

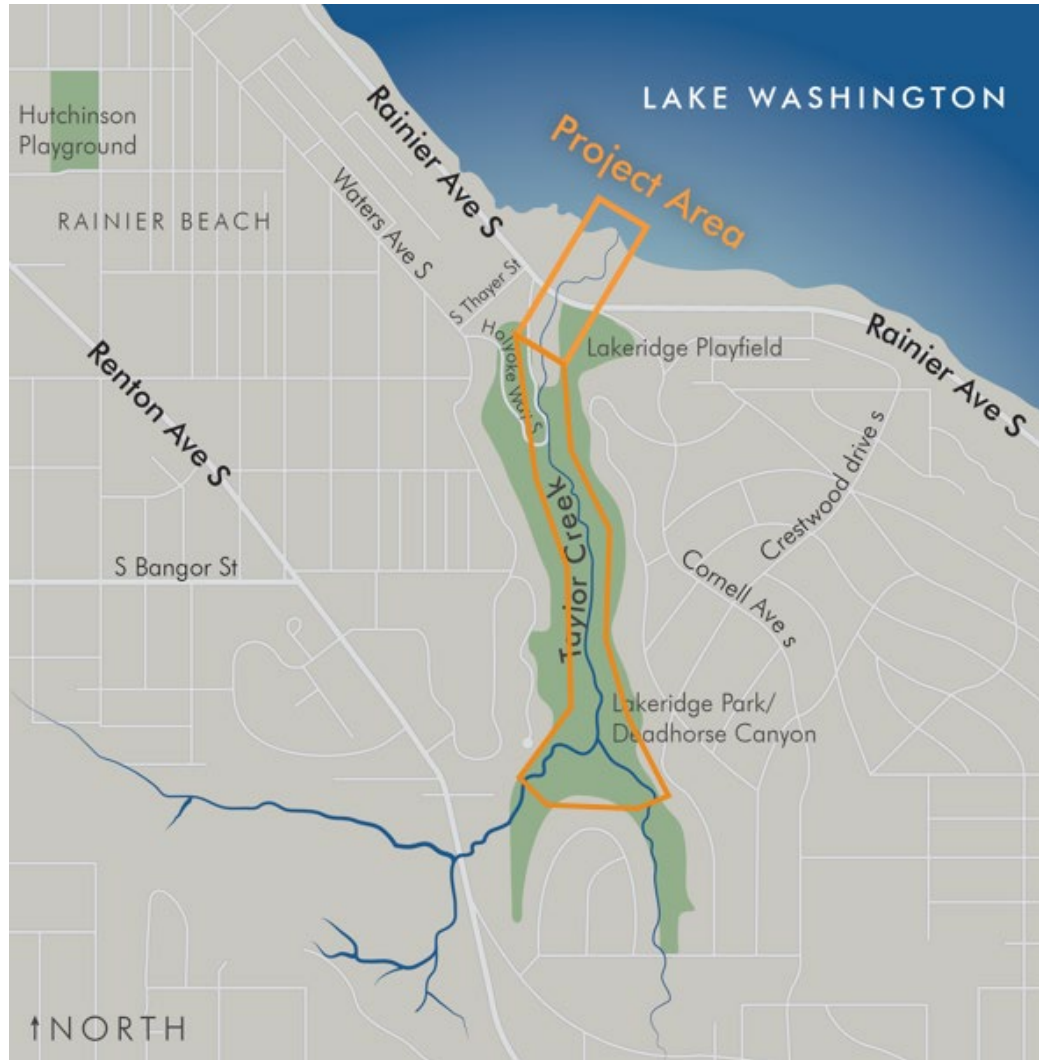
Taylor Creek Restoration

Urban Forestry Commission

Cody Nelson and Betsy Lyons

10/19/2022

Taylor Creek Watershed and Project Area



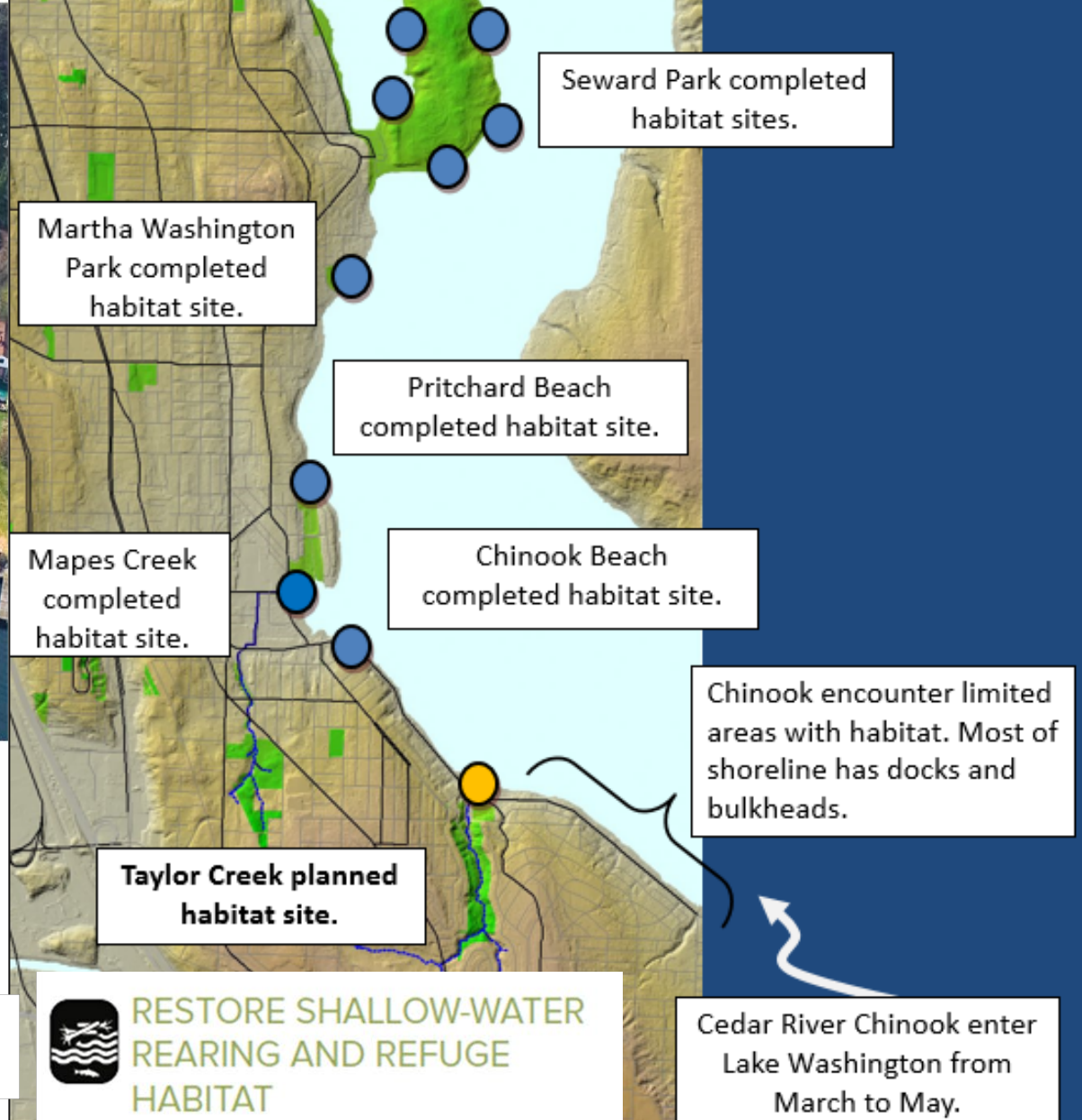


