# Attachment E
# Ecology Responses to Comments
# for City of Palouse WWTP
# Draft Permit WA 0044806 and Fact Sheet

The legal notice that informed the public that a draft permit and fact sheet were available for review was published in the Whitman County Gazette on October 16, 2014. Ecology received comments on the draft documents during the 45-day public comment period. Below are the comments and Ecology's responses. The original comment documents (letters, emails, etc.) are included at the end of this document.

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The following comments were received from the City of Palouse by e-mail dated November 19, 2014:

**PERMIT COMMENTS**

1. NPDES Permit, page 6, Section S1.A. table of Effluent Limits re/performance based effluent mass limits for BOD5 and TSS (and pages 19-20 of Fact Sheet). Palouse requests Ecology reconsider and revise the limits to take into consideration plant capacity and potential future growth.
    - The performance based mass limits (i.e. lbs/day) for effluent BOD 5 and TSS (elaborated on in [*sic*] the Fact Sheet pages 19-20) have been determined based on the current plant flow/loading scenario, rather than projecting to the plant at full capacity. The result of the more restrictive lbs/day limit is to, in effect, place a moratorium on future growth in Palouse. If growth occurs (and corresponding flow and load increase), the plant will be required to progressively treat to a lower and lower effluent concentration as growth occurs.

    - For example, at the average day design capacity for the plant of 0.160 mgd and a BOD5 and TSS monthly limits of 5.4 lbs/day, the plant would be required to achieve an effluent concentration of 4.1 mgd [*sic*]. Although these levels are reached on occasion, they cannot be sustained year round. In addition they will become less possible as the plant flows/loadings approach the plant capacity (i.e. lower treatment efficiency).

    - If a performance based limit is to be imposed, it should have provisions for allowing the mass loading effluent allowance to increase as growth occurs to take into account: (1) increased influent flow and loading, and (2) expected reductions in treatment efficiency as influent flow and loadings increase (i.e. at max. plant capacity, lower efficiencies are expected than at say 50%a current plant capacity).

*Thank you for your comment. Ecology reviewed the development of the performance based limits and has made changes to the effluent loading limits for BOD and TSS. The limits from the previous permit will extend to this permit cycle. Please see the description in the fact sheet documenting why these limits will be kept and the calculation not adjusted to use maximum month flow.*

2. NPDES Permit, pages 6, Section S1.A table of Effluent Limits re/ pH limit (and pages 19-20 of Fact Sheet). The proposed pH limits 6.5-8.5 are more restrictive than the current permit limits of 6.0-9.0. Palouse requests Ecology maintain the limits of 6.0 to 9.0 per their previous permits.
    - The more restrictive limit will likely result in violations in the future. The more restrictive limit would have resulted in 7 violations during this last summer of 2014.

    - As violations occur, will Palouse be required to address the violations; and be required to add equipment for pH adjustment to their existing plant? This would seem a poor use of funds and city staff resource considering the fact a facility plan is required and due in 2017, and could potentially result in options that result in abandoning and /or not requiring pH adjustment.

    - It would seem premature to impose more restrictive limits until the next permit cycle or until the facility plan is complete in 2017. It also creates an anti-backsliding benchmark that may be unnecessary and potentially (unknown) detrimental in the future.

    *The change in the pH effluent limits reflect the aquatic life designation of the receiving water body as specified by WAC 173-201A. This designation, Salmonid Spawning, Rearing and Migration, requires a pH effluent limit of 6.5-8.5. In addition, given the impairment of the North Fork Palouse River, there can be no pH change in the surface water by an effluent discharge. Previously issued permits did not include these water quality based effluent limits for pH and the current permit manager is correcting these omissions in newly issued discharge permits. Ecology also recognizes the potential for effluent violations; however, process control modifications could help to eliminate these violations. This permit will implement interim pH limits of 6.25-8.75 for the duration of the permit cycle. The next permit cycle will promulgate the water quality based pH limit of 6.5-8.5*

3. NPDES Permit, Page 6, Section S1.A. table of Effluent Limits re/interim temperature limit (also referred to pages 30-33 of Fact Sheet). It appears premature to impose a temperature limit prior to the completion of the wastewater facility plan. Palouse requests Ecology reconsider the action and not

impose the limit; and, postpone setting a limit until the next permit cycle or after the facility plan is complete in 2017.

- The imposing of a permit limit creates an anti-backsliding benchmark that potentially could result in difficulties later for Palouse that cannot be know or predicted at the present time. With the results of the facility planning and future alternatives currently unknown, it appears unnecessary and premature to impose the limit at this time.

- Palouse is currently collection daily grab sample temperature data and has been doing so for 19 years. Ecology can continue to monitor the City's temperature data and, if needed, take future action if necessary. Ecology has the prerogative to impose a limit at a future date, either during a permit cycle or during renewal of the permit, and therefore would appear unnecessary to do so now.

- The permit acknowledges the temperature TMDL compliance deadline is 2024. It appears premature to impose a limit now due to the fact that at the current time the results of the future facility plan are not yet know [*sic*].

*Per WAC 173-201A-510(4)(b), when a discharge permit contains a compliance schedule for an effluent limit, an interim limit must be imposed as the facility works toward compliance with the final water quality based effluent limit. The interim temperature limit reflects a performance based limit which Ecology calculated using submitted effluent temperature data. The interim temperature limit cannot be removed.*

4. NPDES Permit, page 7, re/table footnote "e" (bottom of page). Notwithstanding the previous comment re/temperature, does the footnote indicate the temperature limit does not become effective until 2024? We assume the footnote was not meant to negate the interim limit shown on page 6; however, it appears ambiguous and thus the question is asked?

