APPENDIX 2 – Total Maximum Daily Load (TMDL) Requirements

Additional permit requirements are based on applicable TMDLs in accordance with Special Condition S7 *Compliance with Total Maximum Daily Load Requirements.*

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Name of TMDL	**South Fork Palouse River Fecal Coliform Bacteria TMDL: Water Quality Improvement Report**
EPA Approved Document(s) for TMDL	South Fork Palouse River Fecal Coliform Bacteria Total Maximum Daily Load - Water Quality Improvement Report October 2009 Publication No. 09-10-060
Location of Original 303(d) Listings	Paradise Creek 10443 (WA-34-1025) Paradise Creek 10439 (WA-34-1025) Paradise Creek 10444 (WA-34-1025) South Fork Palouse River 6712 (WA-34-1020) South Fork Palouse River 6711 (WA-34-1020) South Fork Palouse River 6710 (WA-34-1020) South Fork Palouse River 6707 (WA-34-1020) Dry Fork Creek 46406 Missouri Flat Creek 6713 (WA-34-1024)
Area Where TMDL Requirements Apply	These requirements apply to areas served by MS4s within the City of Pullman, including the Washington State University Campus that is within the City of Pullman.
Parameter(s)	Fecal Coliform Bacteria
MS4 Permittee:	City of Pullman WAR04-6504 Washington State University WAR04-6700

Actions Required

<u>City of Pullman</u>

A. The City of Pullman, within the permit coverage area, shall:
    1. Inventory and inspect the stormwater system to develop a map and descriptions of known illicit connections and potential sources of fecal coliform to the MS4 by December 31, 2015.
    2. Develop and implement a pet waste education program for residents of Pullman.
    3. The City of Pullman Planning and Public Works Departments will consider during SEPA review the potential for projects to increase runoff and sources of fecal coliform, and the need for mitigation measures to reduce these adverse impacts to the MS4 and surface waters.
    4. Conduct all monitoring to assess changes in water quality and progress toward elimination of stormwater related bacteria discharges to surface water under an Ecology-approved Quality Assurance Project Plan (QAPP). Ecology must be given a minimum of 3 months prior to sampling to review and approve the QAPP.

5. Enter monitoring data collected into Ecology's Environmental Information Management (EIM) database. The database can be accessed at: www.ecy.wa.gov/science/data.html.

B. Beginning no later than the effective date of this permit, the City of Pullman shall, implement an illicit discharge detection and elimination program for stormwater outfalls within the area under its jurisdiction. The outfalls shall be prioritized in the following order:
   1. The area draining to the outfall identified as 34MissSD120.
   2. The area draining to multiple outfalls draining to the compliance point identified as 34Dry00.4.
   3. For the areas draining to the remaining stormwater basins under its jurisdiction, Pullman shall by December 31, 2015:
      - Submit to Ecology a plan outlining subsequent focus areas for the illicit discharge detection and elimination program.
      - Focus areas will be prioritized based on the TMDL, more recent monitoring findings, and consultation with Ecology's TMDL and Stormwater leads.

C. For each outfall drainage area investigated under the IDDE program, the City of Pullman shall submit to Ecology a report 18 months after initiating the investigation summarizing:
   1. Actions taken to reduce fecal coliform pollution.
   2. Results of any outfall monitoring completed up to issuance of this permit that include a comparison of monitoring data to the TMDL Waste Load Allocation to evaluate progress toward meeting the percent reduction needed at the outfall. Because the water quality standard for fecal coliform is concentration based, progress will be assessed by examining concentrations at the outfall and making progress toward the percent reductions and not on a specific bacteria load.
   3. Portions of this report may be submitted prior to permit issuance and will be considered to fulfill this requirement.