Regional investment in salmon recovery

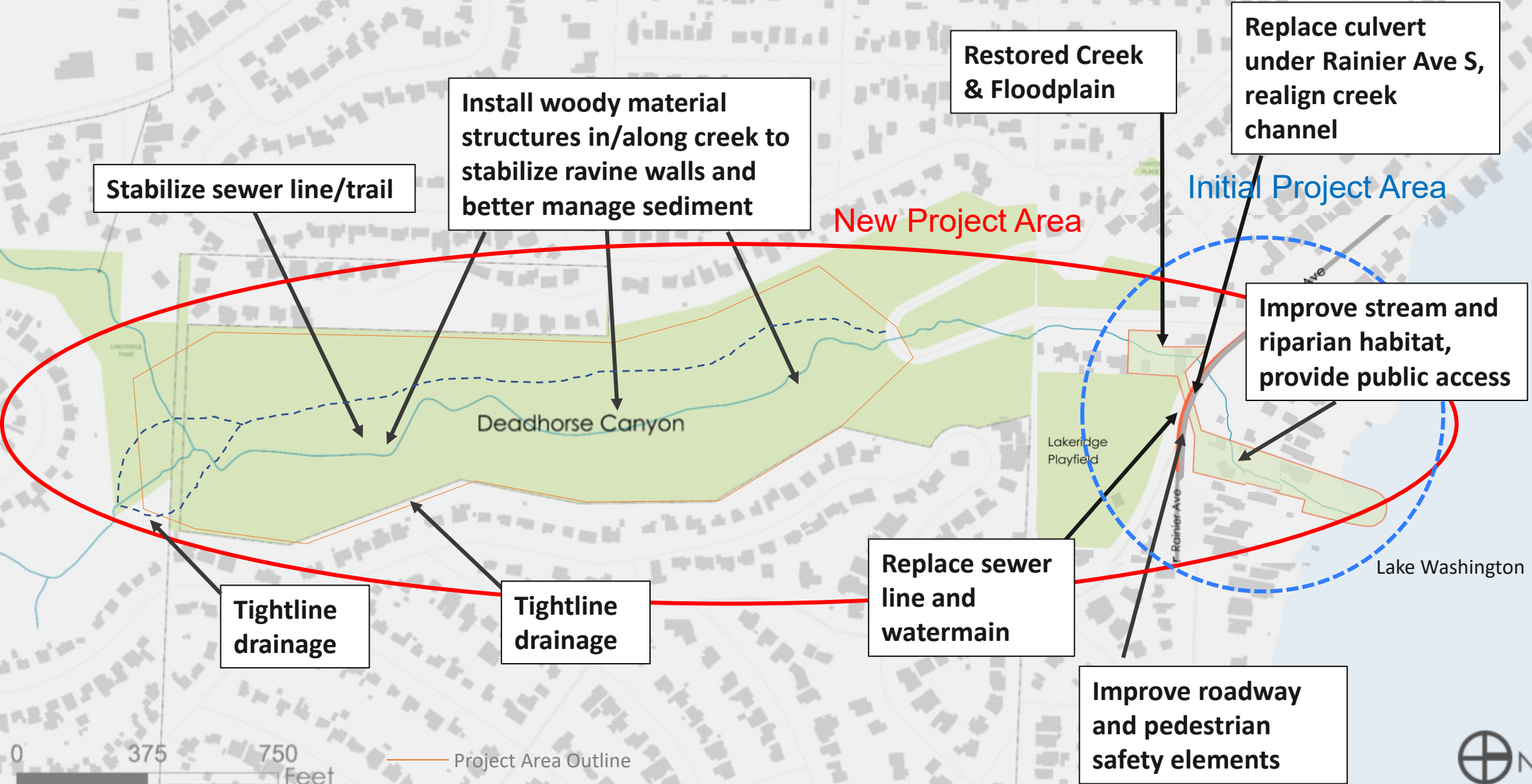
WRIA 8 SALMON RECOVERY STRATEGIES

 RECONNECT AND ENHANCE CREEK MOUTHS

 RESTORE SHALLOW-WATER REARING AND REFUGE HABITAT