   *The final temperature limits do not become effective until the end of the compliance schedule included in the permit for meeting the Temperature TMDL set wasteload allocation. The interim limit applies until July 2024. Regulations require the final limits be placed in the S1 table even though they will not be effective until a later permit cycle.*

5. NPDES Permit, page 8, Section S1.B. Mixing zone authorization re/available dilution factors (DF) shown by Ecology. Also refer to further in depth discussions in the Fact Sheet pages 22-26; and page 28. We have reviewed the referenced mixing zone write-ups; however, we are unable to reproduce the DF values shown using the information in the permit and fact sheet. The lack of understanding makes us unable to agree or disagree with the DFs; and, unable to assess potential implications the values could have for the City. Could you

please clarify? If it would be more efficient to meet and discuss so as to not to have to prepare excess written material, please let us know. Examples of our lack of understanding:

- Based on WAC 173-201A-400(7)(a), the max criteria for chronic mixing zones is allowance to potentially utilize up to 25% of the river flow rate (assuming conditions all use of the max). Thus given a 7Q10 of 2.03 (per Fact Sheet page 24) and a summer plant effluent flow of 0.60 mgd [*sic*] (or lower) the max DF would be 5.7. Or, reference in the Fact Sheet, on page 28, last paragraph, is the 2011 dye study completed by Palouse. In the dye study, Ecology calculated a DF of 3.21 based on the dye study results and output from ECY's Riveplume spreadsheet. Neither of those values agree with the DF=2.2 shown in the dilution table on page 8 of the permit and shown in Table 15, page 28 of the Fact Sheet. We are unclear how the lower 2.2 DF was determined.

- Similarly there are DFs given for Human Health, carcinogen of 7.2; and Human Health, Non-carcinogen of 3.4. From the Fact Sheet write-up. We were not able to reproduce those values.

*Ecology used the spreadsheet "PermitCalc" to develop dilution factors based on facility flows and the critical low flow (7Q10) of the North Fork Palouse River at USGS station 1334500 in Potlatch, Idaho. The permit manager consulted the 2011 Dye Study completed by the facility.*

*The differences in the developed dilution factors (DF) result from the difference in the 7Q10 and permitted average annual, maximum month and peak day design flows. Please note that the referenced summer flow of 0.060 million gallons per day (MGD) exceeds Ecology's 85% design criteria threshold based on flows reported on the DMR during the summer months. Therefore, it does not appear in the last permit and Ecology could not use it to develop the DF and reasonable potential analyses for this permit.*

*The 2011 RiverPlume spreadsheet uses the alternative flow of 0.060 MGD. The permit manager can only use the permitted design values for average annual, maximum month, and peak day flows. Additionally, the Dye Study estimated flows at 25% higher at the facility as compared to the Potlatch gauging station.*

*Please note, that these downstream flows appear to include the effluent discharge due to the analysis occurring downstream of the outfall. Therefore, Ecology considers the actual data produced at the Potlatch gauging station valid and used the 7Q10/30Q5 outputs from DFlow (EPA's stream flow statistic tool for low flow analysis). The harmonic mean flow used Ecology's guidance of 3 (three) x 7Q10 flow.*

*Dilution factor development uses the following formulae:*

$$DF_{Acute} = \frac{Q_{Daily\ Max,cfs} + (.025 * 7Q10)}{Q_{Daily\ Max,cfs}}$$

$$DF_{Chronic} = \frac{Q_{Max\ Month,cfs} + (.25 * 7Q10)}{Q_{Max\ Month,cfs}}$$

$$DF_{HH-Non\ C} = \frac{Q_{Max\ Month,cfs} + (.25 * 30Q5)}{Q_{Max\ Month,cfs}}$$

$$DF_{HH-Car} = \frac{Q_{AvgMonth,cfs} + (.25 * (3 * 7Q10))}{Q_{AvgMonth,cfs}}$$

*While dilution factors did change with this permit, please note that resulting reasonable potential (and subsequent limit calculations) yielded an ammonia limit higher than the previous permit cycle. The existing permit uses the previous permit's ammonia limit to avoid backsliding.*

*Collected receiving water and effluent data will inform reasonable potential calculations for the next permit cycle. The next permit cycle will set water quality based effluent limits. Ecology does agree that the 25% of the width of the water body still controls the allowable mixing zone as it is the most restrictive.*

6. Related to the previous comment, please refer to footnote "a" shown as part of the "Available Dilution" table on page 8 of the NPDES Permit and table 15 on page 28 of the Fact Sheet. The significance of the footnote reference is unclear to us; and, the referenced table's connection between the DF (and dynamic DF) and the tie to the temperature TMDL. Could you please clarify? If it would be more efficient to meet and discuss so as not to have to prepare written material, please let us know.

   *Ecology used the dilution factors in Section S1.B for the reasonable potential analysis and effluent limit development for toxic parameters. Ecology added the footnote to show the difference in the dilution factors used for both toxic and temperature limit development.*

   *The Palouse River Temperature TMDL uses a dynamic dilution factor (see Effluent Limits table in S1 of Permit for the final temperature limit) to allow the facility more flexibility when discharging during the critical season once the TMDL becomes effective.*

   *The allowable temperature of the discharge depends on flows read at the Potlatch USGS gauging station. As a result, Ecology used a dynamic DF instead of a static dilution factor for the final temperature wasteload allocation. Per the footnote, please see page 50 of the approved Palouse River Temperature TMDL: WQ Improvement Report and Implementation Plan for additional discussion regarding the dynamic dilution factors.*

7. NPDES Permit, page 8, Section S2.a. Monitoring schedule re/requirement for continuous flow monitoring of influent flow. Currently, Palouse does not have "continuous" flow monitoring capabilities in the lift station. Palouse requests Ecology not require influent continuous flow monitoring during this permit cycle, based on the following:

    - Requiring metering would seem premature at this time, in light of the fact a facility plan is to be completed in 2017. Depending on plant upgrades required in the future, flow monitoring may not be needed at that location; or, if needed, it would likely be more cost efficient to combine the work with the larger project at that time. Also, the city would likely have financing available at the time for the larger project.

    - To add flow monitoring now, the city would have to borrow the funds; or borrow from other City funds. Depending on the type, installing continuous flow monitoring will range from $7,500 to $30,000+ depending on type (e.g. electronic pump run time devices with logic algorithm for synthesizing continuous flow; or, buried vault with in-line mag meter devices in effluent discharge with algorithm for synthesizing diurnal fluctuations; or deep manhole structure with influent gravity direct instantaneous flow measurement, Parshall flume).

