

**Response to Advisory Group Comments on  
Draft SFPR Fecal Coliform Bacteria TMDL –  
Implementation Section  
4/30/09**

	Location	Comment	Response
Cheryl Morgan	page (12) (under "Overview)	I realize the draft report does not note streams meet contact recreation water quality standards. I request that the listed language for "Beneficial Uses" as presented on page 21 of the Palouse River Chlorinated Pesticide and PCB TMDL (Publication # 07-03-018) be included within the Overview section of our Final Report.	The additional beneficial uses that are protected by the water quality standards in the South Fork Palouse River watershed were added to the report section "Water Quality Standards and Beneficial Uses." The water quality standards have been revised since the publication of the Palouse River Chlorinated Pesticide and PCB TMDL. The Class designations in the 1997 standards no longer apply so the same language cannot be included in this report.
		I also request that <b>all</b> copies of the Agendas and the <b>approved</b> meeting notes be included within the Final Report.	The agenda's and meeting notes are available on the South Fork Palouse River TMDL Advisory Group webpage ( <a href="http://www.ecy.wa.gov/programs/wq/tmdl/palouse/sfpradvgrp.html">http://www.ecy.wa.gov/programs/wq/tmdl/palouse/sfpradvgrp.html</a> ). In the section of the report, "Summary of public involvement methods," it is noted that meeting agendas and notes are available on the webpage and provides the link. Online availability will save paper and printing costs.
		I also request that our comments and responses from DOE (as sent to us by Elaine via email on 3-13-2009) be included within the Final Report. <b>These can be added as Appendices at the end of the report.</b> (Example: Appendix A, B, C, etc.)	<p>The advisory group comments and responses will be made available on the South Fork Palouse River TMDL Advisory Group webpage (<a href="http://www.ecy.wa.gov/programs/wq/tmdl/palouse/sfpradvgrp.html">http://www.ecy.wa.gov/programs/wq/tmdl/palouse/sfpradvgrp.html</a>). In the section of the report, "Summary of public involvement methods," it is noted that the comments and responses are available on the webpage and provides the link. Since page numbers and text will have changed substantially between the versions the advisory group commented on and the document for public review it would be confusing to the reader to include them in the final document. Online availability will also save paper and printing costs.</p> <p>The formal public comment period responses and comments will be included in the report as an appendix before it is submitted to EPA for approval.</p>

Michael Yount	page 104, next to last para:	"in the annual report" To which annual report are you referring?	WSDOT is required by the NPDES stormwater permit to submit a report annually. The language has been revised to clarify.
	page 105	"this implementation strategy recommends": this should be changed to "the advisory group recommends" once agreement is reached.	We will consider making this change if the advisory group agrees.
	Page 104, 105, 106, 111	The "Eastern Washington Phase II Municipal Stormwater Permit" (taken from the document's title) is called "Eastern Washington Municipal Stormwater NPDES General Permit" on page 104; "Phase II Municipal Stormwater Permit" on page 105; "stormwater permits" on page 105; "These permits" on page 105; "municipal stormwater permit" on page 106; "NPDES municipal permit" on page 106; and "an NPDES permit" on page 111. Following the approach you took with the "advisory group" abbreviation would make references to the permit clearer and more consistent.	The first mention of the permit is now referenced as "Eastern Washington Phase II Municipal Stormwater Permit (Municipal Stormwater Permit)." All other references to the permit have been changed to "Municipal Stormwater Permit."
	On page 105	some actions are assigned to the City of Pullman or WSU, and others are not. Wouldn't it be easier to wait until the WQIP is developed to assign responsibilities?	Responsibilities will be expanded upon in the water quality implementation plan (WQIP) which will follow this document. However, WSU has requested that where possible WSU responsibilities be separated from city of Pullman responsibilities for clarity. This TMDL document will also be used to assign responsibilities in the Municipal Stormwater Permit when it is reissued so designating responsibilities in this report will aid that process.
	page 106, first bullet	Change "an approved Quality Assurance Project Plan" to "a Quality Assurance Project Plan approved by Ecology (Lombard and Kirchmer, 2004)."	Language revised.
	page 106, "Whitman County and City of Pullman Planning Departments"	Should this section also include WSU Capital Planning and Development and City of Colfax Planning and Engineering Services?	Planning language for WSU and Colfax will be added to the report. Each entity, Pullman, WSU, Colfax, etc. will have individual headings with sub-headings for each department listed under each.