Taylor Creek Project Elements



0 375 750 Feet

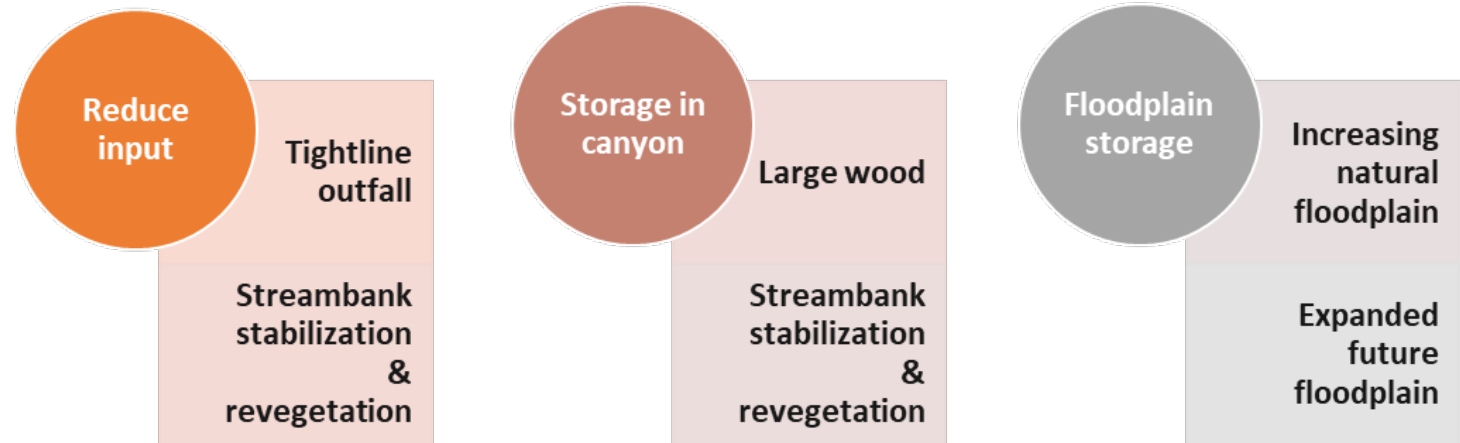
Project Area Outline



Sediment Management Strategy

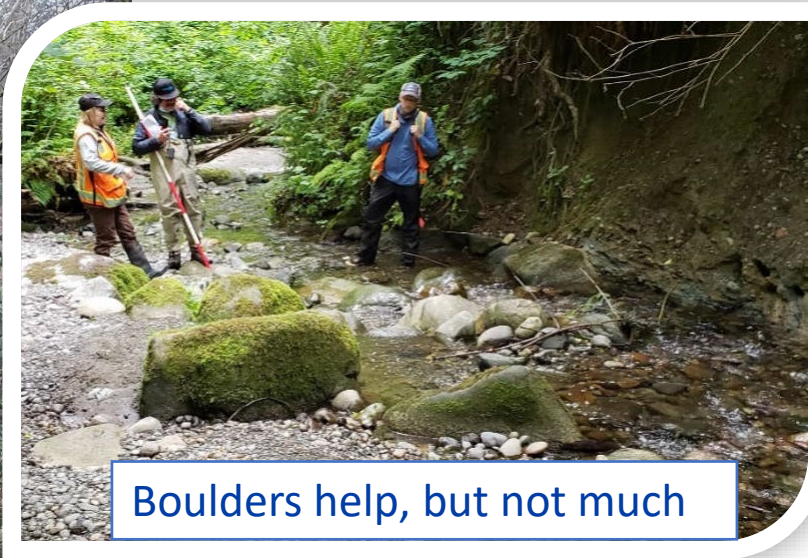
Repair, rebuild and reconnect

- Protect investment in salmon recovery
- Prevent sediment build-up in the culverts
- Reduce/eliminate need for repeated interventions in the creek
- Reduce flooding risk to houses below the canyon