    - Other considerations include inaccuracies due to the recycle of plant flows back to the lift station (i.e. clarifier skimmer trough, belt filter press presage; toilets and sinks).

    - If Ecology maintains the influent continuous flow monitoring requirement, a proposed alternate would be to measure the total daily influent flow (including the recycled flow referred to in previous bullet) via calibration of the lift station pumps in conjunction with the lift station runtime hour meters. The runtime meters would be read on a daily basis and runtime converted to total daily flow for the previous 24-hour period. This method of total daily flow measurement is widely used. It provides total daily influent volume; but not continuous flow data.

    *The proposal for use of pump run times will currently satisfy the requirement of influent flow measurement; however, Ecology does not consider this to be ideal.*

    *Ecology needs the facility to report influent flows so that I/I influence can be assessed. Also, your permit manager uses influent flows and BOD/TSS loadings to assess remaining treatment plant capacity. Once flows and/or loadings exceed the 85% design capacity for three or more consecutive months, the facility must develop and submit for approval a Plan for Maintaining Adequate Capacity. The type of measurement will change from continuous to daily in S2. The facility must include an*

*influent metering station as part of the facility upgrades required for TMDL compliance.*

8. NPDES Permit, pages 9-10, Section S2.A. Monitoring Schedule. The draft monitoring schedule is a significant concern to Palouse due to substantial increase and cost impact over their current permit. Palouse requests Ecology reconsider/reevaluate monitoring requirements.
    - Following is an estimate / comparison of Palouse's current lab testing costs (2014) and future projected costs (2015-2017):

| | Current Permit | Future (Draft) Permit | | |
|---|---|---|---|---|
| Permit Testing Category (see permit) | 2014 | 2015 | 2016 | 2017 |
| (1) Wastewater Influent | $1,638 | $3,276 | $3,276 | $3,276 |
| (2) Wastewater Effluent | $5,122 | $7,996 | $7,996 | $7,996 |
| (3) Receiving Water Monitoring | $0 | $1,795 | $1,795 | $0 |
| (4) Permit Renewal Appl. Req'ts – Final Wastewater Effluent | $0 | $0 | $0 | $1,353 |
| Total | $6,760 | $13,067 | $13,067 | $12,625 |
| Increase above 2014 level | | $6,307 | $6,307 | $5,865 |

    - The estimated costs are based on quoted prices from AAA laboratory, Inc. (the City's contract lab). The draft permit will almost double the city's current laboratory testing costs (a total of about $18,500 during the period). In addition, there are other additional costs not reflected in the preceding table:
        - Additional operator time / manpower (amt. ??)
        - Additional shipping costs to AAA Lab (amt. ??)
        - Additional monitoring equipment and skills req'd (guesstimate $10,000 range – e.g. composite sampler and computer approx. $3,000 to $5,000); other testing equipment, site security, etc.
        - Implementation and program maintenance.

    - The probable range of additional cost impacts is estimated in the $30,000 +/- range.

    *Thank you for your comment. Ecology understands that the City has concerns with the increased monitoring; however, the changes to the influent and effluent monitoring compare to monitoring requirements at similar facilities. Also, the previous permit required composite sampling so the permit manager does not understand why the facility must invest in additional sampling equipment. The facility can manually composite, if needed, eliminating the need for additional sampling equipment.*

9. NPDES Permit, pages 9-10, Section S2.A. Monitoring schedule. The following comments supplement the above monitoring schedule comments.
    - "(1) Wastewater Influent" testing category. Palouse requests Ecology revise the testing frequency to the historical level of ½ weeks for BOD5

and TSS. The operator (Don Myott) indicates the historical data is consistent and predictable. Has Ecology observed anomalies or reasons for concern with the existing data record that justifies doubling the sampling frequency? Based on Palouse's 19 year uninterrupted data record; and considering Palouse is a rural community with no industrial or high use commercial customers, it does not seem justifiable to impose a doubling of the BOD5 and TSS sampling frequency.

- "(2) Final Wastewater Effluent" testing category. The previous comment also applies to this effluent testing for BOD5 and TSS; and Palouse requests Ecology reduce testing frequencies back to the historic level.

- "(3) Receiving Water Monitoring" testing category (pages 9-10); also refer to pages 28-29, Section S11. Receiving water study.
    - This testing category is a significant addition. The cost of the laboratory testing alone is $3,590, plus additional costs for equipment (e.g. composite sampler and other equipment). The river sampling also adds additional burden and variables associated with river sampling; i.e. additional time checking on samplings [*sic*] as they occur, security of sampling equipment, vandalism, etc. In past river sampling conducted by the City, they had sampling equipment stolen.

    - There is also a fairness issue in asking tasking [*sic*] the City with collecting receiving water monitoring data. The river data is used for a broader purpose and benefit to the public as a whole. The data results are used for and applied to other point and non-point sources along the river. It is unfair to ask Palouse to bear the total of the costs alone; and should be spread to and borne by the public as a whole.

    - Related to the previous bullet, Palouse requests the State pay the cost for river testing. Refer to the Fact Sheet page 40, Section G. Receiving Water Study. The section states, "Ecology's water quality program has a sampling budget that the Permit Manager will use to help support the water quality testing in the NFPR."

    - Also, to reducing [sic] testing costs and City labor/management burdens, could Ecology achieve adequate testing goals through sampling every other month, rather than every month during the May – September period? Currently the permit shows 5 samplings during the 5-month period from May to September for

2 years; i.e., monthly sampling. Would reducing testing frequency (and cost) to 3 per year produce sufficient data; i.e. May, July , September.

- "(4) Permit Renewal Application Requirements – Final Wastewater Effluent" testing category (page 10). The cost for this testing adds $1,353 in 2017. It consists of 3 rounds of testing (quarterly). As far as additional City labor/effort, it should not add significantly since the rounds of testing can be done in conjunction with Palouse's regular influent/effluent monitoring. Half of the cost is for the "priority Pollutants – Total Metals"' consists of testing for 13 priority pollutant metals. Considering the consistency of Palouse's wastewater, it would seem a reasonable alternative to reduce the 3 samplings to 1 sampling for the priority metals, and 2 for the others constituents. This would reduce the cost for this category to ½ of the $1,353.

