Challenges and Lessons Learned

Smith Island Estuary Restoration

Snohomish County
Long-Term Vision for the Estuary

Historical loss of vital habitat types

Altered landscape and infrastructure overlay creates complexities for restoration

Synergy among Snohomish Basin Forum Partners in restoration efforts
Project Began with Property Acquisition in 2003

Project site is approximately 400 acres

Snohomish County owns all the property within the project site

Goal is to restore properly functioning tidal wetland to as much of the site as possible
Infrastructure and Landward Property Must Be Protected

New setback dike will be constructed

Dike alignment set to maximize restoration area

Partnership with City of Everett for southern dike segment
Breaching Existing Riverside Dikes Will Restore Natural Tidal and River Hydrology

Re-engage natural tidal channels

Maximize tidal and river circulation
Restored Site Will Develop a Mosaic of Tidal Wetlands

Wide breaches

Jumpstarting tidal channels

Hummocks and remnant dike for upland habitat

Shallow-slope dike segments for emergent habitat
Project Status

- Environmental review – nearly complete
- Permitting – initiating
- Partner/stakeholder agreements – underway
- Final project design – underway
- Target construction date – Summer 2013
Implementation Challenges

Sociopolitical
Practical
Technical
Sociopolitical Challenges

Competing land use interests (e.g. agriculture and restoration)

Partnerships

Stakeholder support

Impacts to local business community

Lack of understanding among the general population
Practical Challenges

Long implementation timeframe

Strong/consistent project management

Establishing/maintaining trajectory

Funding

Site management prior to construction

Stakeholder involvement
### Net Gain for Agriculture means...
- Improve agricultural economic viability
- Farmland protection
- Regulatory certainty
- Infrastructure support

### Net Gain for Fish/Environment means...
- Continued progress toward Salmon Plan targets
- Improvements in water quality
- Broad based community support for actions
- Recognition of changing watershed dynamics
Technical Challenges

Predicting potential impacts:
- Erosion/sedimentation
- Groundwater levels and salinity effects
- Flood levels
- Drainage performance

Ensuring good results
- Subsidence issues
- Cost/benefit trade-offs
- Timeframe for measuring performance
And one last challenge and need... is for more collaboration among practitioners to help each other with questions like....

1. WHAT IS OTHERS EXPERIENCE WITH DIGGING/NOT DIGGING STARTER CHANNELS?
2. WHAT IS THE BEST WAY TO REMOVE THE EXISTING DIKE?
3. IS THERE A SIGNIFICANT HABITAT BENEFIT WITH SHALLOW SLOPE DIKES?
Thank You!

Snohomish County