page 107, "Citizens and landowners":	Change "citizens" to "residents" Change "organization" to "organizations"	Language revised.
page 107, fourth heading:	Change "Moscow, Idaho" to "City of Moscow, Idaho" and do likewise for the title on page 112	Language revised.
page 108, first para:	Please clarify the last sentence.	Language revised.
page 108, fourth para:	Change "determined" to "determined that" If I understand correctly, unlike the City of Pullman, which receives coverage under a general permit for Eastern Washington, the City of Moscow will be issued its own NPDES permit. Will the University of Idaho be a secondary permittee? (In the WQIP, the different requirements of primary and secondary permittees should be taken into consideration in assigning responsibilities to the City of Pullman and WSU.)	Language revised.  According to EPA, Moscow will be issued an individual NPDES permit to regulate their stormwater after their application for coverage is submitted to EPA. The University of Idaho has not been designated for coverage at this time. The university may become a co-permittee with the city of Moscow.
Throughout document	Minor editorial and format comments	Comments have been reviewed and incorporated to the extent possible.

Ken Smith (Dave Jepson), City of Albion		The TMDL mentions that Pullman and Moscow do chlorination and dechlorination. Albion also dechlorinates but this is not in the TMDL report.	De-chlorination has been added to the paragraph about Albion's WWTP (page 21).
		The fecal limit from June through December will be modified from 200 cfu/100 ml to 100 cfu/100 ml. At least in summer, the Town's new limit will be the same as Pullman. One could make an argument that Albion is substantially smaller than Pullman yet it has to meet the same fecal limits, and that a more reasonable number (say 150 cfu / 100 ml) might be in order.	In the winter and spring of 2007, Albion's WWTP fecal coliform discharge concentration was well below 100 cfu/100 mL. During our TMDL study we sampled Albion's effluent 4 times and the maximum concentration we observed was 4 cfu/100 mL. According to the discharge monitoring reports submitted to Ecology, when the effluent concentration does exceed 100 cfu/100 mL it has been well above the 200 cfu/100 mL so raising the limit to 150 cfu/100 mL would not help. This higher level would also not be protective of the river's water quality standards during extremely low summer flows.
City of Pullman (Kevin Gardes)	Page 1, first sentence	strike "what will be done" and replace with "the approach that will be used"	Language revised.
	Page 4, third paragraph, first sentence under "Department of Ecology"	Replace the word "required" with "requirements"?	Paragraph revised.
	Page 7, first paragraph, last sentence, under "Idaho Department of Environmental Quality"	insert the word "to" after "compared"	Corrected.
	Page 9, Under Step 3	ultimately if we are not meeting goals and objectives, it needs to be determined where the loading is coming from and what sources are contributing. If it turns out there is a natural component that keeps us from meeting goals and objectives that would be important to know	Sentence added: "Additional monitoring may be necessary to better isolate the bacteria sources so that new BMPs can be designed and implemented to address all sources of bacteria to the streams."