*Thank you for your comment. No changes will be made to the influent/effluent monitoring schedule based on reasons previously stated in this response to comments. However, the permit manager clarified receiving water monitoring (Section S11) requirements. Ecology did not intend the facility to take 10 receiving water samples during every month of the 2015-2016 critical season. Rather, the sampling should occur during* ***either*** *2015 (pending QAPP approval) or 2016. The submitted QAPP will delineate the sampling frequency. The facility must take 10 samples total that represent the critical low flow period from June until the end of September.*

*The permit manager will use the data collected from the NFPR and the permit renewal application monitoring to complete reasonable potential calculations that determine if the effluent exceeds water quality standards for certain toxic parameters. As previously discussed with the City and their consultant, there are no other point source discharges to the NFPR.*

*The Water Quality and Environmental Assessment Programs do provide surface water assessments based on a competitive ranking and rating process. The permit manager will submit a proposal for evaluation of the surface water quality and will work with the City in the event of proposal approval. However, these proposals compete with those submitted across the State. This proposal may or may not receive approval.*

*The permit renewal sampling should occur during one sampling event. Your permit manager clarified this in the S2 Monitoring table. Three samples for each parameter taken simultaneously will be necessary for the data to be considered statistically valid.*

10. NPDES Permit, page 11, footnote “e” states, “The Permittee must report the daily minimum and maximum pH”. Suggest clarification to, “Report the pH value daily for the monitoring period; and, report the minimum pH and maximum pH for the overall monthly monitoring period.”

    *Thank you for your comment. This footnote now reflects the recording of a daily pH and the reporting of the monthly minimum and maximum pH on the DMR.*

11. NPDES Permit, Page 11, footnote “j”. The City indicates that the “rotational basis” is not practical and is disruptive due to the shipping and processing time involved. Currently the City’s composite sampling period runs from 8:00Am Monday morning to 7:00AM Tuesday morning. The samples are then packed up and shipped to Spokane and arrive Wednesday to AAA laboratory in Cheney. The lab sets up and runs the tests on Wednesday and Thursday. Due to those constraints it’s not possible for the city collect samples on a “rotational basis” throughout the five – day week. It may be possible to accommodate a Tuesday sampling and maybe Wednesday, but not Thursday or Friday due to the constraints. Palouse requests Ecology allow the continued on day [*sic*] sampling on Mondays.

    *Thank you for your comment. Ecology removed the “rotational basis” requirement in footnote “j”. Please note that holding times for fecal coliform wastewater analysis is 6 hours, not 24 hours. Shipping this sample to a laboratory violates the holding period (your contract laboratory should alert you to this holding time requirement) and renders your reporting invalid for this parameter.*

    *Ecology recommends the City coordinate sampling efforts with other regional treatment facilities to share the responsibility of delivering samples to a contract laboratory in a timely manner.*

12. NPDES Permit, page 11, para S5.G.a O&M manual submittal and requirements. The operator (Don Myott) wanted to confirm his understanding of the requirements. Background: currently Don has the original O&M manual (1995) on file at the plant and refers to it when needed. Don indicates the plant and equipment has not changed since originally built in 1995 (with one exception); and therefore the existing O&M manual applies and is sufficient for operation of the plant. Regarding the exception referred to, the biosolids dewatering portion of their plant was originally equipped with a Drimad bagging system that was replaced with an AeroMod belt filter press (BFP) in 2006. The BFP equipment came with an O&M manual they use and is kept on file at the plant. Therefore, the City assumes they are in compliance with the O&M requirements of the permit; and that Ecology is no asking [*sic*] or requiring further O&M materials be submitted for Ecology approval – is that correct?

*This submittal requirement applies to major modifications to the operations, process, maintenance requirements and/or changes to the operator in charge. If no changes occur prior to the due date, a letter or email stating that no changes have occurred at the facility will suffice.*

13. NPDES Permit, page 11, para S5.G.a.1 states: *"Review the O&M Manual at least annually and confirm this review by electronic submittal by September 1 of each year."* The City interprets this as the City is required to send an email to the Ecology permit manager (i.e. Ellie Key) annually stating something to the effect "Palouse's plant operator has reviewed the City's existing O&M manual and indicates the manual is kept on file for use at the treatment plant when needed; and the manual still applies to the City's plant and treatment processes." Is this Ecology's expectation under this item? Pertaining to all of the preceding comments, City PW Superintendent – Dwayne Griffin registered his concerns with the costs of meeting additional requirements for: (1) testing dollars, (2) City staff labor dollars, (3) construction costs and (4) engineering services. Dwayne further indicates the City's PW Department is understaffed and struggling financially for the past several years. The additional costs caused by the draft permit will pose significant financial burden on the City.

    *The electronic submittal refers to the web portal linked to your WebDMR account through Secure Access Washington. Ecology now requires all submittal delivery through the web portal. Your suggested text meets expectations for this submittal. If changes occur, please provide a hard copy addenda or replacement sheets as necessary.*

    *In regards to Dwane Griffin's concerns, Ecology reminds the City of Palouse that they have a responsibility to operate and maintain their treatment plant for permit compliance. Discharges cannot violate water quality standards making upgrades and facility changes necessary.*

    *The City's sewer rate structure should support the required testing, operation and maintenance of their treatment plant. Ecology recommends a review of the current rate structure and will work with the City if they have questions regarding a rate change. The City has the ability to control the cost of engineering services by selecting a consultant that provides a service (e.g., a facility plan) at a competitive cost.*

    *Ecology recognizes that construction costs can also vary. The facility plan due in 2017 should examine both affordability and cost effectiveness which includes engineering, construction and life cycle costs. The City has the ability to select the preferred alternative that meets water quality and that they feel is cost effective. Ecology will approve a facility plan with the preferred alternative that protects the water quality in the NFPR. Please note the permit changes align this permit with permitting requirements seen by similar sized facilities. Permitting requirements have also changed since Ecology issued the 2005 discharge permit.*

**FACT SHEET COMMENTS**

1. Fact Sheet, page 1 (last paragraph), Summary. The section includes the statement, "*Previous permits used annual average flows rather than maximum month flows for this calculation. Revising this calculation using the monthly maximum flow increased the allowable mass loading to the receiving water body triggering the anti-backsliding provision of the Clean Water Act. Ecology."*[*sic*] We are not sure of the implications of this statement, and are not necessarily taking exception to it; however, we are concerned if there is some negative implication for Palouse that the City should be aware of. Can Ecology comment further on this?