Bank erosion – toe of steep slope



Boulders help, but not much



Some locations upstream have more wood



Gully, slope and bank erosion

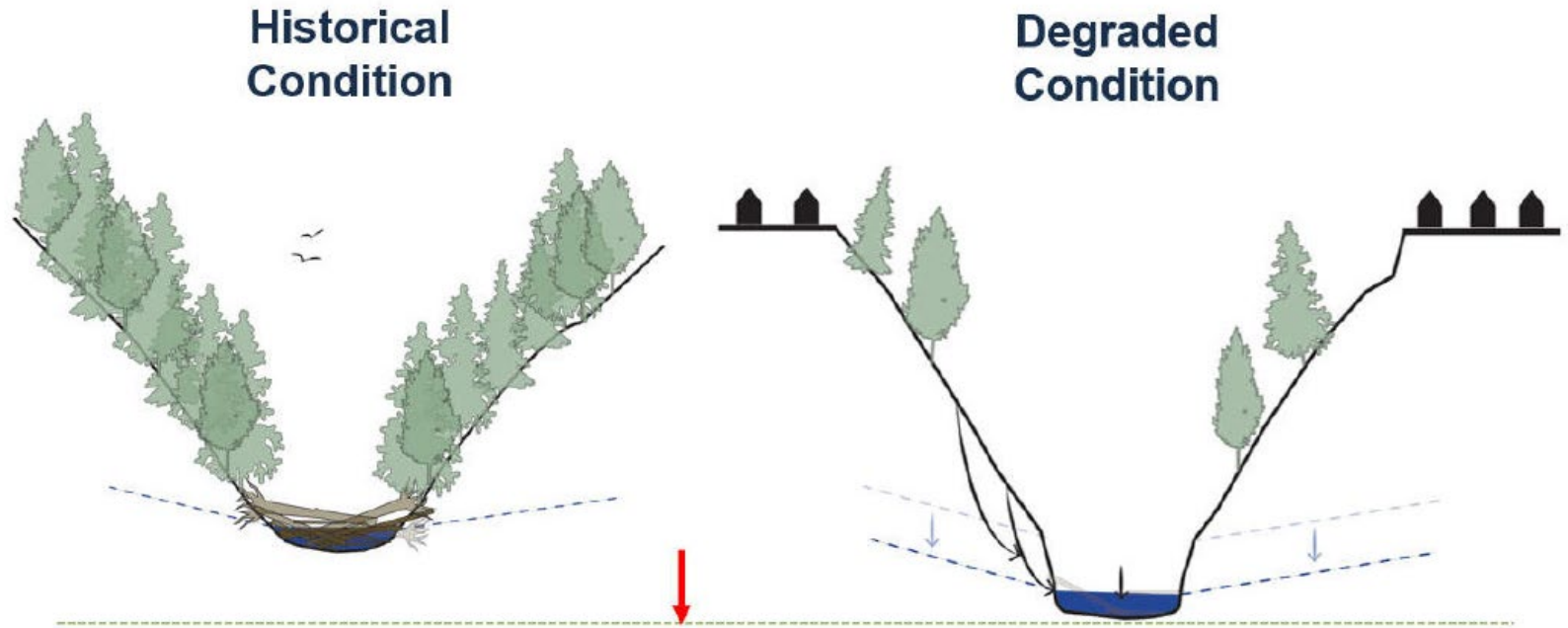
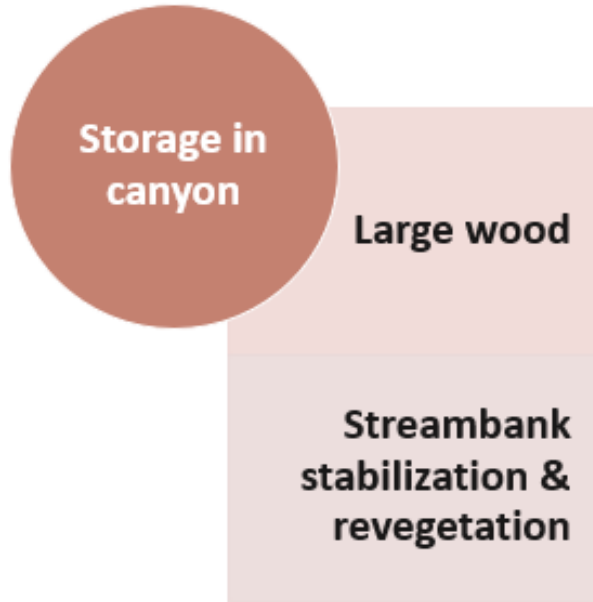
Current canyon conditions

Large Woody Material - what do we need it to do?