WSU (Gene Patterson, Marty O'Malley, Dwight Hagihara, John Reed, Mike Barber)	Title	Suggest improving the title. Possibly: <b>“South Fork of the Palouse River Fecal Coliform TMDL Implementation Strategy”</b>	The Implementation Strategy will be combined with the Technical Report previously reviewed and not a standalone document. The title of the entire document is “South Fork Palouse River Fecal Coliform Bacteria Total Maximum Daily Load – Water Quality Improvement Report.”
	Introduction	Will the Implementation Strategy dictate what “will be done to improve water quality” or will the Water Quality Implementation Plan do that?	Both the Implementation Strategy and the Water Quality Implementation Plan will describe what will be done to improve water quality. The Water Quality Implementation Plan will expand and refine the activities described in the Implementation Strategy.
	Introduction	Switch first and second paragraph.	Language revised.
	Introduction	In the current second paragraph change the first sentence to read “...was formed in June 2008 to review the Fecal Coliform TMDL”	Language revised.
	Page 1, “What Needs to be Done”	We would propose that trying to meet the class A fecal coliform water quality standard is what needs to be done. All sources non point and point sources should be identified during low flow, high flow, and storm events. If it is feasible to meet the class A fecal coliform water quality standards in the SFPR then primary contact recreation and cold water biota may be possibilities. In the interim should measures be taken by Ecology and/or the Whitman County Health Department to sign and educate – No swimming or fishing in these waters- fecal coliform contamination “ to protect public health?	A paragraph was added stating that the goal of the TMDL is to meet bacteria water quality standards.  Ecology is working with Whitman County Health Department on ways to inform the public about the bacteria levels in these streams. Health advisories typically come from the local or state health agencies. Ecology will also highlight this issue in the press release announcing the public comment period on the TMDL report.
	Page 1, Table X	The picture is not from the Washington-Idaho stateline	Caption was changed to read “...near the Washington-Idaho state line.”
	Page 2, “Sources”	Please put sources in alphabetical order	Sources re-ordered.
	Page 2, “Stormwater ”	Stormwater outfalls that flow year round should be separated from outfalls that flow during storm events. These are two separate conditions. More storm water events and outfalls should be monitored before developing a strategy that includes storm water impacts.	Illicit discharge detection, sewer and catch basin maintenance, and citizen education will benefit both stormwater outfalls with year round flow and those that only flow during storm events. Additional monitoring will likely be a component of the implementation plan.
	Page 2, “Stormwater ”, second paragraph	Were any other wetlands or small lakes sampled? If so please include them in this section. If the source of bacteria from the wetland near Merman Drive or any other source in the drainage is natural and	No other wetlands or small lakes were sampled. This paragraph has been clarified to indicate the sampling was by the city of Pullman and not part of the TMDL study.

	exceeds water quality standards does it have to be controlled?	
Page 2 “Livestock”	<p>Change to “Agriculture” and include farming. Include link to Palouse Watershed Planning Unit report regarding water quality and agriculture.</p> <p>Pet waste and pet boarding should be separate and included on this list.</p>	<p>This section was left as “Livestock” because other agricultural operations not related to animals should not be sources of bacteria. Impacts such as farming to the edge of a stream are discussed under “Wildlife.”</p> <p>The Palouse Watershed Planning Unit is listed under reasonable assurances. The Watershed Plan is referenced and the link to it is included in the references.</p> <p>A separate section on “Pet Waste” was added.</p>
Page 2, “Wildlife”	“Practices that remove natural vegetation, such as farming to the stream’s edge or unmanaged grazing <i>contribute bacteria to streams.</i> ” Should be moved to Livestock or Agriculture sections above.	Language revised but left in “Wildlife” section. Riparian vegetation language added to “Livestock” section.
Page 3, “Who needs to participate”	list DOE 1 <sup>st</sup> , then the entities should be listed in alphabetical order (see comment # 3). In the 2 <sup>nd</sup> sentence, change “board” to “broad.”	Order revised. Typo corrected.
	Shouldn’t all property owners adjacent to the SFPR and its tributaries, including farmers, participate and contribute to help meet the fecal coliform water quality standard? From agricultural land; who is ultimately responsible for maintaining water quality, the land owner or the lessee working the land?	<p>Yes, nonpoint pollution is the result of everyone living in a watershed, therefore property owners will need to participate for the SFPR to meet water quality standards. There is a section in the implementation strategy for “Residents and Landowners.”</p> <p>Per Washington State Law (RCW 90.48.080) “It shall be unlawful for any person to throw, drain, run, or otherwise discharge into any of the waters of this state, or to cause, permit or suffer to be thrown, run, drained, allowed to seep or otherwise discharged into such waters any organic or inorganic matter that shall cause or tend to cause pollution of such waters according to the determination of the department, as provided for in this chapter.”</p> <p>Pollution from agricultural land is the responsibility of the person(s) that causes it. When Ecology is addressing an agricultural issue where a lessee</p>

