What are the plans for estuarine restoration on the Nisqually Delta?

A lot of work will be necessary to restore the Nisqually estuary. Construction will occur over a 3-4 year period, beginning in 2008, pending permits. In year one, a new exterior dike will be built. During this time, there will be trail closures in some areas. The dirt to build the dike will come from the fields around the Twins Barns and other areas, which will provide larger, enhanced seasonal freshwater wetlands. Some water control structures will be installed and the ring dike will be removed. **Construction of the new dike may begin in mid July 2008.**

After one year of settling, the new exterior dike will be ready for receiving the tides of Puget Sound. Prior to its removal, work inside the old dike will require removal of water control structures and crossdikes, discing to break up thick root mats, and building up the riparian surge plain forest restoration site with dirt. At this point, the Brown Farm Dike will be removed. Most of the earthen dike will be pushed into the "borrow ditch" beside the dike. This is where the dirt came from originally. Some of the dirt will also be used to build new interior crossdikes to help manage water levels in the freshwater wetlands. The third big step will be the construction of the new boardwalk trail, which will be built in year two and three on the base of the old dike.

How is the project being accomplished?

Many partners have joined the Refuge to help make this project a reality, including the Nisqually Indian Tribe and Ducks Unlimited. The Tribe recently restored 140 acres of estuary habitat on the east side of the Nisqually River and together these projects will restore more than 900 acres in the Nisqually estuary. Funds contributed by partners include the Salmon Recovery Funding Board or Puget Sound Acquisition and Restoration funds from all five south Puget Sound watersheds; the Estuary and Salmon Restoration Program administered by Washington Department of Fish and Wildlife; National Fish and Wildlife Foundation; and the National Oceanic and Atmospheric Administration.

Salt marsh on the Nisqually Delta

Brochure photos by Refuge Volunteer Dennis Ellison

Will estuarine restoration change the trails at Nisqually NWR?

YES! Because successful estuary restoration requires complete tidal circulation and sediments to reach the area to support salt marsh, the dike must be removed and that will necessarily impact public access and trails. The Brown Farm Dike will be removed so the Brown Farm Dike Trail will no longer exist. However a new trail and boardwalk will be constructed to allow visitors to walk to the northwest corner of the delta, at the mouth of McAllister Creek. This trail will be a unique experience; you will be able to walk above the estuary, whether the tide is in or out, and see up close the amazing habitats that make up an estuary including high and low salt marsh, mudflats, and slough channels.

How can I find out about the changes and what trails are open?

The Refuge will make every effort to keep the public informed about trail closures and other important events. For on-going information you may:

- Call the Refuge anytime at (360)753-9467. If you don't get a live person, follow the prompts to "Refuge updates".
- Check the Refuge website at fws.gov/nisqually. Go to Events and News button.
- Get on the Refuge mailing list to receive the Refuge's quarterly newsletter "The Flyway".

Also, watch for signs at the fee station, Visitor Center reader board, and on the trails. Your patience is appreciated while we work to restore the Nisqually estuary.

How can I find more about the entire project?

The Nisqually NWR Comprehensive Conservation Plan, which details the changes, effects to wildlife and many other things can be found on line. Go to: http://www.fws.gov/pacific/planning/main/docs/WA/docsnisqually.htm

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Olympia, WA 98516
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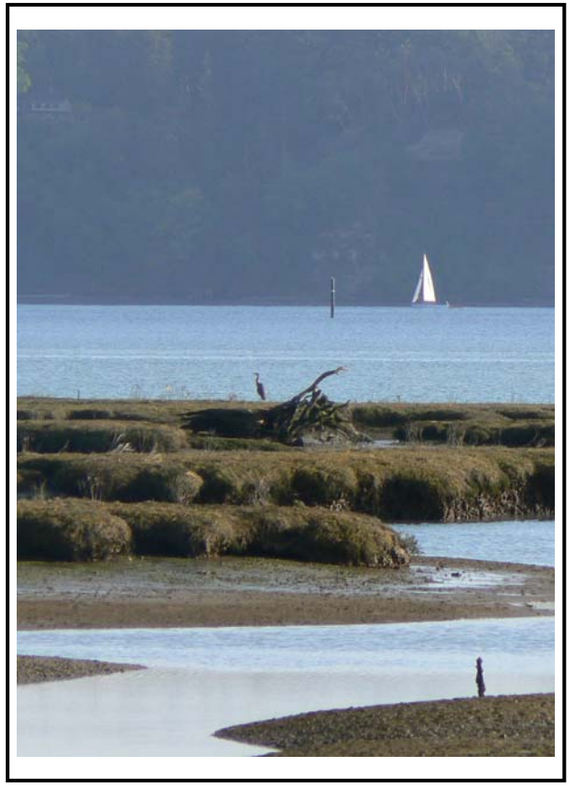
fws.gov/nisqually

Estuary Restoration



The Future of the Nisqually Delta

What is going to be restored at Nisqually NWR?