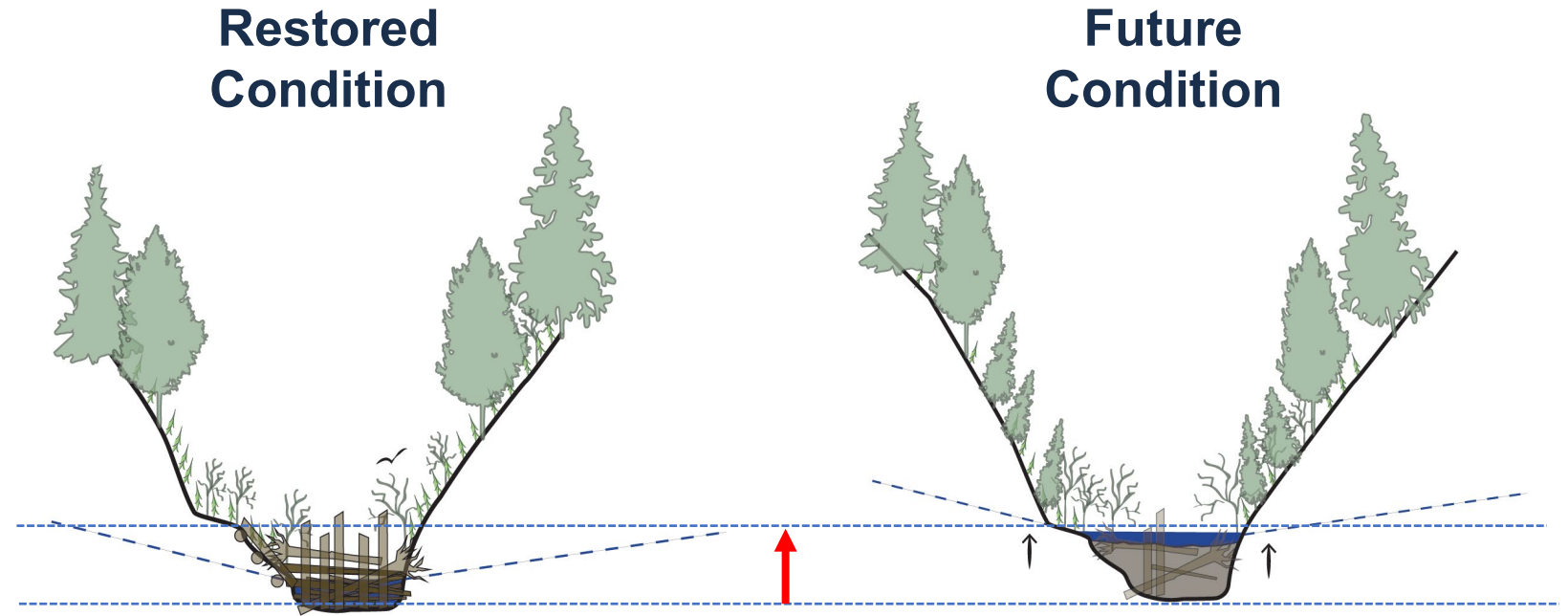
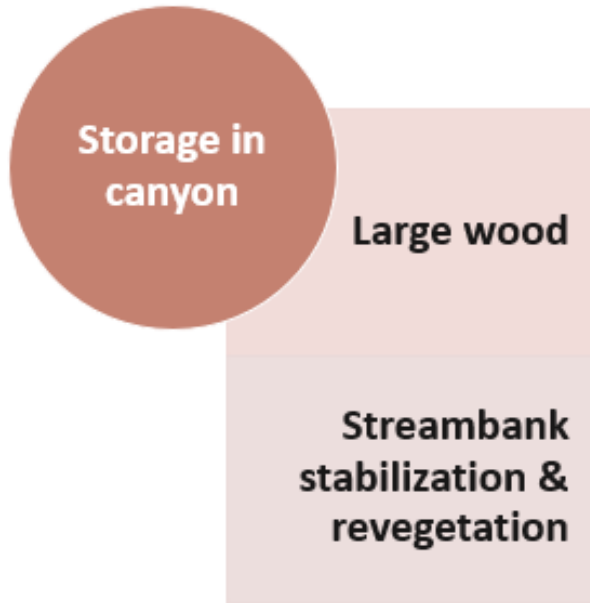
- Stay in place
- Capture sediment/prevent transport and deposition downstream
- Be large enough and capture enough sediment to get to target elevation
 - Connect channel with floodplain
 - Reduce erosional processes at banks