		manages the land, we also involve the landowner because they often restrict the practices the lessee uses on the land and they need to be aware of the issue. One or both parties could receive an enforcement action.
Page 4, “Department of Ecology”, 1 <sup>st</sup> paragraph	DOE should either do more sampling or provide entities more funding for sampling, especially since during storm events the study data is limited (one sampling event plus preliminary data from three outfalls during three storm events).	Storm event sampling would be more feasible if it were conducted by a local organization. Predicting weather events and travel time made it very difficult for Ecology to sample storms.  Ecology administers an integrated funding program each year. The funding cycle usually opens in September with applications due at the end of October. Projects implementing TMDLs can get additional points in the ranking process.
Page 4, “Department of Ecology”, 2 <sup>nd</sup> paragraph	Spell out WLAs the 1 <sup>st</sup> time	Revised.
Page 4, “Department of Ecology”, 3 <sup>rd</sup> paragraph	Please clarify the first sentence: “Ecology designated the City of Pullman for coverage under the NPDES Municipal Stormwater Permit using criteria that included required for public entities that operate municipal separate storm sewer systems (MS4) discharging to impaired streams”.	Language revised.
Page 4, “City of Pullman and WSU Stormwater Management ”	Please separate into two sections and eliminate “Stormwater Management” and include the Pullman POTW in the City of Pullman section as was done with Moscow, Idaho. All Cities named in the document should be generically identified and include both their POTW and storm water as potential sources of coliform bacteria.	Each municipality, university and county in the plan has been given a major heading with sub-headings for different departments under it (if necessary).
Page 5, reference to the “Stormwater Management Manual for Eastern Washington”	Please list the appropriate BMPs for bacteria with a short synopsis for each.	This sentence was deleted. Specific BMPs to address bacteria will be brainstormed by the advisory group and stormwater management personnel and described in the Implementation Plan to follow this report.
Page 5, “Monitoring ”, first bullet	Why are three outfalls singled out? Other outfalls also showed elevated levels of bacteria. Also, how does DOE expect WSU (as a state agency not eligible for	These three outfalls are addressed specifically in the implementation strategy because they were assigned numeric wasteload allocations in the

	<p>assistance) in the current economic climate to procure funding from the legislature for all of the proposed monitoring?</p>	<p>technical analysis. More data was available for these outfalls so more specific wasteload allocations could be assigned.</p> <p>The monitoring proposed in the implementation strategy will help collect the necessary information to facilitate water quality improvement activities. These monitoring recommendations are recommended through the TMDL but are not automatically included in the next revision of the stormwater permit. If these streams are showing improvement or the recommendations are no longer necessary when the permit is renewed there would not be a need to include them.</p> <p>WSU is eligible for Ecology low-interest loans for implementation of stormwater programs. Stormwater activities not required by the permit may also be eligible for Ecology grants. WSU could apply for Ecology funding for monitoring and implementation activities prior to it becoming a permit requirement. Only activities that are a permit or statutory requirement are not eligible for funding. Therefore, it would be beneficial to address the TMDL recommendations before they are required by the permit.</p>
Page 5, "Monitoring", 4 <sup>th</sup> bullet	Since Pullman streets also drain into the pond, they need to be included in the investigation	Pullman added to this bullet.
Page 6	Treat all municipalities, universities, counties, and state agencies equally in the strategy and plan. Address POTW, point and non point sources from each separately. Should Washington DOT be included for their work on Paradise Creek and its affect on water quality?	<p>Each municipality, university and county in the plan has been given a major heading with sub-headings for different departments under it (if necessary).</p> <p>As section was added for WSDOT stormwater.</p>
Page 7	Change "Moscow, Idaho" title to "Moscow and Latah County" and that Latah County and Moscow, Idaho should investigate the SFPR to determine if the loading is occurring in the county and/or the city.	Section was changed to "Idaho (City of Moscow and Latah County)"