   *Typically, the permit writer calculates mass based limits from the maximum month flow and influent design criteria in order to meet the 85% removal of BOD and TSS. However, the previous permit used the annual average flow in the calculations. Using the maximum month flow for the loading calculation in this permit cycle would result in an increase to the effluent BOD/TSS loading to the receiving water body. Given the erroneous nature of the previous calculations, the permit writer initially used the performance based calculation for effluent limit development; however, based on your comment the limits reflect the calculation made in previous permits. Ecology added a detailed explanation to Section III.B of the Fact Sheet.*

2. Fact Sheet, page 1, the last sentence on page states, *"This proposed permit does not include any other significant changes."* The city does not agree with this statement. The permit includes significant changes in the additional monitoring and testing Palouse is being asked to provide, and the resulting cost and labor impacts to the City.

   *Thank you for your comment. Ecology understands the City's position on the new discharge permit and removed the sentence.*

3. Fact Sheet, page 8, 1st paragraph pertaining to the collection system. The city indicates there have been additional collection system upgrades subsequent to those noted from 1979 to 1992. Suggest adding the following text regarding additional collection system improvements: "During the period from 1996 to 2013, an additional 11,422 LF of old sewer lines were replaced, including 26 manholes and 86 service connections. New additions to collection system during the same period included 5,210 LF of new sewer pipe added, 17 manholes, and 17 service connections."

   *Thank you for the clarification. Ecology added the additional text.*

4. Fact Sheet, page 9, Table 2. Fyi – question. Is the TSS of 190 mg/L for the Palouse River correct? It appears higher than would be expected, unless it was taken during a runoff period.

*Thank you for your comment, the 190 mg/L represents the 90th percentile of suspended solids data collected.*

5. Fact Sheet, page 11, para. E. states, *"The City of Palouse has not consistently complied with the effluent limits and permit conditions throughout the duration of the permit issued on June 29, 2010."* The plant operator indicates he feels this statement is incorrect, or is a negative overstatement. He is concerned this statement reflect poorly on the City's operational record and conscientious efforts to maintain permit compliance. He indicates, of the violations that occurred, several of them were tardy report submissions due to slip-ups in coordination with City staff schedules, time off, etc. And, others were due to process glitches (unknowns), of which, the operator contacted Darrel Fleishman (Ecology tech assistance) for assistance and troubleshooting, to adjust operation in an effort to avoid future compliance excursions.

   *Ecology appreciates the operator's dedication to the operation and maintenance of the treatment plant. However, the language used reflects the standard permit language when the facility does not maintain compliance with the permit throughout the previous permit cycle. Compliance includes meeting submittal dates, meeting effluent limits, and preventing process upsets.*

6. Fact Sheet, page 16, Table 6: Compliance with Report Submittals over Permit Term shows the first two items as having been submitted late, subsequent to the Ecology deadlines. The plant operator indicates, the city conferred with Ecology prior to the deadlines to obtain permission / additional time for completion of the items.

   *Ecology understands that the operator contacted Ecology regarding submittal dates. However, without a permit modification, the submissions sent past the dates listed in the permit qualify as violations. Advanced notification of late submittals or other violations may and often result in informal enforcement actions instead of formal enforcement actions (e.g., a notice of violation or fines). It is the City's responsibility to read and meet permit requirements by the dates specified in the document or to negotiate a permit modification that is public noticed. Ecology cannot make a permit less stringent i.e. lengthened submittal timeline without publicly noticing the change to the permit.*

7. Fact Sheet, page 40, 1st paragraph stating, *"The City should complete a financial feasibility assessment as part of the facility plan. Ecology will provide spreadsheets for assessing economic feasibility of the selected alternative(s)."* Is this a new element / requirement for facility plans? We are not familiar with the referenced spreadsheets. Can you provide us a copy for review of the spreadsheets? Thank you.

*Thank you for your comment. Affordability and cost effectiveness have always been a component of facility plan approval. Ecology provided the EPA's Substantial and Economic Impact spreadsheet to Dana Cowger via email on October 9, 2014. Please let your permit manager know if you need an additional copy.*

8. Fact Sheet, page 40, paragraph G. Receiving Water Study. The paragraph states, "*Ecology's water quality program has a sampling budget that the Permit Manager will use to help support the water quality testing necessary in the NFPR".* Please refer to previous comments #8 and #9 regarding potential testing cost burden to Palouse and request to use Ecology funding to offset. The City requests use of the fund.

   *As previously stated, these funds are available through an internal competitive process. Your permit manager will submit a proposal to the Environmental Assessment Program requesting the receiving water study be financially supported either in full or in part by the Agency. Proposals will be due in early January 2015, the successful proposals will be announced before the end of the 1st quarter, 2015.*

**City of Palouse**

**City Hall**

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November 19, 2014

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Department of Ecology
Eastern Regional Office
4601 North Monroe Street
Spokane, WA 99205-1295

Subject: Review of Draft Permit and Fact Sheet
NPDES Permit WA0044806 and

Dear Ellie:

We have reviewed the Draft NPDES Permit and Fact Sheet and our comments are attached.

Having reviewed the permit, we are concerned with the direct cost and labor impacts the permit will have on Palouse, and we ask Ecology to reconsider the increased requirements. Our concerns are reflected in the attached comments. The City has limited resources and limited maintenance staff; and limited ability to generate revenue. For each $1 sewer increase we generate only about $440/month.

Please consider our comments. We appreciate your efforts to work with us and we will do everything we can to cooperate with Ecology.

Please call me or our engineer (Varela & Associates, Inc.) if you have any questions or would like to discuss the attached comments.