Sediment Management Strategy



Sediment Management Strategy

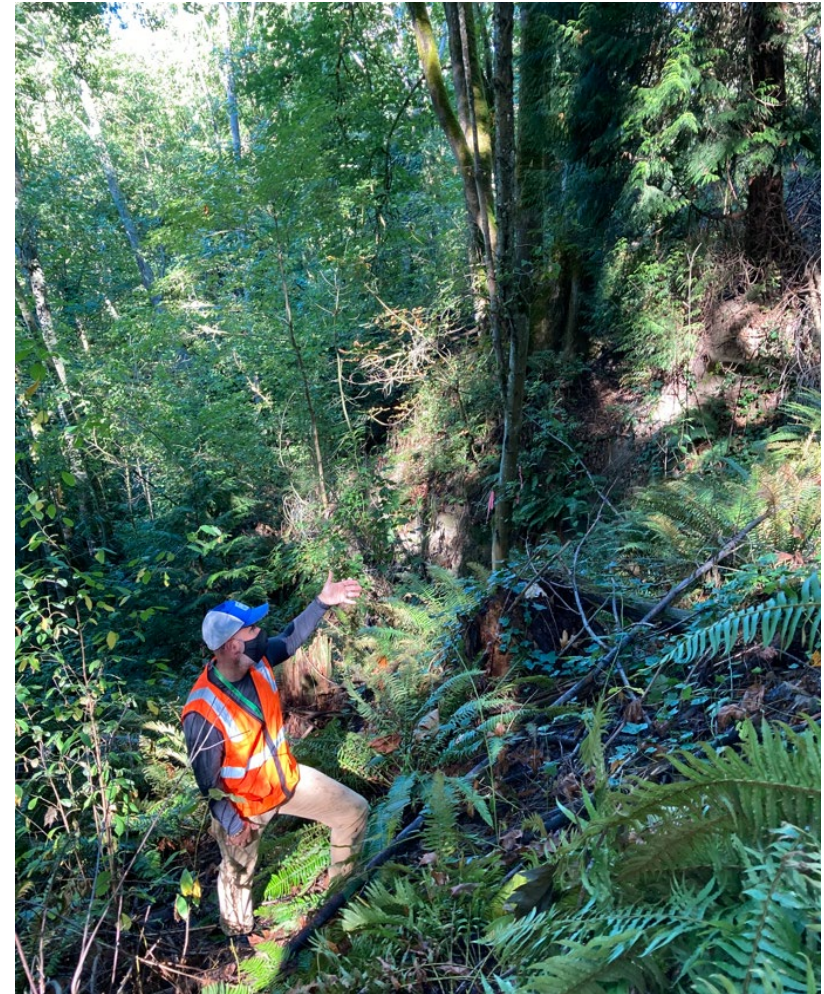


Site Challenges

- Steep ravine
- Natural landslides
- No road access
- Privately owned properties surrounding ravine
- Maturing forest
- Sewer line