Nisqually NWR is restoring more than 760 acres of the Nisqually estuary, re-creating almost an entire estuary by returning diked areas back to tidal influence. The project will also restore 37 acres of riparian surge plain forest, an extremely depleted type of tidal forest important for juvenile salmon and songbirds. Freshwater wetlands will be enhanced and managed more intensively to control invasive plants on 246 acres to benefit migratory birds and other wildlife.

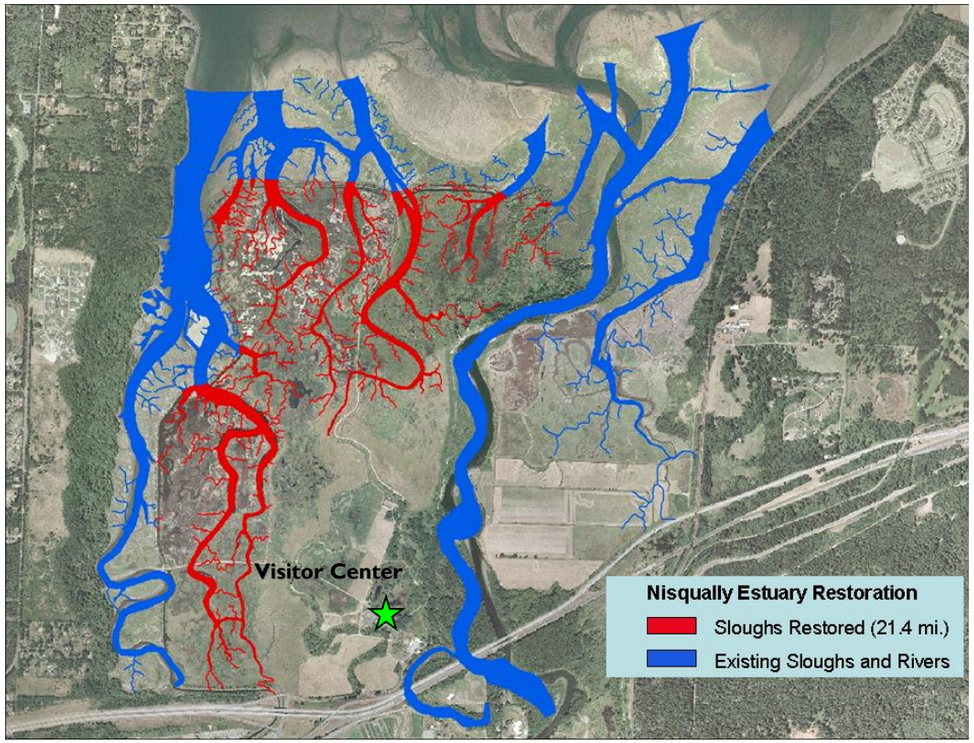
What is the value of habitat restoration and why is it needed at Nisqually NWR?