D. For any outfall that has not achieved a 40% toward the WLA target (percent reduction) by December 31, 2016, submit to Ecology a four-year Action Plan outlining actions and monitoring intended to achieve targeted reductions. The Action Plan shall include:
   1. The specific purpose of the plan
   2. A description of key actions and who will conduct them
   3. Implementation schedule, including milestones, deadlines, and how frequently the plan should be updated
   4. Discussion of legal authority to implement actions
   5. Process and schedule for how to evaluate appropriateness of actions in the plan and how frequently to update it
   6. The specific type of monitoring that will be used to evaluate the effectiveness of the plan

E. Within 90 days of Ecology approval, begin implementing the Ecology-approved Action Plan.

Washington State University

A. Washington State University, within the area under its jurisdiction, shall from the effective date of this permit:
    1. Conduct education and outreach with an emphasis on animal waste disposal practices to reduce potential bacteria-laden runoff.
    2. The Capital Planning Department will consider during SEPA review the potential for projects to increase runoff and sources of fecal coliform, and the need for mitigation measures to reduce these adverse impacts to the MS4 and surface waters.
    3. Conduct all monitoring to assess changes in water quality and progress toward elimination of stormwater related bacteria discharges to surface water under an Ecology approved QAPP. Ecology must be given a minimum of 3 months prior to sampling to review and approve the QAPP.
    4. Enter monitoring data collected into Ecology's Environmental Information Management (EIM) database. The database can be accessed at: www.ecy.wa.gov/science/data.html.
B. Beginning no later than the date this permit becomes effective, Washington State University shall implement an illicit discharge detection and elimination program for stormwater outfalls within the area under its jurisdiction. The outfalls should be prioritized in the following order:
    1. The area draining to the outfall identified as 34SFPRWSU1.
    2. The next basin for further monitoring and investigation will be based on the findings of the City of Pullman's investigation of the 34MissSD120 drainage.
        a. If the City of Pullman finds that Washington State University contributes greater fecal coliform bacteria loads to the 34MissSD120 system than the loading found during the TMDL study to the South Fork Palouse River from 34SFPRWSU2 then 34MissSD120 will be the next drainage basin for WSU investigation.
        b. If the City of Pullman finds that Washington State University contributes less fecal coliform bacteria loads to the 34MissSD120 system than the loading found during the TMDL study to the South Fork Palouse River from 34SFPRWSU2 then the 34SFPRWSU2 basin will be the next drainage basin for investigation.
    3. The basin not selected in B.2 above.
C. For each outfall drainage area investigated under the IDDE program submit to Ecology a report 18 months after initiating the investigation summarizing:
    1. Actions taken to reduce fecal coliform pollution.
    2. Results of any outfall monitoring completed up to issuance of this permit that include a comparison of monitoring data to the TMDL Waste Load Allocation to evaluate progress toward meeting the percent reduction needed at the outfall. Because the

water quality standard for fecal coliform is concentration based, progress will be assessed by examining concentrations at the outfall and making progress toward the percent reductions and not on a specific bacteria load.

3. Portions of this report may be submitted prior to permit issuance and will be considered to fulfill this requirement.

D. For any outfall that has not achieved a 40% toward the WLA target (percent reduction) by December 31, 2016, submit to Ecology a three-year Action Plan outlining actions and monitoring intended to achieve targeted reductions. The Action Plan shall include:
   1. The specific purpose of the plan
   2. A description of key actions and who will conduct them
   3. Implementation schedule, including milestones, deadlines, and how frequently the plan should be updated
   4. Discussion of legal authority to implement actions
   5. Process and schedule for how to evaluate appropriateness of actions in the plan and how frequently to update it
   6. The specific type of monitoring that will be used to evaluate the effectiveness of the plan

E. Within 90 days of Ecology approval, implement the Ecology-approved Action Plan.

Name of TMDL	**Selah Ditch Multiparameter Total Maximum Daily Load**
EPA Approved Document(s) for TMDL	Selah Ditch Multiparameter Total Maximum Daily Load, Technical Assessment Report, January 2005, Publication Number 05-10-020 Selah Ditch Multiparameter Total Maximum Daily Load, Water Quality Improvement Report, June 2006, Publication No. 06-10-040
Location of Original 303(d) Listings	Selah Ditch, Water Resource Inventory Area (WRIA) 39, Selah Ditch is a short (0.83 mile), straight, man-made drainage canal that is classified as a Class A water body.
Area Where TMDL Requirements Apply	City of Selah
Parameter(s)	Fecal Coliform Bacteria, and Temperature
EPA Approval Date	Water Quality Improvement Plan – June 2006
MS4 Permittee	City of Selah

Actions Required:

City of Selah

- Implement the schedule and activities in S5.B.1 for Public Education and Outreach to include education and outreach to target the reduction of fecal coliform bacteria discharges into the stormwater system to include the following:
    - Targeted education regarding the effects of pet waste on stormwater and inform pet owners about proper management of pet waste.
    - Installation of pet waste pick-up bags in city parks, and on city-owned open spaces, where appropriate.

