

BDCP

BAY DELTA CONSERVATION PLAN

FACTS ABOUT BDCP HABITAT RESTORATION

The alteration of river corridors, channels, and adjacent floodplains in the Delta has significantly and permanently changed the natural habitat, diminishing the ability of the ecosystem to support native species. The BDCP Habitat Restoration Program Technical Team is charged with developing and recommending conservation actions that would restore these remnants of natural habitat and where possible expand habitat to mimic natural conditions. The objective is to improve the living conditions, in particular the availability of food and good locations for spawning and rearing, for BDCP covered species in this highly changed environment.

The specific issues being addressed by the Habitat Restoration Program Technical Team include:

- ▶ Identifying areas with appropriate elevations that may be suitable for expanding and enhancing habitat
- ▶ Defining the ecological functions that would need to be provided by restored habitats
- ▶ Prioritizing habitat restoration opportunities
- ▶ Identifying approaches for restoring habitats
- ▶ Evaluating the feasibility of restoration concepts based on current and future land use, interests and concerns of local communities, anticipated cost, and the requirements of monitoring and adaptive management

MAJOR PHYSICAL HABITAT RESTORATION CONCEPTS UNDERGOING INVESTIGATION INCLUDE:

Floodplain restoration—under this concept, suitable floodplain (i.e., lands adjacent to channels that currently or historically were flooded during periods of high flow) would be inundated more frequently, at greater depths, or for longer periods of time during winter and spring.

How would floodplain restoration help?

Inundated floodplains:

- 1) *Produce large quantities of phytoplankton and zooplankton (fish food) that are transported into the Delta and support the Delta food web, and*
- 2) *Provide spawning habitat for Sacramento splittail and rearing habitat for splittail and salmon species.*

Restoring floodplains can be accomplished by reconnecting historical floodplains to channels using set-back levees or by increasing the frequency with which existing connected floodplains are inundated by water that tops the bank. Careful attention will be paid to ensuring that floodplain restoration does not interfere with current or future land use and that it does not increase local flood risk.



The Yolo Basin Wildlife Area near Davis, California, in Yolo County is a good example of floodplain restoration. Instead of flowing quickly down the ripped and channelized Sacramento River, water flows through the Yolo Bypass and over the floodplain and picks up nutrients along the way that are beneficial to fish.

Intertidal marsh restoration—under this concept, brackish and freshwater intertidal marsh would be restored by reintroducing a daily inflow and outflow of water to currently diked and leveed lands that historically supported marshes.

How would intertidal marsh restoration help?

Intertidal marshes produce large quantities of phytoplankton, zooplankton, and organic material that provide food for covered fish species and support food production in the Delta and Suisun Bay.



Channel margin habitat restoration—under this concept, suitable sites along the water side of levees would be restored to a more natural state. This could be accomplished by increasing instream woody material (e.g., logs), restoring riparian vegetation to provide overhanging shade (trees and bushes), and constructing shallow benches that periodically are exposed to discourage predators.

How would channel margin habitat restoration help?

Riverbanks in a more natural state increase food production, provide rearing habitat, improve local water temperature conditions, and provide movement corridors for covered fish species.



Juvenile salmon that grow up in a floodplain (right) grow faster and larger than those from the main channel (left).

ACCOMMODATING LAND USE AND DEVELOPMENT

Existing and future land use and development plans will influence the feasibility of restoration concepts and the viability of the restored habitat. A major component of BDCP implementation will be in working with local land owners to assess their interest in participating in the restoration program. No land will be sought for the restoration program unless the landowner is supportive and a mutually beneficial agreement can be made. In addition, the environmental review of the BDCP will include an analysis of the human environment, including the potential impact to local landowners and communities, and will identify necessary mitigation measures.

The purpose of the BDCP is to provide for the recovery of endangered and sensitive species and their habitats in a manner that also will provide for the protection and restoration of water supplies.

For more information about the BDCP, contact: Keith Coolidge, 916/445-0092. For more information about BDCP habitat restoration efforts, please contact: Pete Rawlings, 916/949-6786.

GENERAL PROCESS FOR BDCP HABITAT RESTORATION ELEMENTS