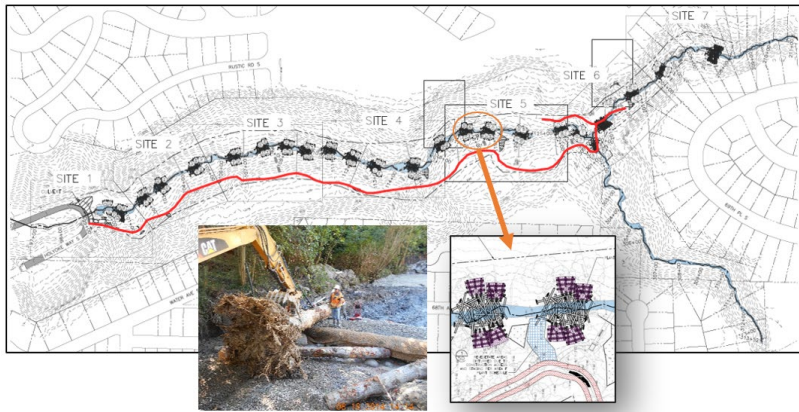
Existing walking path over sewer line showing upslope and downslope trees



SPU-identified Sediment Management Options

1) Machine Placed

- Largest LWM
- Most sustainable
- Temp access road
- Construction equipment
- Tree removal
- Minimal O&M or add'l CIP



2) Hand Placed

- Smallest LWM
- Least sustainable
- Requires ongoing O&M or add'l CIP



3) Hybrid

- Combo small & large LWM
- Combo benefits
- Partial temp access road
- Construction equipment
- Tree removal
- Requires ongoing O&M or add'l CIP



Community & Stakeholder Input

Community concerns:

- **Tree and forest ecosystem impacts (temp road construction, tree removal, wildlife)**
- Alternative options to road??
- Increased community engagement and transparency

Parks supports project goals:

- Concerned about long term health & sustainability

Pausing design to evaluate additional, less impactful sediment management options.



Community Workshops

Community co-development workshops & feedback - **underway**



- Identify community priorities
- Evaluate community partnership potential for maintenance of installations/vegetation
- Reduce impact to trees
- Achieve sediment management goals of reducing erosion, building up canyon floor, connecting to floodplain, increasing habitat quality

Community Ideas (so far):

- *Prioritize tree preservation*
- *Community Partnerships for stewardship/maintenance*
- *Alternate access point*
- *Property purchase*
- *Carbon minimization /offset*
- *Incremental construction*
- *Monitor to determine O&M or add'l CIP*

Recent Brainstorm

- Animal delivery + machine or human installation
- Incremental approach
- New access point – fewer tree impacts
- Re-evaluate helicopter delivery
- More source control
- Community Education

THEMES	IDEAS			
Incremental Approach	Primary sources of sed - East and North- address only those areas?	Incremental approach, measuring sed reduction and forest health insights after some implementation	Tightlining before implementing wood	High level outflow
New Access Point	Consider temp road access from southern part of canyon, acquiring add'l property	11425 64th pl s or other property for access	KC Conservation Futures and Parks Open Space Committee	
Alternatives to Road	Animal assisted approach could be an element	using helicopters to import/export	Assemble machinery in canyon, deliver materials, build LWM, disassemble after to remove	
Community Education	Outreach to schools for environmental science curriculum	having schools do the monitoring work as part of science curric/citizen science/building conservation corps	potential for building out other priority restoration of parcels/educating community on sources/control	GND Principles and Parks Levy alignment
Source Control/Upstream Management	Involving KC Council & rep Zahilay	KC GSI collab & SPU's new incentive prog	Look at where flashiest water is coming into canyon and address source	

Questions and Feedback

New strategies/options that:

- Restore the stream, reduce erosion, capture sediment
- Protect & restore the forest
- Invest in local community needs and interests
- Create a more resilient ecosystem from the canyon to the shoreline

