

CRANBERRY, JOHNS, AND MILL CREEKS TEMPERATURE TMDL

October 13, 2011

1

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- ◉ 2003 - Internal Ecology Scoping Discussion. Initial focus was Fecal Coliform Bacteria but Temperature was added.
- ◉ August 2004 - Ecology decision to begin TMDL.
- ◉ September 20, 2004 - Oakland Bay Survey.
- ◉ May 2005 - Quality Assurance Project Plan (QAPP) completed.
- ◉ 2006 - Field data collection completed.
- ◉ 2007 - Oakland Bay Clean Water District formed; decision to split project and focus on fecal coliform bacteria first.

2

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- ◉ November 2008 - Cranberry, Johns, and Mill Creeks Water Quality Improvement Report drafted.
- ◉ June 2011 - Oakland Bay Fecal Coliform Bacteria TMDL WQIR/WQIP completed.
- ◉ October 13, 2011 - Initial Cranberry, Johns, and Mill Creek Temperature TMDL Advisory Group meeting.
- ◉ September 2012 - Target for completion of the Cranberry, Johns, and Mill Creeks Temperature TMDL WQIR/WQIP.

3

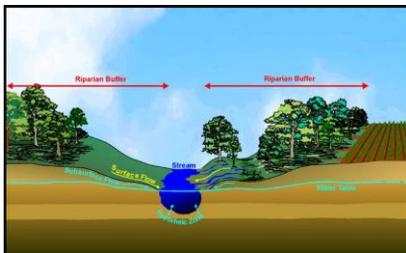
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Temperature Considerations

- ◉ Are there water quality standards for temperature?
- ◉ Is it a pollutant?
- ◉ How do you limit temperature?
- ◉ Temperature and flow relationships?
- ◉ Shade as a temperature surrogate?

4

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5

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Shade Considerations

- ◉ Stream aspect
- ◉ Channel condition
- ◉ Hyporheic exchange
- ◉ Buffer widths
- ◉ Buffer condition
- ◉ Buffer sustainability
- ◉ Riparian tree height

6

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7

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Other Temperature TMDLs

- ◉ Willapa River
- ◉ Wind River
- ◉ Little Klickitat River
- ◉ Walla Walla River
- ◉ South Prairie Creek
- ◉ Stillaguamish River
- ◉ Wenatchee River
- ◉ Bear Evans Creek
- ◉ Snoqualmie River
- ◉ Upper Natches River
- ◉ Newaukum Creek
- ◉ Green River
- ◉ Salmon Creek

8