

Appendix 2 – TMDL Requirements

This Appendix contains the list of all TMDLs in Western Washington that include more specific requirements than those found in either the Phase I or Phase II permits. The potential permittees that these would apply to are listed with each TMDL.

This appendix is a draft.

A complete list of all applicable TMDLs in Western Washington will be included in the Fact Sheet to each permit. The complete list will reflect all the TMDLs for which compliance with the permit constitutes compliance with the TMDL.

1. Name of TMDL: Snohomish River Tributaries

Location of Original 303 (d) Listings –

WA-07-1012, WA-07-015, WA-07-1052, WA-07-1163WA-07-1163, WA-07-1030 and WA-07-040

Area where TMDL Requirements Apply:

For each waterbody listed, TMDL coverage includes areas draining to the WASWIS segment number, and all the upstream tributaries contributing to it: Allen Creek, YT94RF: Quilceda Creek, TH58TS: French Creek, XZ24XU: Woods Creek, FZ74HO: Pilchuck River, NF79WA: Marshland Watershed, XW79FQ

TMDL coverage includes the areas indicated in the Lower Snohomish River Tributaries Fecal Coliform Bacteria TMDL Detailed Implementation Plan dated June 2003, Figure 3, page 7. This TMDL can be found at http://www.ecy.wa.gov/programs/wq/tmdl/watershed/tmdl_info-nwro.html

Parameter –

Fecal Coliform

Approval Date –

9 – Aug. 2001

Potential MS4 Permittees –

Phase I permit: Snohomish County

Phase II permit: Granite Falls, Lake Stevens, Monroe, Snohomish, Marysville, Arlington, Everett

WSDOT permit: WSDOT.

Action Required –

Baseline Requirements: Within 12 months after the effective date of this permit, all municipal stormwater permittees must adopt and enforce an ordinance or ordinances requiring the application of source control BMPs for the following existing land uses if they occur within their jurisdiction:

1) commercial animal handling areas, and 2) commercial composting facilities.

Where these activities are not occurring, no action is required. BMPs shall be equivalent to those found in Volume IV of the 2001 Ecology Stormwater Management Manual for Western Washington. Ordinances shall also address illicit connections to storm drains.

Where potential sources of bacterial pollution exist, operational source control BMPs shall be required for all pollutant generating sources. Only in those cases where a facility is demonstrated to be causing a violation of surface or ground water standards, or is discharging illegally, shall structural source control BMPs shall be required as related to this TMDL. The provision for structural source control BMPs is not intended to apply to individual municipal stormwater outfalls.

No later than 12 months after the effective date of this permit, affected municipal permittees shall compile a list of the existing composting and animal waste handling facilities. This list shall be updated no later than 180 days prior to the expiration of the permit and submitted with the permit renewal application.

Starting no later than 24 months after the effective date of this permit, conduct an inspection program for all the listed sites, with adequate enforcement capability to ensure implementation of source control BMPs. All facilities must be inspected with 40 months of the effective date of this permit.

Monitoring and Implementation Requirements: Permittees shall choose one or both of the following monitoring strategies. Strategy A is the default implementation strategy unless the permittee chooses to implement Strategy B in all or part of the area subject to the TMDL:

Strategy A, Targeted Implementation Approach

- Within 90 days of permit issuance, prepare and submit to Ecology for review, a Quality Assurance Project Plan (QAPP) for the sampling of streams and/or discharges from stormwater conveyances within the jurisdictions boundaries in order to determine areas with highest bacteria concentrations (high priority areas). Provisions for additional monitoring in high priority areas shall be included in order to locate pollution sources were they are not obvious.
- The QAPP shall be prepared following Ecology’s “Guidelines for Preparing Quality Assurance Project Plans for Environmental Studies, Feb. 2001, Ecology Publication No. 01-03-003. Ecology will review and provide comments within 30 days the plan is received. The sampling plan shall include an adequate number of sampling points and adequate sampling frequency to reasonably characterize the receiving water or waste stream. Monitoring shall begin no later than 270 days after permit issuance.