Sincerely,

Michael Echanove

Michael Echanove
City of Palouse

November 19, 2014

**CITY OF PALOUSE, WA**
**DRAFT NPDES PERMIT AND FACT SHEET REVIEW COMMENTS**
**(NPDES Permit # WA0044806)**

*Note:*
*Where comments pertain to similar information in both the NPDES Permit and the Fact Sheet, they are combined in the "NPDES Permit Comments" below and not included in the "Fact Sheet Comments".*

## NPDES Permit Comments:

1. NPDES Permit, page 6, Section S1.A. table of Effluent Limits re/performance based effluent mass limits for BOD5 and TSS (and pages 19 – 20 of Fact Sheet). Palouse requests Ecology reconsider and revise the limits to take into consideration plant capacity and potential future growth.
    - The performance based mass limits (i.e. lbs/day) for effluent BOD5 and TSS (elaborated on in the Fact Sheet pages 19 -20) have been determined based on the current plant flow/loading scenario, rather than projecting to the plant at full capacity. The result of the more restrictive lbs/day limit is to, in effect, place a moratorium on future growth in Palouse. If growth occurs (and corresponding flow and load increase), the plant will be required to progressively treat to a lower and lower effluent concentration as growth occurs.
    - For example, at the average day design capacity for the plant of 0.160 mgd and a BOD5 and TSS monthly limits of 5.4 lbs/day, the plant would be required to achieve an effluent concentration of 4.1 mg/L. Although these levels are reached on occasion, they cannot be sustained year round. In addition they will become less possible as the plant flows/loadings approach the plant capacity (i.e. lower treatment efficiency).
    - If a performance based limit is to be imposed, it should have provisions for allowing the mass loading effluent allowance to increase as growth occurs to take into account: (1) increased influent flow and loading, and (2) expected reductions in treatment efficiency as influent flow and loadings increase (i.e. at max. plant capacity, lower efficiencies are expected than at say 50% current plant capacity).
2. NPDES Permit, pages 6, Section S1.A. table of Effluent Limits re/ pH limit (and pages 19 – 20 of Fact Sheet). The proposed pH limits 6.5 to 8.5 are more restrictive than the current permit limits of 6.0 to 9.0. Palouse requests Ecology maintain the limits of 6.0 to 9.0 per their previous permits.
    - The more restrictive limit will likely result in violations in the future. The more restrictive limit would have resulted in 7 violations during this last summer of 2014.
    - As violations occur, will Palouse be required to address the violations; and be required to add equipment for pH adjustment to their existing plant? This would seem a poor use of funds and City staff resource considering the fact a facility plan is required and due in 2017, and could potentially result in options that result in abandoning and/or not requiring pH adjustment.

- It would seem premature to impose more restrictive limits until the next permit cycle or until the facility plan is complete in 2017. It also creates an anti-backsliding benchmark that may be unnecessary and potentially (unknown) detrimental in the future.

3. NPDES Permit, pages 6, Section S1.A. table of Effluent Limits re/ interim temperature limit (also referred to pages 30 – 33 of Fact Sheet). It appears premature to impose a temperature limit prior to the completion of the wastewater facility plan. Palouse requests Ecology reconsider the action and not impose the limit; and, postpone setting a limit until the next permit cycle or after the facility plan is complete in 2017.

    - The imposing of a permit limit creates an anti-backsliding benchmark that potentially could result in difficulties later for Palouse that cannot be known or predicted at the present time. With the results of the facility planning and future alternatives currently unknown, it appears unnecessary and premature to impose the temperature limit at this time.

    - Palouse is currently collecting daily grab sample temperature data and has been doing so for 19 years. Ecology can continue to monitor the City's temperature data and, if needed, take future action if necessary. Ecology has the prerogative to impose a limit at a future date, either during a permit cycle or during renewal of the permit, and therefore would appear unnecessary to do so now.

    - The permit acknowledges the temperature TMDL compliance deadline is 2024. It appears premature to impose a limit now due to the fact that at the current time the results of the future facility plan are not yet know.

4. NPDES Permit, page 7, re/table footnote "e" (bottom of page). Notwithstanding the previous comment re/temperature, does the footnote indicate the temperature limit does not become effective until 2024? We assume the footnote was not meant to negate the interim limit shown on page 6; however, it appears ambiguous and thus the question is asked?

5. NPDES Permit, page 8, Section S1.B. Mixing zone authorization re/ available dilution factors (DF) shown by Ecology. Also refer to further in depth discussions in the Fact Sheet pages 22 – 26; and page 28. We have reviewed the referenced mixing zone write-ups; however, we are unable to reproduce the DF values shown using the information in the permit and fact sheet. This lack of understanding makes us unable to agree or disagree with the DFs; and, unable to assess potential implications the values could have for the City. Could you please clarify? If it would be more efficient to meet and discuss so as not to have to prepare excess written material, please let us know. Examples of our lack of understanding:

    - Based on WAC 173-201A-400(7)(a), the max criteria for chronic mixing zones is allowance to potentially utilize up to 25% of the river flow rate (assuming other conditions allow use of the max). Thus given a 7Q10 of 2.03 (per Fact Sheet page 24) and a summer plant effluent flow of 0.060 mgd (or lower) the max DF factor would be 5.7. Or, referenced in the Fact Sheet, on page 28, last paragraph, is the 2011 dye study completed by Palouse. In the dye study, Ecology calculated a DF of 3.1 based on the dye study results and output from ECY's Riveplume spreadsheet. Neither of those values agree with the DF = 2.2 shown in dilution table on page 8 of the permit

and shown in Table 15, page 28 of the Fact Sheet. We are unclear how the lower 2.2 DF was determined.

- Similarly there are DFs given for Human Health, Carcinogen of 7.2; and Human Health, Non-carcinogen of 3.4. From the Fact Sheet write-up. We were not able to reproduce those values.