Name of TMDL	**Wilson Creek Sub-Basin Bacteria Total Maximum Daily Load**
EPA Approved Document(s) for TMDL	Wilson Creek Sub-Basin Bacteria Total Maximum Daily Load (Water Cleanup Plan), Submittal Report, June 2005 Publication Number 05-10-041
Location of Original 303(d) Listings	Wilson Creek (WA-39-1020) PY59BF (inside city limits) Mercer Creek EY18WK, Whiskey Creek SO19BM
Area Where TMDL Requirements Apply	City of Ellensburg
Parameter(s)	Fecal Coliform Bacteria
EPA Approval Date	TMDL – June 2005
MS4 Permittee	City of Ellensburg, Central Washington University

Actions Required:

City of Ellensburg

- Implement the schedules and activities for Public Education and Outreach identified in S5.B.1 include the following:
    - A targeted education program for pet waste, including installing pet waste pick-up bags in city parks and/or on city property and/or open spaces where pets may be present.
    - Provide information to the general public about the relationship between feeding wildlife water fowl and fecal coliform bacteria in stormwater.

Central Washington University

- Implement the schedules and activities for public education and outreach identified in S6.D.1.b.vii. Part of this program shall include installing pet waste pick-up bags on university owned spaces where people might walk their pets.

Name of TMDL	**Spokane River and Lake Spokane Dissolved Oxygen Total Maximum Daily Load**
EPA Approved Document(s) for TMDL	Spokane River and Lake Spokane Dissolved Oxygen Total Maximum Daily Load Water Quality Improvement Report Revised February 2010 Publication No. 07-10-073
Location of Original 303(d) Listings	Lake Spokane 40939 Spokane River 17523 (WA-54-1010) Spokane River 15188 (WA-54-1010) Spokane River 15187 (WA-54-1010) Spokane River 11400 (WA-57-1010) Spokane River 6373 (WA-54-1020)
Area Where TMDL Requirements Apply	These requirements apply to areas served by MS4s owned or operated by the Permittees within the TMDL coverage area.
Parameter(s)	Total Phosphorus, Ammonia, $CBOD_5$
MS4 Permittee:	City of Spokane WAR04-6505, City of Spokane Valley WAR04-6507 Spokane County WAR04-6506

Actions Required

The City of Spokane and Spokane County shall each develop and implement monitoring programs for phosphorus, ammonia, and CBOD according to the schedules outlined below. Flow rates shall also be measured in order to calculate volumes of stormwater to determine pollutant loadings.

City of Spokane

1. No later than August 31, 2015, the City of Spokane shall prepare a monitoring plan. The outfalls for the Cochrane Basin shall be monitored for phosphorus, ammonia, CBOD, and flow rates. A QAPP that follows *Quality Assurance Project Plans for Environmental Studies,* July 2004, Ecology Publication No. 04-03-030 shall be prepared and submitted to Ecology for review and approval.
2. Ecology will review and provide written comments on the monitoring plan by November 30, 2014.
3. The City of Spokane shall submit an updated QAPP to Ecology responding to Ecology's comments by February 28, 2016. If Ecology provides comments later than November 30, 2015, the updated QAPP submittal deadline will be extended by the number of calendar days that Ecology exceeds past the November 30, 2015 date.
4. No later than August 31, 2016 the City of Spokane shall implement the Ecology-approved monitoring plan. The monitoring plan shall be conducted until the expiration of the Permit. The results of the monitoring shall be entered into Ecology's EIM database.
5. No later than August 31, 2017 the City of Spokane shall begin evaluating the results of the monitoring plan with respect to the city's share of the stormwater Waste Load Allocations in the TMDL. If the monitoring results indicate that stormwater Waste Load Allocations are being exceeded then an adaptive management response to reduce pollutant loading shall be initiated. The City of Spokane shall prepare an Action Plan. The Action Plan must include:
    a. The specific purpose and objective of the plan
    b. A description of key actions and who will conduct them
    c. Implementation schedule, including milestones, deadlines, and how frequently the plan should be updated
    d. Discussion of legal authority to implement actions
    e. Process and schedule for how to evaluate appropriateness of actions in the plan and how frequently to update it
    f. Any additional monitoring that may be necessary to evaluate the effectiveness of the plan

