

# QUARTERMASTER HARBOR NITROGEN LOADING STUDY

## PUBLIC WORKSHOP

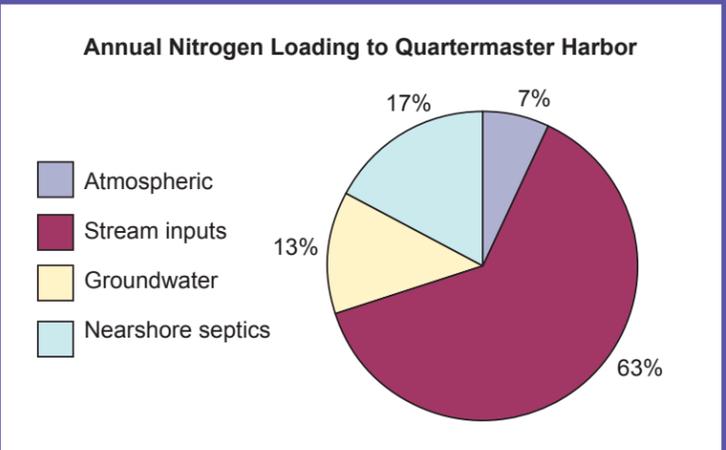
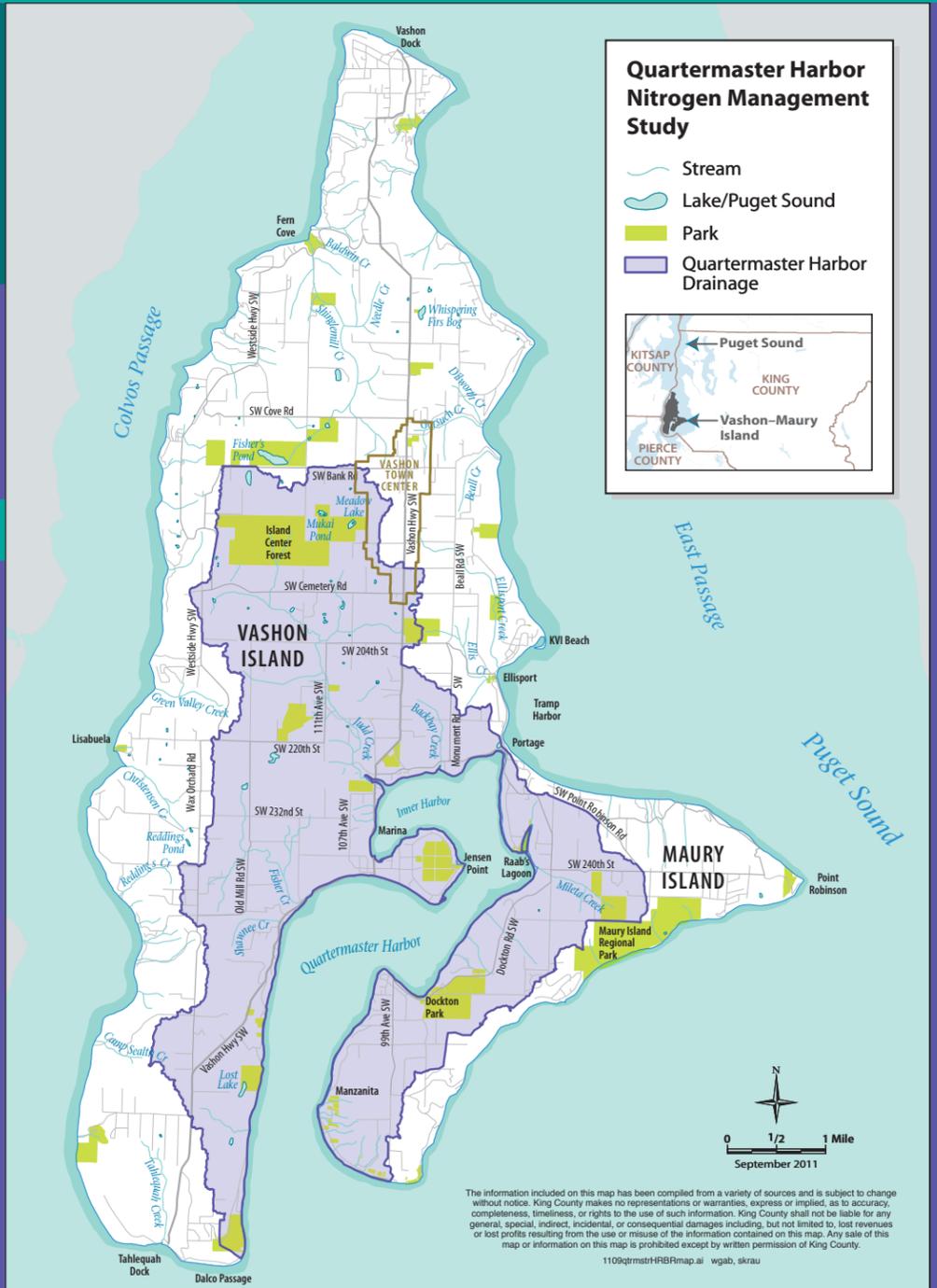
Wednesday, October 12, 2011, 6:30 p.m.  
Vashon High School Commons  
20120 Vashon Highway