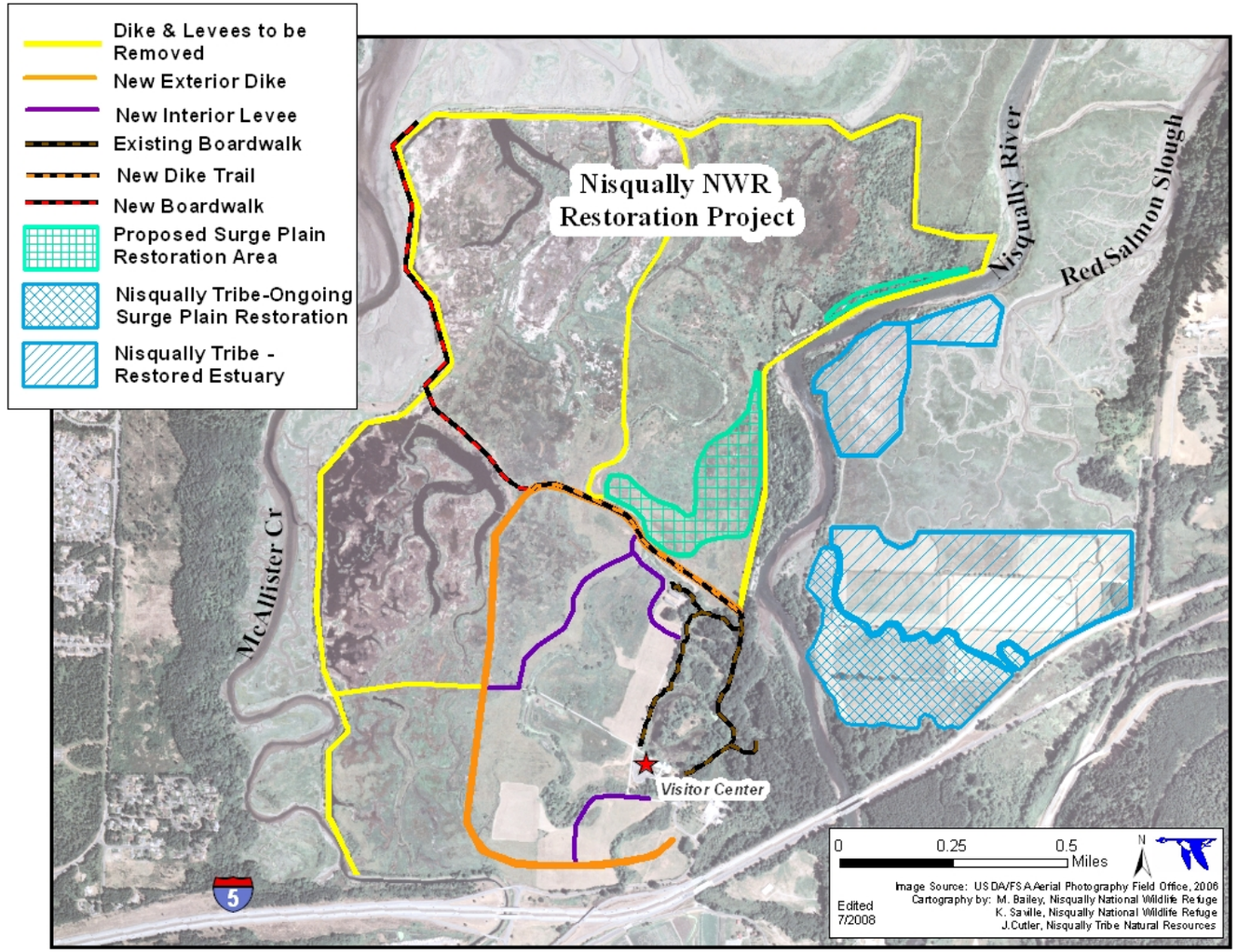
Many public lands have been impacted and degraded over time by human activity. These areas are often not as healthy and productive as they could be for wildlife and for the enjoyment by people. Successful habitat restoration projects can change all of that and will play an important role in recovering Puget Sound.

Prior to the late 1800s, the Nisqually estuary was intact. However by the early 1900s, 1000 acres of the Nisqually Delta were diked for farming; cutting off the salt marsh from the Nisqually River, McAllister Creek, and the tides of Puget Sound. Since the 1970s the Refuge has managed this area as freshwater wetlands and grasslands. Overtime, these habitats have become degraded and difficult to manage.

While the importance of estuaries to the health of Puget Sound has become well known, more than 80% of estuary habitat in Puget Sound has been lost due to diking, draining, and development. Many fish and wildlife that are dependent on estuaries are declining.

From 1996-2004, the Refuge conducted an extensive planning process with partners and public involvement, to consider what would be best for the wildlife resources of the delta. In 2004, the Nisqually NWR Comprehensive Conservation Plan was completed with the decision





to restore the estuary. This project is the top priority to recover federally threatened Chinook salmon in the Nisqually watershed. Migratory birds that depend on estuaries will also benefit, including waterfowl, waterbirds, shorebirds, and seabirds.

What is an estuary and why is estuarine habitat so important?

Estuaries are places where freshwater from rivers meet and mix with bodies of salt water like Puget Sound, to create one of the most important environments on earth. Estuaries support unique communities of plants and animals that make up the basis of the food web, provide a buffer from flooding, filter sediments and pollution, and provide an important source of recreation and economic benefits for people.

The Nisqually River estuary is one of the most extensive and productive estuaries in Puget Sound and it provides a unique, large scale restoration opportunity. The magnitude of this project will provide regional benefits to the greater Puget Sound area, including for many species of plants and animals that depend on the delta for one or more phases of their life cycles.