- No later than 365 days prior to permit renewal application, a Bacterial Pollution Control Plan shall be developed. The Bacterial Pollution Control Plan shall, at a minimum, consider the use of the following approaches:
 - 1) pet waste ordinance,
 - 2) evaluation of water pollution control enforcement capabilities,
 - 3) evaluation of CAO in relation to TMDL goals,
 - 4) educational program directed at reducing bacterial pollution,
 - 5) investigation and implementation of methods that prevent additional stormwater bacterial pollution through stormwater treatment, reducing stormwater volumes, and preventing additional sources of stormwater in association with new development,
 - 6) implementation of activities in the Quilceda/Allen or French Creek Watershed Management Plans (as applicable),
 - 7) ambient water quality and stormwater quality sampling to specifically identify bacterial pollution sources, and
 - 8) livestock ordinance and compost ordinance (Phase I Permittees only.)
- No later than 270 days prior to permit renewal application, conduct public review of the Bacterial Pollution Control Plan.
- Submit the final Bacterial Pollution Control Plan to Ecology at the time of permit renewal application.

Strategy B: Early Action Approach.

- Prepare Early Action BMP plan within 180 days of permit effective date. The Early Action Plan shall contain those BMPs that the permittee believes will be effective in reducing bacteria levels within the MS4 (or otherwise in local waters). The Early Action Plan must include implementation of the required baseline requirement for all municipal stormwater permittees including adoption and enforcement of ordinance(s) requiring the application of source control BMPs related to bacterial pollutants (equivalent to Volume IV of the 2001 Ecology Stormwater Management Manual for Western Washington).
- The Early Action BMP Plan shall, at a minimum, consider the use of the following approaches:
 - 1) pet waste ordinance,
 - 2) evaluation of water pollution control enforcement capabilities,
 - 3) evaluation of CAO in relation to TMDL goals,
 - 4) educational program directed at reducing bacterial pollution,

- 5) investigation and implementation of methods that prevent additional stormwater bacterial pollution through stormwater treatment, reducing stormwater volumes, and preventing additional sources of stormwater in association with new development,
 - 6) implementation of activities in Quilceda/Allen or French Creek Watershed Management Plans (as applicable) Watershed Management Plan,
 - 7) ambient water quality and stormwater quality sampling to specifically identify bacterial pollution sources, and
 - 8) livestock and compost ordinances (Phase I permittees only)
- Conduct and complete public review of the Early Action BMP plan within 270 days of permit effective date.
 - Begin implementation of Early Action BMPs as specified in the plan within 360 days of permit issuance. BMPs shall be place within 36 months of permit issuance unless otherwise approved by Ecology.
 - Within 30 months of permit issuance, prepare and submit to Ecology for review, a Quality Assurance Project Plan (QAPP) for the sampling of streams and/or discharges from stormwater conveyances within the jurisdictions boundaries in order to assess whether or not affected water bodies and/or stormwater discharges, are meeting state water quality standards.
 - The QAPP shall be prepared following Ecology’s “Guidelines for Preparing Quality Assurance Project Plans for Environmental Studies, Feb. 2001, Ecology Publication No. 01-03-003. Ecology will review and provide comments within 30 days the plan is received. The sampling plan shall include an adequate number of sampling points and adequate sampling frequency to reasonably characterize the receiving water or waste stream. Monitoring shall begin no later than 36 months after permit issuance.
 - No later than 270 days prior to permit renewal, a Bacterial Pollution Control Plan shall be developed. The Plan shall consider all available monitoring data and the approaches noted for the Early Action BMP Plan above.
 - No later than 270 days prior to permit renewal application, conduct public review of the Bacterial Pollution Control Plan.
 - Submit the Bacterial Pollution Control Plan to Ecology at the time of permit renewal application for review.

2. Name of TMDL: North Creek

Location of Original 303 (d) Listings –
WA-08-1065

Area where TMDL Requirements Apply:

TMDL coverage includes areas draining to the portion of the WASWIS segment SM74QQ starting at the confluence with the Samamish River and including all the upstream tributaries contributing to the North Creek segment of WASWI SM74QQ.

