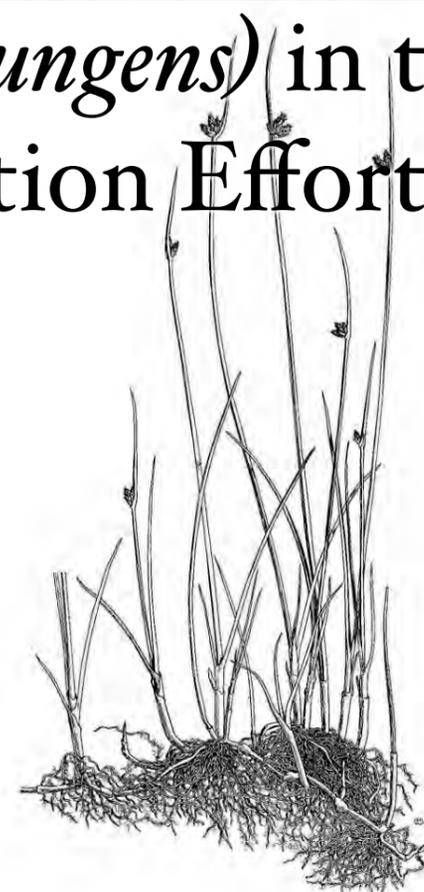


The Restoration of Sweetgrass (*Schoenoplectus pungens*) in the Nisqually Delta: An Ethnobotanical Restoration Effort

by Alex Harwell

University of Washington, School of Environmental and Forest Science



1. Introduction

The Puget Sound has been intensely altered from its original state through industrial and agricultural development. Currently we are realizing the toll of these activities on the environment and are seeking to restore these important ecological sites. The Nisqually estuary is a place where fresh water and salt water mingle; creating a unique ecosystem that performs many ecological functions. The drastic changes to the region within the last century have affected plant communities along the Nisqually River Delta. In 2009, the Brown Farm Dike was removed, reconnecting this estuary to natural tidal inundation.

Schoenoplectus pungens (Sweetgrass) is an estuary bullrush that is used in Northwest basketry techniques (Shebitz and Crandell 2012). This plant grows in low elevation salt marshes, often covered at least once a day by tidewater. There is interest within the Nisqually Tribe to establish a population of *S. pungens* in the estuary.



Sweetgrass gatherers, bundling their stocks (Shebitz and Crandell 2012).

2. Methods

- Transects of the area will be established with 5x5 plots monitored throughout the growing season
- The estuary will be evaluated by salinity, elevation, and soil testing
- Propagation protocol for *S. pungens* will be established through a seed germination and growth trial
- Growing conditions for *S. pungens* will be determined, identifying suitable propagation sites in the area.
- Over 200 bare root plugs of *S. pungens* were planted in Summer 2013; these will also be monitored for growth and survival rates.

3. Objectives

- * Define current plant associations in the area
- * Propose potential restoration actions
- * Identify reestablishment location and growth potential of *S. pungens*.



Coast Salish basket of sweetgrass and beargrass (Shebitz and Crandell 2012).

Acknowledgments Advisor- Kern Ewing; Nisqually Indian Tribe, especially Hanford McCloud; UW College of the Environment- travel grant; and WSNLA

Works Cited Shebitz, Daniela and Caren Crandell. *Weaving Cultural and Ecological Diversity*. From the Hands of a Weaver. University of Oklahoma: 2012. P.156

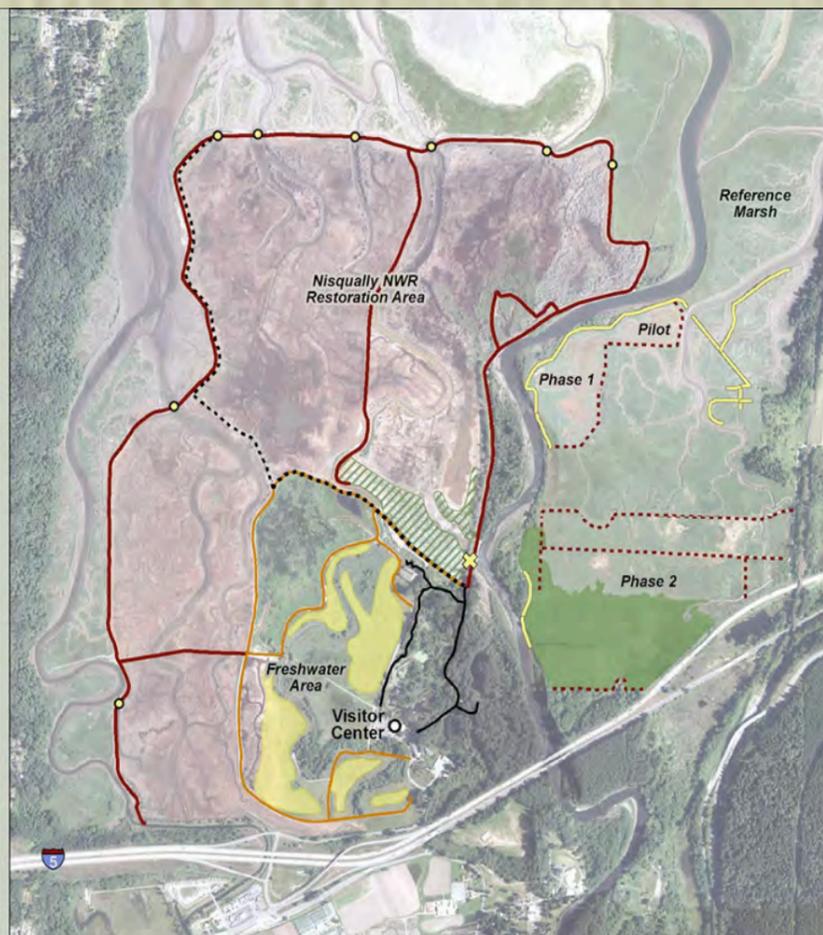
Nisqually Estuary Restoration
Status as of June 2011

Nisqually NWR

- Historic Sloughs Reconnected
- ✘ Log Jam Constructed
- Dikes and Levees Removed
- New Dike Constructed
- New Estuary Trail Completed
- New Estuary Boardwalk Completed
- Twin Barns Loop Trail
- Freshwater Wetlands Enhanced
- Surge Plain Restored

Nisqually Indian Tribe

- Dikes Removed
- Dike Removal Planned
- Surge Plain Restored



Cartography by: J. Cutler, Nisqually Indian Tribe