6. Related to the previous comment, please refer to footnote "a" shown as part of the "Available Dilution" table on page 8 of the NPDES Permit and Table 15 on page 28 of the Fact Sheet. The significance of the footnote reference is unclear to us; and, the referenced table's connection between the DF (and dynamic DF) and the tie to the temperature TMDL. Could you please clarify? If it would be more efficient to meet and discuss so as not to have to prepare written material, please let us know.
7. NPDES Permit, page 8, Section S2.a. Monitoring schedule re/requirement for continuous flow monitoring of influent flow. Currently, Palouse does not have "continuous" flow monitoring capabilities in the lift station. Palouse requests Ecology not require influent continuous flow monitoring during this permit cycle, based on the following:
    - Requiring metering would seem premature at this time, in light of the fact a facility plan is to be completed in 2017. Depending on plant upgrades required in the future, flow monitoring may not be needed at that location; or, if needed, it would likely be more cost efficient to combine the work with the larger project at that time. Also, the City would likely have financing available at that time for the larger project.
    - To add flow monitoring now, the City would have to borrow the funds; or borrow from other City funds. Depending on type, installing continuous flow monitoring will range from $7,500 to $30,000+ depending on type (e.g. electronic pump run time devices with logic algorithm for synthesizing continuous flows; or, buried vault with in-line mag meter devices in effluent discharge with algorithm for synthesizing diurnal fluctuations; or deep manhole structure with influent gravity direct instantaneous flow measurement, Parshall flume).
    - Other considerations include inaccuracies due to the recycle of plant flows back to the lift station (i.e. clarifier skimmer trough; belt filter press pressate; toilets and sinks).
    - If Ecology maintains the influent continuous flow monitoring requirement, a proposed alternate would be to measure the total daily influent flow (including the recycled flow referred to in previous bullet) via calibration of the lift station pumps in conjunction with the lift station runtime hour meters. The runtime meters would be read on a daily basis and runtime converted to total daily flow for the previous 24-hour period. This method of total daily flow measurement is widely used. It provides total daily influent volume; but not continuous flow data.
8. NPDES Permit, pages 9 – 10, Section S2.A. Monitoring schedule. The draft monitoring schedule is a significant concern to Palouse due to substantial increase and cost impact over their current permit. Palouse requests Ecology reconsider / reevaluate monitoring requirements.
    - Following is an estimate / comparison of Palouse's current lab testing costs (2014) and future projected costs (2015 – 2017):

| Permit Testing Category (see permit) | Current Permit | Future (Draft) Permit | | |
|---|---|---|---|---|
| | 2014 | 2015 | 2016 | 2017 |
| (1) Wastewater Influent | $1,638 | $3,276 | $3,276 | $3,276 |
| (2) Wastewater Effluent | $5,122 | $7,996 | $7,996 | $7,996 |
| (3) Receiving Water Monitoring | $0 | $1,795 | $1,795 | $0 |
| (4) Permit Renewal Appl. Req'ts – Final Wastewater Effluent | $0 | $0 | $0 | $1,353 |
| Total | $6,760 | $13,067 | $13,067 | $12,625 |
| Increase above 2014 level | | $6,307 | $6,307 | $5,865 |

- The estimated costs are based on quoted prices from AAA Laboratory, Inc. (the City's contract lab). The draft permit will almost double the City's current laboratory testing costs (a total of about $18,500 during the period). In addition, there are other additional costs not reflected in the preceding table:
    - Additional operator time / manpower (amt. ??).
    - Additional shipping costs to AAA Lab (amt. ??).
    - Additional monitoring equipment and skills req'd (guesstimate $10,000 range – e.g. composite sampler and computer approx. $3,000 to $5,000); other testing equipment, site security, etc.
    - Implementation and program maintenance.
- The probable range of additional cost impacts is estimated in the $30,000+/- range.

9. NPDES Permit, pages 9 – 10, Section S2.A. Monitoring schedule. The following comments supplement the above monitoring schedule comments.
    - "(1) Wastewater Influent" testing category. Palouse requests Ecology revise the testing frequency to the historical level of 1/2 weeks for BOD5 and TSS. The operator (Don Myott) indicates the historical data is consistent and predictable. Has Ecology observed anomalies or reasons for concern with the existing data record that justifies doubling the sampling frequency? Based on Palouse's 19 year uninterrupted data record; and, considering Palouse is a rural community with no industrial or high use commercial customers, it does not seem justifiable to impose a doubling of the BOD5 and TSS sampling frequency.
    - "(2) Final Wastewater Effluent" testing category. The previous comment also applies to this effluent testing for BOD5 and TSS; and Palouse requests Ecology reduce testing frequencies back to the historic level.
    - "(3) Receiving Water Monitoring" testing category (pages 9 – 10); also refer to pages 28 – 29, Section S11. Receiving water study.
        - This testing category is a significant addition. The cost of the laboratory testing alone is $3,590, plus additional costs for equipment (e.g. composite

sampler and other equipment). The river sampling also adds additional burden and variables associated with river sampling; i.e. additional time checking on samplings as they occur, security of sampling equipment, vandalism, etc. In past river samplings conducted by the City, they had sampling equipment stolen.

- There is also a fairness issue in asking tasking the City with collecting receiving water monitoring data. The river data is used for a broader purpose and benefit to the public as a whole. The data results are used for and applied to other point and non-point sources along the river. It is unfair to ask Palouse to bear the total of the costs alone; and should be spread to and borne by the public as a whole.
- Related to the previous bullet, Palouse requests the State pay for the cost for river testing. Refer to the Fact Sheet page 40, Section G. Receiving Water Study. The section states, "Ecology's water quality program has a sampling budget that the Permit Manager will use to help support the water quality testing necessary in the NFPR."
- Also, to reducing testing costs and City labor/management burdens, could Ecology achieve adequate testing goals through sampling every other month, rather than every month during the May – September period? Currently the permit shows 5 samplings during the 5-month period from May to September for 2 years; i.e., monthly sampling. Would reducing the testing frequency (and cost) to 3 per year produce sufficient data; i.e. May, July, September.