Page 8, 1 <sup>st</sup> paragraph, 2 <sup>nd</sup> sentence	change “fecal coliform bacteria <i>in ...</i> ” to “... <i>is</i> needed ...”	Corrected.
Page 8, “What is the schedule...”, 1 <sup>st</sup> paragraph, 2 <sup>nd</sup> to last sentence	Delete “By 2013 these streams should be have achieved at least 50% of the target reductions specified in this report.” How were these dates selected? Please explain the two part coliform standard.	This section has been revised. 2013 was selected because it was the mid-way point for when the streams should achieve water quality standards. Therefore, it is an appropriate time to check in to determine if progress is being made. The 50% goal in this section is toward meeting the percent reduction required in the TMDL, not 50% of the standard. The two part bacteria standard is explained in the Water Quality Standards and Beneficial Uses section of the report.
Page 8, “What is the schedule...”, 1 <sup>st</sup> paragraph, last sentence	change to read “... will <i>be</i> applied.”	Section revised.
Page 8	Please define Adaptive Management. Is it the feedback loop?	A defining paragraph and a figure have been added to the Adaptive Management section to clarify.
Page 10, 1 <sup>st</sup> sentence	Is “The <i>Recommendations</i> section of this report . “ referring to the study? Please clarify.	Yes, the <i>Recommendations</i> section is the section in the study. The technical study and the implementation strategy will be combined into a single report.
Page 11, Whitman County Health Department	Should it be mentioned that they are also responsible for protecting the Public’s health from primary contact with water contaminated with fecal coliform bacteria.	Language added to this section.
Page 11 “City of Pullman”	Does or will Pullman, other municipalities, and the county have an ordinance for pet and animal owners to clean up and dispose of waste similar to WSU’s WAC 504-36-020?	<p>Pullman City Code 9.20.110 requires pet owners to pick up after pets in public places and private premises not owned by the pet owner. The pet owner also has to carry in their possession the necessary tools to remove wastes when walking their pet. This was added to the City of Pullman section under reasonable assurance.</p> <p>The city of Colfax also has a pet waste ordinance which has been added to the reasonable assurance.</p> <p>The county has a pet waste ordinance that applies to county owned properties such as parks. Since no county parks border any of the streams in the South Fork Palouse watershed it was not</p>

		added to the reasonable assurance section.
Page 11, "Washington State University", second paragraph	Delete. The WSU dairy is not on the WSU campus or in the SFPR watershed (it is in the Union Flat Creek drainage) and DOE terminated the CAFO permit for this facility as well as other WSU concentrated animal feeding operation facilities. Please also mention all of the measures WSU is making to protect water quality. Construction storm water permits, successfully completing a 3 year cycle and maintaining controls for concentrated animal feeding operations, outdoor irrigation controls to minimize runoff, etc. A part of the strategy for the plan should be to recognize past and current measures to reduce coliform bacteria contamination for each entity participating in the TMDL.	WSU dairy paragraph deleted.  The reasonable assurance section of the report is the ideal place to describe activities already under way to help address bacteria in the streams. All entities should submit a brief discussion of activities they are doing to help reduce bacteria in the streams for inclusion in this section.
Page 12 "Potential funding sources"	Indicate what types of entities are eligible for these funds and is WSU eligible for any of these? Local "teams" of people that could sample at a moments notice would greatly benefit getting better data. WSU would most likely be able to provide students to assist with sampling if grant funding was available.	For Ecology's funding programs, eligible public bodies include any Washington State county, city, town, conservation district, or other political subdivision; municipal or quasi-municipal corporation; federally recognized tribe; or Washington State institution of higher education, provided that the project is not included in that institution's statutory responsibilities.  Stormwater activities required under the Municipal Stormwater Permit are eligible for loans but not for grants unless the applicant can demonstrate hardship. Stormwater activities not required by the stormwater permit are eligible for grants. WSU would likely be eligible to apply for a grant for a storm sampling program provided it was not a requirement of the permit. TMDL action recommendations would likely become a permit requirement when it's reissued in 2012. However, under the current permit they are not required, therefore; some of the recommendations may be eligible for funding now.
	Although it may not ultimately matter, the study defines wet (mid-December – June) and dry (July – mid-December) seasons. It seems strange to think of June 20 <sup>th</sup> as wet season just because it may have rained the	The split between wet and dry season is not meant to be definitive or exact. Ecology wanted to simplify the analysis and the pollution control implementation. Ecology is mainly

