

## Erosion Control and Storm Water Volume in the EHNSWB Overlay

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- There are two main issues related to the EHNSWB Overlay
  - Erosion control during development
  - Stormwater management after development
- Consultant's BAS Report provided limited discussion about emerging technologies
  - Advised only where to learn about recent approvals by Ecology.
  - Not evaluated in report as a means of mitigating risk.
- Both the Tightline and Open Channel Conveyance options in the proposed pilot program require the same advanced erosion control techniques, technologies and limitations be used.
  - Both include 60% phosphorus Removal
  - Erosion Control technologies are reliable per Department of Ecology BMP C250 "*reliably provide exceptional reductions of turbidity and associated pollutants*"
- There are no regulations that require storm water volume be limited to current levels in the EHNSWB Overlay.
  - No development is permitted, therefore no volume limits
- Lake Sammamish is a designated receiving water body with no volume limits.
- Main differences between the Tightline and Open Channel Conveyance options are how storm water gets to Lake Sammamish, the volume and rate of storm water coming off the property post development. The Open Channel Conveyance (Ditch) option:
  - Requires stringent analysis of the Ditch to ensure integrity before permit awarded.
    - Field Inspection to the Lake (Extended Level 1 under the King County Storm Water Design Manual)
    - Geotechnical review and quantitative hydraulic analysis
    - 3<sup>rd</sup> party peer review of the studies
    - Repairs or improvements to ensure integrity of the Ditch, if needed
    - Result is significantly more analysis than required in the 2009 King County Surface Water Design Manual.
  - Includes many Low Impact Development Techniques that the tight-line option does not, to reduce storm water volume
    - Requires level 3 flow control on all projects (current requirement is level 2)
      - Peak flows will be lower than the current undeveloped levels.
      - Lower storm water flow rate into Lake Sammamish than tight-line option resulting in a
      - Lower risk of stirring Phosphorus-containing particles settled in the substrate of Lake Sammamish
    - Roof rainwater harvesting for indoor plumbing
    - Minimum of 15% open space (in addition to required recreation space)
    - Limit individual site impervious surface to 50%
    - Revegetation of all open space
    - 15% of each lot shall contain drought resistant/tolerant plantings
    - As an example, for our property these techniques would reduce overall water volume by 30% or more from a comparable development elsewhere. (Rick Tomkins PE, Triad Associates)

EXHIBIT NO. CC23