed by DWR, and is likely to identify future improvements to the Yolo Bypass. It is therefore reasonably foreseeable that future flood improvements will be necessary in the Bypass. Habitat development projects proposed in the Yolo Bypass are likely to cause increased vegetation growth that may reduce the flood capacity and functionality of the Bypass and may violate USACE levee vegetation standards, unless they are properly managed to prevent growth. Vegetation can, over time, change hydraulic roughness which in turn results in higher water surface elevations, which effectively reduce flood capacity and increase flood risk. In other conditions, aquatic habitat may increase open water areas. Such changes increase the energy of waves and the potential for wave induced erosion on existing levees.

In this context, changes in the weirs and associated infrastructure of the Yolo Bypass should not be implemented to establish habitat before the completion of the CVFPP and must comply with the design and capacity needs of the Yolo Bypass identified in the CVFPP. Habitat established in the Yolo Bypass shall not impede or reduce the flood capacity of the Bypass, conflict with USACE levee vegetation standards, or interfere with any reasonably foreseeable flood control improvements to the Bypass.

Further, BDCP and Implementing Entities shall commit to funding long term vegetation management and hydraulic monitoring programs to identify hydraulic changes and prevent vegetation growth that impedes Yolo Bypass flood capacity or violates the vegetation standards of the USACE.

Lastly, the cost of controlling and repairing wave-related erosion damage due to open water habitat shall be paid for by the BDCP and Implementing Entities and as part of the BDCP Adaptive Management Program (previously discussed) any habitat project shall be re-designed to avoid future ongoing damage to levees. BDCP projects shall not redirect hydraulic or other impacts to levees or other flood control facilities. Ecosystem restoration must be secondary to the protection of public safety and private property and only be pursued if the primary public safety objective can be protected and assured.

Emergency Levee Response

Implementing Entities will work with local Delta governments / agencies, RDs, and DWR to develop and fund a comprehensive program to address emergency levee activities associated with habitat development projects.

Impacts to Rio Vista and Reclamation Districts East of the Yolo Bypass

Habitat projects adjacent to and upstream of Rio Vista, and immediately west of RD 999 and 501 pose a particular risk due to the questionable flood retaining capacity of inland Federal Flood Project levees that have no ‘wetted edge’. This is particularly important in areas adjacent to Egbert Tract (near Rio Vista) and the area known as “Five Points” (north of Prospect Island)

Implementing Entities will fully mitigate any impacts associated with increased river stage due to habitat projects. If restricted height levees at Egbert Tract and Prospect Island are removed, currently dry levees must be evaluated and improved to provide adequate flood protection.

Section 4 – Other Impacts

Mosquito & Vectors

Implementing Entities must not increase the population of vector species, such as mosquitoes, that would create increased vector control costs as a result of habitat development activities on adjacent lands. Vector control, including Best Management Practices (BMPs) for managed wetlands, must be described and funded as part of the Management Agreements (see Section

Invasive Species and Agricultural Pests

Management Agreements must address and fund measures such as rapid intervention programs when invasive species are first discovered. Increased flooding could result in a profusion of invasive plants. Funding must be made available to control these plants using BMPs, including (but not limited to) herbicide or mechanical means such as mowing or discing.

Loss of Existing Wildlife

Implementing Entities must provide mitigation for impacts to existing fish and wildlife populations and habitat resulting from developments of habitat for endangered species. Additionally, all habitat development projects must be consistent with existing federal and state habitat easements, many of which are held in perpetuity.

Geographic Habitat Development Limits

BDCP (and related efforts) will determine an upper limit of habitat developments in each County (or part of a county). This limit should be mapped out geographically to clearly show the extent of potential development, including the extent of inundation due to sea level rise on lands not previously subject to flooding. Any developments above that amount will only be done with concurrence of the County. Projects shall internally incorporate buffers sufficient to avoid physical or regulatory impacts on adjacent properties or operations.

Local HCPs/NCCPs

Delta habitat lands must be counted as part of mitigation requirements for the Solano HCP and the Yolo Natural Heritage Program HCP / NCCP. These local HCP / NCCPs can not be impacted and lose species protection credits due to larger geographic efforts being addressed through BDCP.

Monitoring and Management of New Habitats

New habitat development should be accompanied by a thorough monitoring program which will develop measures for success, indicators for problems, and associated adaptive management techniques (see Section 1). Implementing Entities need to show proof of advance funding for such monitoring to ensure it is implemented properly.

Potential Increases in Delta Water Salinity

No changes may be made to existing North Delta Water Agency (NDWA) Contract criteria and all BDCP projects must not violate NDWA Contract criteria. Agricultural salinity water quality standards should be set through the State Water Resources Control Board. Flows in the Sacramento River and sloughs must be sufficient to maintain or improve current salinity levels, particularly in Cache Slough and Rio Vista reaches.

Methylmercury Production and Control

Habitat development projects should result in no net increase in methylmercury production or transport. Projects and Implementing Entities must be in compliance with the pending Delta Methylmercury Total Maximum Daily Load. If the conceptual BMPs discussed in the CALFED ERP are not sufficient to avoid this threat, additional mitigation must be made available to all impacted parties. Mitigation options for methylmercury production require further definition and should be addressed in Management Agreements.

Water Rights

No changes can be made to existing area of origin and Delta Protection Act laws. Additionally, the existing water rights priority system and NDWA contract must be maintained and honored.