TMDL coverage includes the areas indicated in the North Creek Fecal Coliform Bacteria TMDL Detailed Implementation Plan dated September 2003, in Figure 1, page 3. This TMDL can be found at http://www.ecy.wa.gov/programs/wq/tmdl/watershed/tmdl_info-nwro.html .

Parameter –
Fecal Coliform

Approval Date –
2-Aug. 2002

Potential MS4 Permittees –

Phase I permit: Snohomish County

Phase II permit: Everett, Bothell, and Mill Creek

WSDOT permit: WSDOT. . Note: For WSDOT in the North Creek Watershed area defined above, compliance with the WSDOT permit shall constitute compliance with the North Creek Fecal Coliform TMDL.

Action Required –

Baseline Requirements: Within 12 months after the effective date of this permit, all municipal stormwater permittees must adopt and enforce an ordinance or ordinances requiring the application of source control BMPs for the following existing land uses if they occur within their jurisdiction:

1) commercial animal handling areas, and 2) commercial composting facilities.

Where these activities are not occurring, no action is required. BMPs shall be equivalent to those found in Volume IV of the 2001 Ecology Stormwater Management Manual for Western Washington. Ordinances shall also address illicit connections to storm drains.

Where potential sources of bacterial pollution exist, operational source control BMPs shall be required for all pollutant generating sources. Only in those cases where a facility is demonstrated to be causing a violation of surface or ground water standards, or is discharging illegally, shall structural source control BMPs shall be required as related to this TMDL. The provision for structural source control BMPs is not intended to apply to individual municipal stormwater outfalls.

No later than 12 months after the effective date of this permit, affected municipal permittees shall compile a list of the existing composting and animal waste handling facilities. This list shall be updated no later than 180 days prior to the expiration of the permit and submitted with the permit renewal application.

Starting no later than 24 months after the effective date of this permit, conduct an inspection program for all the listed sites, with adequate enforcement capability to ensure implementation of source control BMPs. All facilities must be inspected with 40 months of the effective date of this permit.

Monitoring and Implementation Requirements: Permittees shall choose one or both of the following monitoring strategies. Strategy A is the default implementation strategy unless the permittee chooses to implement Strategy B in all or part of the area subject to the TMDL:

Strategy A, Targeted Implementation Approach

- Within 90 days of permit issuance, prepare and submit to Ecology for review, a Quality Assurance Project Plan (QAPP) for the sampling of streams and/or discharges from stormwater conveyances within the jurisdictions boundaries in order to determine areas with highest bacteria concentrations (high priority areas). Provisions for additional monitoring in high priority areas shall be included in order to locate pollution sources were they are not obvious.
- The QAPP shall be prepared following Ecology’s “Guidelines for Preparing Quality Assurance Project Plans for Environmental Studies, Feb. 2001, Ecology Publication No. 01-03-003. Ecology will review and provide comments within 30 days the plan is received. The sampling plan shall include an adequate number of sampling points and adequate sampling frequency to reasonably characterize the receiving water or waste stream. Monitoring shall begin no later than 270 days after permit issuance.
- No later than 365 days prior to permit renewal application, a Bacterial Pollution Control Plan shall be developed. The Bacterial Pollution Control Plan shall, at a minimum, consider the use of the following approaches:
 - 1) pet waste ordinance,
 - 2) evaluation of water pollution control enforcement capabilities,
 - 3) evaluation of CAO in relation to TMDL goals,
 - 4) educational program directed at reducing bacterial pollution,
 - 5) investigation and implementation of methods that prevent additional stormwater bacterial pollution through stormwater treatment, reducing stormwater volumes, and preventing additional sources of stormwater in association with new development,
 - 6) implementation of activities in the North Creek Watershed Management Plan,
 - 7) ambient water quality and stormwater quality sampling to specifically identify bacterial pollution sources, and

8) livestock and compost ordinances (Phase I Permittees only.)

- No later than 270 days prior to permit renewal application, conduct public review of the Bacterial Pollution Control Plan.
- Submit the final Bacterial Pollution Control Plan to Ecology at the time of permit renewal application.

