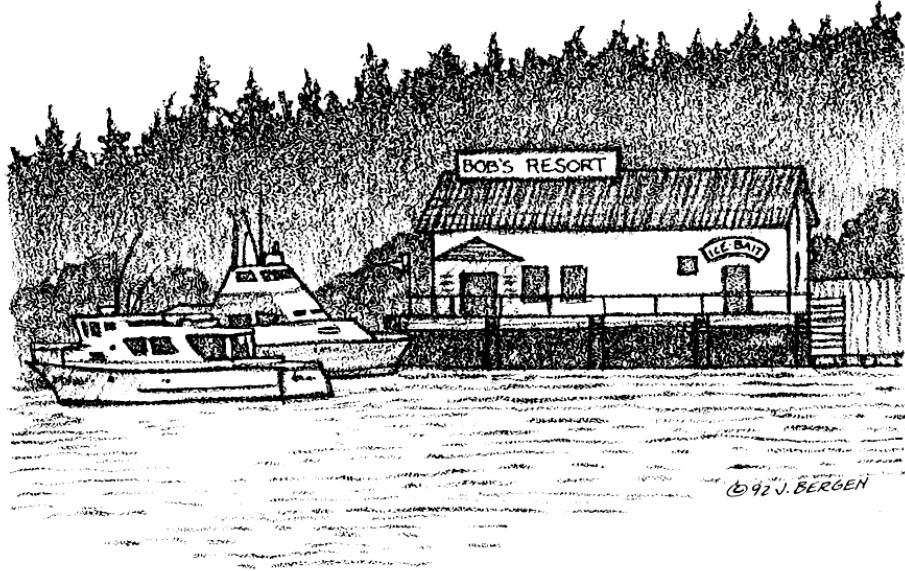


# Wetland Restoration and Creation

by Kenn Oberrecht



*Faced with the fact that less than half of America's original wetlands exist today, and armed with modern scientific knowledge and technological abilities, can we successfully restore some of the lost habitat and even create new wetlands? Well, maybe. We think so. We hope so.*

A term that has gained currency among land-use planners is mitigation. The authors of *Wetland Creation and Restoration: The Status of the Science* (Island Press, 1990) define mitigation as "the actual restoration, creation, or enhancement of wetlands to compensate for permitted wetland losses."

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Here's how it's supposed to work. Let's say a corporation has acquired a piece of bayfront property to develop into a motel-restaurant-marina complex. Assume the plans will pass all the usual tests and permits will be granted. Part of the land, however, is marsh that must be drained and filled. Elsewhere on the bay is another piece of property where no marsh exists, or perhaps where a marsh once existed but was drained and filled for agricultural use. In exchange for the marsh that construction will destroy, the developers agree to buy the other property and pay for creating, or re-creating, a comparable marsh there. Although that sounds like a fair trade, it doesn't always work out so simply. In fact, attempts to restore or create wetlands aren't always successful.

When we level a forest and replace harvested trees with seedlings, we aren't restoring the forest, with all the functions, complexities, and dynamics of a forest. We're creating a tree farm--planting a crop. Similarly, there's more to marsh creation or restoration than acquiring the land, seeing to hydrology problems, then planting grasses, sedges, and

other wetland vegetation. To succeed, it must perform as a marsh. Specifically, it must function as well as or better than the marsh lost in the mitigation process. Without the functions, complexities, and dynamics of a marsh, it will be little more than an expensive garden.

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Dr. Joy B. Zedler of San Diego State University has listed nine reasons why wetland functions are so difficult to replace, even though we might have the best intentions:

- ⇒ Original wetlands were not manmade.
- ⇒ We don't have blueprints to follow.
- ⇒ We don't know everything nature used as building materials.
- ⇒ Species don't stay put, as buildings, roads, and other structures do.
- ⇒ We don't know how all the components of a wetland interact and depend on one another.
- ⇒ We find it difficult to plan for a system that's naturally dynamic.
- ⇒ We don't know how to plan for permanence, because we don't know what combinations of functions will ensure resilience.
- ⇒ We don't know enough about wetland configuration and distribution to be sure that there will always be sufficient habitat to serve as refuges from threatening or harmful conditions.
- ⇒ It's difficult to plan a wetland when we can't predict problems that might arise during construction.

Land-use planners, managers, and scientists are working on these and other problems, but it will take time to solve them all. Meanwhile, we need to preserve existing wetlands and continue to look for ways to restore degraded ones. Mitigation is a step in the right direction, but it's no panacea.