Spokane County

1. No later than August 31, 2015, Spokane County shall prepare a monitoring plan to evaluate its stormwater discharges to the Spokane River in order to determine pollutant loading for total phosphorus, ammonia, and CBOD. Sampling shall be conducted at the Ella Road outfall. Sampling shall be representative of the total quantity of flows and shall be conducted at least once per month during the months of March through October during the first precipitation event in a month that produces adequate stormwater for analysis. Discharge volume estimates shall be calculated for all events sampled. A QAPP that follows *Quality Assurance Project Plans for Environmental Studies,* July 2004, Ecology Publication No. 04-03-030 shall be prepared and submitted to Ecology for review and approval by August 31, 2015. The monitoring shall be conducted using Ecology approved Standard Operating Procedures. If the QAPP needs to be modified, Spokane County will provide the updated QAPP for review and approval within 90 days of receiving Ecology comments.

2. No later than August 31, 2016 Spokane County shall start sampling and implement the Ecology-approved monitoring plan. All applicable seasonal results of the monitoring shall be entered into Ecology's EIM database by December 31st of each year. A summary and discussion of the monitoring results shall be included with the appropriate annual report. Sampling shall continue until the expiration of the permit, or until the discharge has been eliminated.
3. No later than December 31, 2017 Spokane County shall, in consultation with Ecology, evaluate the results of the monitoring plan in order to evaluate pollutant loading with respect to Spokane County's share of the Stormwater Waste Load Allocations in the TMDL. If the monitoring results indicate that Stormwater Waste Load Allocations are being exceeded then an adaptive management response to reduce pollutant loading shall be initiated. Spokane County shall submit an Action Plan for Ecology approval by March 31, 2018. The Action Plan must include:
    a. The specific purpose and objective of the plan
    b. A description of key actions and who will conduct them
    c. Implementation schedule, including milestones, deadlines, and how frequently the plan should be updated
    d. Discussion of legal authority to implement actions
    e. Process and schedule for how to evaluate appropriateness of actions in the plan and how frequently to update it
    f. Any additional monitoring that may be necessary to evaluate the effectiveness of the plan

<u>City of Spokane Valley</u>

1. No later than August 31, 2015, the City of Spokane Valley shall prepare a monitoring plan to evaluate all of its remaining stormwater discharges to the Spokane River in order to determine pollutant loading for total phosphorus, ammonia, and CBOD. Sampling shall be representative of the total quantity of flows and shall be conducted at least once per month during the months of March through October during the first precipitation event in a month that produces adequate stormwater for analysis. Discharge volume estimates shall be calculated for all events sampled. A QAPP that follows *Quality Assurance Project Plans for Environmental Studies*, July 2004, Ecology Publication No. 04-03-030 shall be prepared and submitted to Ecology for review and approval by August 31, 2015. The monitoring shall be conducted using Ecology approved Standard Operating Procedures. If the QAPP needs to be modified, the City of Spokane Valley will provide the updated QAPP for review and approval within 90 days of receiving Ecology comments.
2. No later than August 31, 2016 the City of Spokane Valley shall start sampling and implement the Ecology-approved monitoring plan. All applicable seasonal results of the monitoring shall be entered into Ecology's EIM database by December 31st of each year. A summary and discussion of the monitoring results shall be included with the appropriate annual report. Sampling shall continue until the expiration of the permit, or until the discharges have been eliminated.
3. No later than December 31, 2017 the City of Spokane Valley shall, in consultation with Ecology, evaluate the results of the monitoring plan in order to evaluate pollutant loading

with respect to the city's share of the Stormwater Waste Load Allocations in the TMDL. If the monitoring results indicate that Stormwater Waste Load Allocations are being exceeded then an adaptive management response to reduce pollutant loading shall be initiated. The City of Spokane Valley shall submit an Action Plan for Ecology approval by March 31, 2018. The Action Plan must include:

a. The specific purpose and objective of the plan
b. A description of key actions and who will conduct them
c. Implementation schedule, including milestones, deadlines, and how frequently the plan should be updated
d. Discussion of legal authority to implement actions
e. Process and schedule for how to evaluate appropriateness of actions in the plan and how frequently to update it
f. Any additional monitoring that may be necessary to evaluate the effectiveness of the plan