Strategy B: Early Action Approach.

- Prepare Early Action BMP plan within 180 days of permit effective date. The Early Action Plan shall contain those BMPs that the permittee believes will be effective in reducing bacteria levels within the MS4 (or otherwise in local waters). The Early Action Plan must include implementation of the required baseline requirement for all municipal stormwater permittees including adoption and enforcement of ordinance(s) requiring the application of source control BMPs related to bacterial pollutants (equivalent to Volume IV of the 2001 Ecology Stormwater Management Manual for Western Washington).

The Early Action BMP Plan shall, at a minimum, consider the use of the following approaches:

- 1) pet waste ordinance,
 - 2) evaluation of water pollution control enforcement capabilities,
 - 3) evaluation of CAO in relation to TMDL goals,
 - 4) educational program directed at reducing bacterial pollution,
 - 5) investigation and implementation of methods that prevent additional stormwater bacterial pollution through stormwater treatment, reducing stormwater volumes, and preventing additional sources of stormwater in association with new development,
 - 6) implementation of activities in the North Creek Watershed Management Plans,
 - 7) ambient water quality and stormwater quality sampling to specifically identify bacterial pollution sources, and
 - 8) Livestock and compost ordinances (Phase I permittees only)
- Conduct and complete public review of the Early Action BMP plan within 270 days of permit effective date.
 - Begin implementation of Early Action BMPs as specified in the plan within 360 days of permit issuance. BMPs shall be place within 36 months of permit issuance unless otherwise approved by Ecology.
 - Within 30 months of permit issuance, prepare and submit to Ecology for review, a Quality Assurance Project Plan (QAPP) for the sampling of streams and/or discharges from stormwater conveyances within the jurisdictions boundaries in order to assess whether or not affected water bodies and/or stormwater discharges, are meeting state water quality standards.

- The QAPP shall be prepared following Ecology’s “Guidelines for Preparing Quality Assurance Project Plans for Environmental Studies, Feb. 2001, Ecology Publication No. 01-03-003. Ecology will review and provide comments within 30 days the plan is received. The sampling plan shall include an adequate number of sampling points and adequate sampling frequency to reasonably characterize the receiving water or waste stream. Monitoring shall begin no later than 36 months after permit issuance.
- No later than 270 days prior to permit renewal, a Bacterial Pollution Control Plan shall be developed. The Plan shall consider all available monitoring data and the approaches noted for the Early Action BMP Plan above.
- No later than 270 days prior to permit renewal application, conduct public review of the Bacterial Pollution Control Plan.

Submit the Bacterial Pollution Control Plan to Ecology at the time of permit renewal application for review.

3. Name of TMDL: Issaquah Creek Basin

Location of Original 303 (d) Listings –
WA-08-1010

Area where TMDL Requirements Apply:

TMDL coverage includes areas draining to the WASWIS segments MB51QQ and EA48LQ: (Tibbetts Creek), TF31OB (Issaquah Creek), and CZ80NC (North Fork Issaquah Creek) and all the upstream tributaries contributing to these segments

Parameter –
Fecal Coliform

Approval Date –
1-Oct. 2004

Potential MS4 Permittees –
Phase I permit: King County
Phase II permit: Issaquah
WSDOT permit: WSDOT.

Action Required –
Projects or ongoing programs must address urban bacteria source control and stormwater treatment. These include low impact development to help limit bacteria transporting sediment loads, runoff infiltration, street and parking lot sweeping to remove wildlife-attracting litter, and dumpster area maintenance. **TMDL Requirements are under development at this time. Detailed Implementation Plan in preparation and should be done by the time of permit issuance.**

4. Name of TMDL: Lower Skagit River Fecal Coliform TMDL

Location of Original 303 (d) Listings –

1998 listings: YA61IC – Carpenter Creek; DY42MK- Gages Slough; SV53RP – Hansen Creek; LZ60MT – Nookachamps Creek; QG78VP – Skagit River; also 1996 listings: Fisher Creek WA-03-1012; Hart Slough/Brickyard Creek WA-03-1018; Skagit River North Fork WA-03-1015

Area where TMDL Requirements Apply:

Areas draining to Skagit River and mouths of tributaries, from mouth of North and South Forks of Skagit River (at South Skagit Bay marine waters) upstream to river mile 24.6 at Skiyou Slough

Parameter –

Fecal coliform bacteria

Approval Date –

September 2000

Potential MS4 Permittees –

Phase II permit: Mount Vernon, Skagit County, Burlington, Sedro Woolley
WSDOT permit: WSDOT.