		<p>day before. Similarly, December 6 is dry season but December 18 is wet season. The study used streamflow but that is likely influenced by larger watershed and may miss early fall rain events on urban areas. I think this can be seen in November data in Figure 5.</p>	<p>distinguishing between runoff and non-runoff periods because those distinguish two different modes of pollution. Non-runoff sources are those that generally have a direct deposition or discharge to the water, while runoff sources include pollution that has been washed into the water. Obviously, stormwater discharge from impervious surfaces can happen in any season given enough rainfall, but using stream discharge to differentiate between runoff and non-runoff periods works pretty well. The stream cannot have lots of runoff and low stream discharge. Discharges were still elevated in June from the spring runoff and the early summer thunderstorms that happen in the Palouse. The first rain events in the fall did not appear to generate much stream discharge, maybe because the dry conditions in the watershed soaked up the precipitation.</p>
		<p>Stormwater sampling appears to be limited for logistical reasons. While this is to be expected, more data would be useful to help define specific problems. Three outfalls are not sufficient for planning implementation. Moreover, previous studies have shown that factors such as time since previous event and other related factors do not appear adequately addressed.</p>	<p>Ecology agrees that more data would be useful and would help define more specific problems. On the other hand, the data we did collect showed that there is a water quality problem with stormwater and that several outfalls appear to be worse than others. The data also showed that baseflow contributions from several outfalls are year-round. One of the storm event samplings we collected samples from 14 outfalls. We know more than we did before, and as we learn more it will be applied through the adaptive management process.</p>
		<p>Variability is not well defined. If multiple samples were taken at a single location over a short period of time, what kind of range would exist?</p>	<p>Ecology was covering a lot of territory doing this TMDL. We sampled nearly 60 sites every two weeks for a year in order to screen the whole watershed. We did not have time or resources to do multiple sampling at the same site on the same day. Instead of daily variability, we defined seasonal variability. That is as much specificity about variability that we needed for such a large screening.</p>
		<p>Regrowth is not well understood. Are increases in concentrations due to new sources coming in to the streams or are</p>	<p>Regrowth may not be well understood. Ecology suggested further study in the reaches below the Moscow WWTP and</p>

		<p>bacteria multiplying? What kind of die-off rate would be expected?</p>	<p>the Pullman WWTP because there are undefined load increases in reaches that the WWTPs discharge to. Ecology recommends looking at regrowth as a possible source. There may be other possible explanations too. We may have missed sampling a source within these reaches. It may be that there is regrowth in the sediments of these reaches too. Effluent may be providing nutrients to sustain and activate growth in the sediments. In any case, further monitoring may help understand the increases in these reaches. The data suggests that seasonal die-off from these reaches takes place downstream. A seasonal rate has not been calculated.</p>
		<p>The references to stormwater BMPs and the Eastern Washington Stormwater Manual do not go far enough towards solving the large percent reductions that are called for in the TMDL. What is needed is a clear strategy for “Stormwater Retrofitting” solutions rather than regulations for new growth/development. Urban outfalls are extremely difficult to treat since much of the land is already being used. Demonstration sites, innovative technologies and monitoring of practices to judge effectiveness are needed. Lots of money could be spent with no significant reduction if everyone is not careful.</p>	<p>The Eastern Washington Stormwater Manual is a starting place for addressing stormwater pollution.</p> <p>The Phase II permits do not include requirements for local governments to plan for or implement retrofitting. It is not economically feasible for most Phase II local governments to address stormwater retrofits at this time, especially while they are building stormwater management programs and establishing utilities. Ecology’s alternative approach was to request funding from the legislature for a grant program for capital projects like LID and stormwater retrofits. The legislature did so in FY2007 and FY2008. The Recent Federal Recovery Act funding also helped fund some stormwater infrastructure projects for FY2010.</p> <p>WSU Puyallup has been a regional leader in research, education, and implementation of LID, and WSU Pullman has faculty and students actively advancing the knowledge and practice of LID as well. WSU Pullman stormwater managers for the campus are starting to work with Capital Planning and Development personnel to seek opportunities to use these innovative techniques on campus. There is potential for this type of</p>

			<p>drainage and water quality improvement through this cooperative approach.</p> <p>Ecology recommends the first step to address the reductions in this TMDL should be locating and correcting illicit discharges, educating city and campus residents, and reviewing existing maintenance and operation procedures to determine if adjustments or changes should be made. All efforts should be accompanied by monitoring to determine and/or demonstrate effectiveness.</p>
		<p>Decreasing runoff may be as important as decreasing fecal counts. Types of LID practices that decrease flow reaching the storm drains should be mentioned.</p>	<p>Decreasing runoff would likely help reduce bacteria levels in the streams. Language to this effect was added to the stormwater sections.</p>