- "(4) Permit Renewal Application Requirements – Final Wastewater Effluent" testing category (page 10). The cost for this testing adds $1,353 in 2017. It consists of 3 rounds of testing (quarterly). As far as additional City labor/effort, it should not add significantly since the rounds of testing can done in conjunction with Palouse's regular influent/effluent monitoring. Half of the cost is for the "Priority Pollutants – Total Metals"; consists of testing for 13 priority pollutant metals. Considering the consistency of Palouse's wastewater, it would seem a reasonable alternative to reduce the 3 samplings to 1 sampling for the priority metals, and 2 for the others constituents. This would reduce the cost for this category to ½ of the $1,353.

10. NPDES Permit, page 11, footnote "e" states, "The Permittee must report the daily minimum and maximum pH". Suggest clarification to, "Report the pH value daily for the monitoring period; and, report the minimum pH and maximum pH for the overall monthly monitoring period."
11. NPDES Permit, page 11, footnote "j". The City indicates the "rotational basis" is not practical and is disruptive due to the shipping and processing time involved. Currently the City's composite sampling period runs from 8:00AM Monday morning to 7:00AM Tuesday morning. The samples are then packed up and shipped to Spokane and arrive Wednesday to AAA Laboratory in Cheney. The lab sets up and runs the tests on Wednesday and Thursday. Due to those constraints it's not possible for the City collect samples on a "rotational basis" throughout the five-day week. It may be possible accommodate a Tuesday sampling and maybe Wednesday, but not Thursday or Friday due to the constraints. Palouse requests Ecology allow the continued one day sampling on Mondays.

12. NPDES Permit, page 11, para. S5.G.a. O&M manual submittal and requirements. The operator (Don Myott) wanted to confirm his understanding of the requirements. Background: currently Don has the original O&M manual (1995) on file at the plant and refers to it when needed. Don indicates the plant and equipment has not changed since originally built in 1995 (with one exception); and therefore the existing O&M manual applies and is sufficient for operation of the plant. Regarding the exception referred to, the biosolids dewatering portion of their plant was originally equipped with a Draimad bagging system that was replaced with an AeroMod belt filter press (BFP) in 2006. The BFP equipment came with an O&M manual they use and is kept on file at the plant. Therefore, the City assumes they are in compliance with the O&M requirements of the permit; and that Ecology is not asking or requiring further O&M materials be submitted for Ecology approval – is that correct?

13. NPDES Permit, page 11, para. S5.G.a.1. states: *"Review the O&M Manual at least annually and confirm this review by electronic submittal to Ecology by September 1 of each year."* The City interprets this as the City is required to send an e-mail to the Ecology permit manager (i.e. Ellie Key) annually stating something to the effect: "Palouse's plant operator has reviewed the City's existing O&M manual and indicates the manual is kept on file for use at the treatment plant when needed; and the manual still applies to the City's plant and treatment processes." Is this Ecology's expectation under this item? Pertaining to all of the preceding comments, City PW Superintendent – Dwayne Griffin registered his concerns with the costs of meeting the additional requirements for: (1) testing dollars, (2) City staff labor dollars, (3) construction costs and (4) engineering costs. Dwayne further indicates the City's PW Department is understaffed and struggling financially for the past several years. The additional costs caused by the draft permit will pose significant financial burden on the City.

**Fact Sheet Comments (for those not referenced previously):**

1. Fact Sheet, page 1 (last paragraph), Summary. The section includes the statement, *"Previous permits used annual average flows rather than maximum month flows for this calculation. Revising this calculation using the monthly maximum flow increased the allowable mass loading to the receiving water body triggering the anti-backsliding provision of the Clean Water Act. Ecology."* We are not sure of the implications of this statement, and are not necessarily taking exception to it; however, we are concerned if there is some negative implication for Palouse that the City should be aware of. Can Ecology comment further on this?

2. Fact Sheet, page 1, the last sentence on page states, *"This proposed permit does not include any other significant changes."* The City does not agree with this statement. The permit includes significant changes in the additional monitoring and testing Palouse is being asked to provide, and the resulting cost and labor impacts to the City.

3. Fact Sheet, page 8, 1st paragraph pertaining to the collection system. The City indicates there have been additional collection system upgrades subsequent to those noted from 1979 to 1992. Suggest adding the following text regarding additional collection system improvements: "During the period from 1996 to 2013, an additional 11,422 LF of old sewer lines were replaced, including 26 manholes and 86 service connections. New additions to collection system during the same period included 5,210 LF of new sewer pipe added, 17 manholes, and 17 service connections."

4. Fact Sheet, page 9, Table 2. Fyi—question. Is the TSS of 190 mg/L for the Palouse River correct? It appears higher than would be expected, unless it was taken during a runoff period.

5. Fact Sheet, page 11, para. E. states, *"The City of Palouse has not consistently complied with the effluent limits and permit conditions throughout the duration of the permit issued on June 29, 2010."* The plant operator indicates he feels this statement is incorrect, or is a negative overstatement. He is concerned this statement reflects poorly on the City's operational record and conscientious efforts to maintain permit compliance. He indicates, of the violations that occurred, several of them were tardy report submissions due to slip-ups in coordination with City staff schedules, time off, etc. And, others were due to process glitches (unknowns), of which, the operator contacted Darrel Fleishman (Ecology tech assistance) for assistance and troubleshooting, to adjust operation in an effort to avoid future compliance excursions.

6. Fact Sheet, page 16, Table 6: Compliance with Report Submittals over Permit Term shows the first two items as having been submitted late, subsequent to the Ecology deadlines. The plant operator indicates, the City conferred with Ecology prior to the deadlines to obtain permission / additional time for completion of the items.

7. Fact Sheet, page 40, 1st paragraph stating, *"The City should complete a financial feasibility assessment as part of the facility plan. Ecology will provide spreadsheets for assessing economic feasibility of the selected alternative(s)."* Is this a new element / requirement for facility plans? We are not familiar with the referenced spreadsheets. Can you provide us a copy for review of the spreadsheets? Thank you.

8. Fact Sheet, page 40, paragraph G. Receiving Water Study. The paragraph states, *"Ecology's water quality program has a sampling budget that the Permit Manager will use to help support the water quality testing necessary in the NFPR"*. Please refer to previous comments #8 and #9 regarding potential testing cost burden to Palouse and request to use Ecology funding to offset. The City requests use of the fund.