Action Required –

Kulshan Creek: Measure FC concentrations during storm events in Kulshan Creek at Frontage Road Pump Station in accordance with TMDL Detailed Implementation Plan (estimated completion date October 2005).

Target elements of stormwater program to address FC in Kulshan Creek

Britt Slough: Measure FC concentrations during storm events in Britt Slough at discharge to Skagit River in accordance with Detailed Implementation Plan (estimated completion date October 2005).

Target elements of stormwater program to address FC in Britt Slough.

Gages Slough: Measure FC concentrations during storm events in Gages Slough at discharge to Skagit River in accordance with Detailed Implementation Plan (estimated completion date October 2005).

Target elements of stormwater program to address FC in Gages Slough.

Brickyard Creek: Tributary at Riverfront Park, and South Sedro-Woolley Stormwater Drain Measure FC concentrations during storm events in these waterbodies at discharge to Skagit River in accordance with Detailed Implementation Plan (estimated completion date October 2005).

Target elements of stormwater program to address FC in these three waterbodies.

5. Name of TMDL: South Prairie Creek

Location of Original 303 (d) Listings –
WA-10-1085, WA-10-1087

Area where TMDL Requirements Apply:

Areas draining to South Prairie Creek Mainstem, Spiketon Creek/Ditch, Unnamed trib at SR 162, Unnamed trib at mouth.

Parameter –

Fecal Coliform

Approval Date –

5-August. 2004

Potential MS4 Permittees –

Phase I permit: Pierce County

WSDOT permit: WSDOT.

Action Required –

TMDL Requirements are under development at this time. Detailed Implementation Plan in preparation and should be done by the time of permit issuance.

6. Name of TMDL: Piper’s Creek

Location of Original 303 (d) Listings –

WA-08-1000

Area where TMDL Requirements Apply:

Areas draining to Piper’s Creek.

Parameter –

Fecal Coliform

Approval Date –

8-Apr-93

Potential MS4 Permittees –

Phase I permit: City of Seattle

Action Required –

Samples for fecal coliform are collected monthly on an ongoing basis by Seattle Metro (King County) from three stations on Pipers and Venema Creeks. In addition, at least two storm events will be sampled for fecal coliform at three stations each year, one during the winter season and one during the summer season.

The following TMDLs might be approved by EPA prior to permit issuance and could result in additional TMDL requirements:

- A. Stillaguamish Fecal Coliform, Dissolved Oxygen, pH, Mercury and Arsenic TMDL - submitted to EPA - April 2005. Approval expected June 2005. Includes Waste Load Allocations (WLAs) for stormwater permittees, Snohomish County, Arlington and WSDOT (fecal coliform and BOD).
- B. Meeker Ditch and Clarks Creek Temperature and Fecal Coliform TMDL – Target for Submittal to EPA: 6/05. Includes City of Puyallup and Pierce County
- C. Nisqually River and McCallister Creek Dissolved Oxygen and Fecal Coliform TMDL – Target for Submittal to EPA: 6/05. Includes Thurston County, Pierce County, and WSDOT.
- D. Little Bear Creek Fecal Coliform TMDL – Submitted to EPA May 2005. Approval expected June 2005. Includes WLAs for Snohomish County, Woodinville and WSDOT
- E. Whatcom Creek Fecal Coliform TMDL – Technical report is published. Submittal report has to be prepared. Target date for submittal to EPA: 9/05. Will have a WLA for City of Bellingham and possibly WSDOT.