The **Quartermaster Harbor Nitrogen Loading Study** is evaluating the role of nitrogen in low dissolved oxygen levels observed over the last five years of monthly monitoring by King County in Quartermaster Harbor (QMH).

### Objectives of this four year (2009-2012) study include:

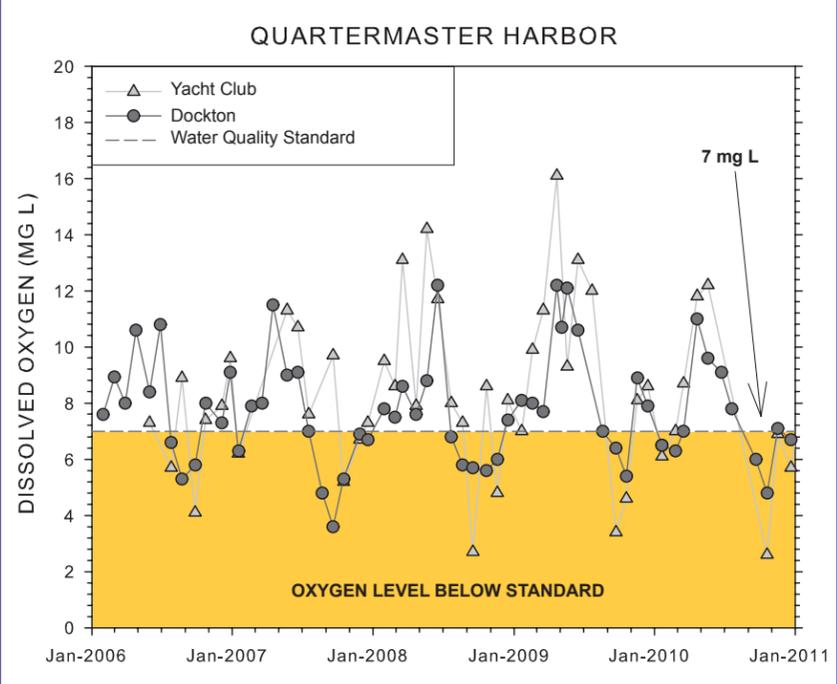
1. Determine the relative nitrogen loadings to QMH by source type: OSS, livestock (manure), fertilizer, alder forests, and other.
2. Model the loadings to simulate the time varying loads in a receiving water model.
3. Identify Best Management Practices (BMPs) to address the largest loadings identified.
4. Model effectiveness of nitrogen management on QMH dissolved oxygen levels, and compare the level of effectiveness of different management options with conceptual cost estimates.
5. Develop new policies for the 2012 King County Comprehensive Plan update related to nitrogen management on VMI, and to recommend management actions for implementing the new policies.

The long term outcomes are improved policies in the King County Comprehensive Plan and the implementation of land use management BMPs to reduce nitrogen loading to QMH and the prevention of low level oxygen events in QMH. These outcomes will be useful as a model for other rural areas of Puget Sound.



Relative contributions of various external nitrogen sources to Quartermaster Harbor.

Monthly sampling results for dissolved oxygen at the 4 to 9-m depth for King County monitoring stations in Quartermaster Harbor.



This study is a collaborative effort from the following agencies:



and the Vashon-Maury Island Groundwater Protection Committee.

For more information about this study: [www.kingcounty.gov/qmhnitrogenstudy](http://www.kingcounty.gov/qmhnitrogenstudy)