CALFED
BAY-DELTA
PROGRAM

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15 point scenario for a variable Delta

This 15 point scenario for a variable Delta was compiled by Mike Healey from the suggestions made in the PPIC Report and some additional ideas from the science workshop on variable salinity.

1. Devote much of the central and western part of the Delta, Suisun Bay and Suisun Marsh to wildlife/fisheries habitat.
2. During annual low flow periods, allow salt to penetrate deeply into the central and western region of the Delta but during high flow periods release more water through the Delta to push salt wedge far seaward to create variable salinity over a wide area with the expectation that this variation will reduce the abundance of Egeria and invasive clams. During wet periods the salt intrusion will be less (the Delta will be essentially fresh year round) and during dry period the intrusion will be greater. Salinities must rise to 10-12 ppt over large areas for up to 4 months to affect Egeria and Clams significantly.
3. Plan for the strategic breaching of levees around Suisun Bay so that both freshwater and brackish marsh can expand and so that marsh habitats can migrate landward as sea level rises. Aim for an overall increase in total salt/fresh marsh area.
4. Protect Suisun Marsh and adjacent uplands from urban development so that the marsh can expand into the upland as sea level rises.
5. Construct gates in Freemont Slough and make other modifications so that Yolo Bypass can be inundated on a more regular basis.
6. Implement similar flooding potential for a flood bypass on lower the San Joaquin River.
7. Manage flows or use appropriate structure to ensure that floodplain wetlands on the Cosumnes, Mokelumne, and areas of lower San Joaquin are inundated annually.
8. Pursue Delta Wetlands Project by dedicating a number of islands as freshwater wetland/water storage areas. Construct sloping levees with riparian vegetation and create island topography that will allow shallow and deeper habitats.
9. Use selective flooding of western islands to create increased areas of brackish open water habitat. This habitat would have to have variable salinity to keep invasive clams and plants under control.
10. Construct barriers on selected channels to reestablish a more dendritic channel configuration in the western and parts of the central delta. The expectation is that this will create a more variable water mosaic in the Delta.

11. Protect significant areas of upland around margins of Delta from urban development. Practice wildlife friendly agriculture on as much of this area as possible. Dedicate parts of the area to creation of upland wildlife habitat.
12. Ensure open migration corridors for salmon and other species moving through the Delta; minimize distracting or confusing flows caused by water export pumps.
13. Improve connectivity among habitat types within the Delta and adjacent areas so that native species can move easily among suitable habitats.
14. Develop long range habitat plans for the Delta that take account of impending changes in climate, hydrology and sea level associated with global warming.
15. Implement a science and research infrastructure that can address the information needs for a sustainable delta.