Water Quality Program Responsiveness Summary

Fiscal Year 2001 TMDL Priority List

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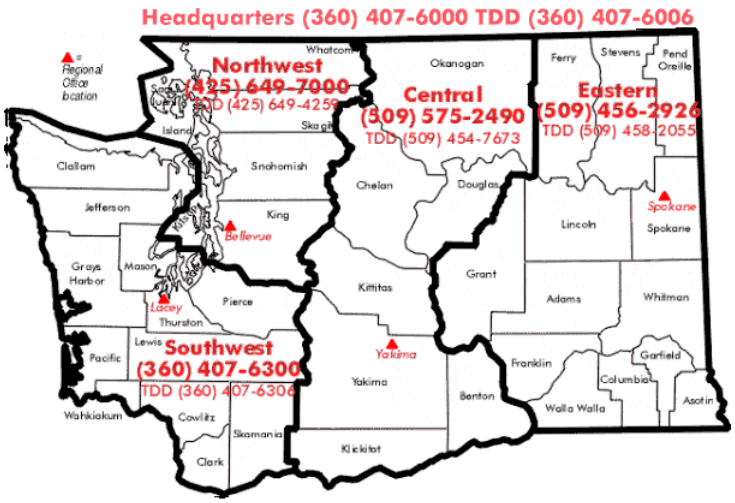

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Introduction

This responsiveness summary has been prepared to address public comments pertaining to the Water Quality Program's proposed fiscal year (FY) 2001 Total Maximum Daily Load (TMDL) Priority List (Water Cleanup Plans). These TMDLs will be started in FY2002 (July 2001 - June 2002).

TMDLs are plans for cleaning up polluted water bodies so they can meet water quality standards. Water Cleanup Plans (TMDLs) identify the pollution problems, allocate the maximum allowable pollution from various sources, and develop strategies to achieve those limits.

Water Cleanup Plans (TMDLs) include the following components:

- Identification of the type, amount, and sources of water pollution in a particular water body or segment;
- Determination of the capacity of the water body to assimilate pollution and still remain healthy;
- Allocation of how much pollution each source will be allowed to discharge;
- A strategy to attain the allocations; and
- A monitoring plan to assess effectiveness.

Community involvement is very important to the process of developing these plans and putting the plans into action. The local community, with Ecology's support and assistance, needs to be involved to help determine how pollution will be reduced to improve water quality.

Why Develop Water Cleanup Plans (TMDLs)

Section 303(d) of the Clean Water Act (CWA) requires that, every two years, states prepare a list of water bodies that fail to meet water quality standards. All water bodies identified on the list must attain water quality standards within a reasonable time frame, either through a TMDL, or through other pollution controls.

Nearly 700 water bodies in Washington State still fail to meet standards. End of pipe discharges from cities and industries (point sources) and diffuse runoff and habitat destruction (nonpoint sources) contribute to declines in good water quality. Typically, nonpoint pollution comes from everyday activities like household and garden chemicals, runoff from urban streets, agriculture, logging, and failing septic systems.

The purpose of a water cleanup plan is to determine the amount of pollution a waterbody can receive and still remain healthy for its intended uses. Uses include industrial process water, agricultural irrigation and stock watering, drinking water, recreation, and fish habitat.

What is a Typical TMDL Process?

The cleanup process begins with the development of a technical report analyzing the pollution parameters identified for a water body in the Section 303(d) list of impaired water bodies. This study takes approximately one to two years to scientifically identify the pollution sources and the load allocations needed to return the water body to standards. The technical report provides a single source of data and analysis for the community and Ecology to join together to determine pollution control strategies.

During this period, involved members of the community are apprised of the situation as it develops. Pollution control strategies will be reviewed together and converted into solutions and activities. Solutions should be economically feasible and capable of early implementation by the community and Ecology. Implementation activities may continue for some time into the future until follow-up monitoring indicates that water quality standards have been reached.

What is the Schedule for Washington's Cleanup Plans?

According to a legal settlement agreement signed in 1998, Ecology had 15 years to develop plans to clean up 666 water bodies, to help local governments write their own plans, or to work with them in partnership. Reviews every five years will evaluate progress. The water bodies identified on the FY2001 TMDL Priority List continue the fifteen-year schedule and clean up process (see priority list below).

Priority Water Bodies to begin Cleanup Plans in FY2002 (Jul 1, 2001- Jun 30, 2002)

WRIA	Primary Location	Water Body	Pollution Problems
47	Chelan County	Lake Chelan/Roses Lake	DDT, PCBs (federal law banned these toxic chemicals in transformers and other industrial purposes in 1979) and pesticides
45	Chelan County	Mission Creek	Pesticides
45	Chelan County	Wenatchee River Basin	Low levels of oxygen levels, elevated temperatures, fecal coliform bacteria, pH
9	King County	Green River	Chromium, bacteria, low levels of oxygen, and high temperature (King County and Ecology staff plan to address this cleanup)
15	Kitsap County	Sinclair and Dyes Inlets	Toxic substances, fecal coliform bacteria , zinc, PCBs (Ecology and U.S. Navy staff plan to address this cleanup)
24	Pacific County	Willapa River	Elevated temperature
13	Thurston County	Henderson Inlet and Woodland, Woodard, Dobbs, and Libby Creeks	Fecal coliform bacteria, pH, low levels of oxygen, elevated temperature
11	Thurston/Pierce County	Nisqually River, McAllister Creek, Nisqually Reach, Ohop Creek	Fecal coliform bacteria, low levels of oxygen
23	Thurston-Lewis counties	Upper Chehalis River	Fecal coliform bacteria

32	Walla Walla County	Walla Walla River, Touchet River and Mill Creek	Elevated temperature, pesticides, fecal coliform bacteria, pH, PCBs
1	Whatcom County	Lake Whatcom Watershed	Low levels of oxygen, fecal coliform bacteria, Phosphorus, Pentachlorophenol, Mercury, PCBs
1	Whatcom County	Whatcom Creek	Fecal coliform bacteria, elevated temperature, zinc, benzo(a)pyrene - (Ecology and city of Bellingham plan to address this cleanup)
Many	Several	Columbia River	Total Dissolved Gas. Temperature, Cooperative effort with Oregon, Idaho, and EPA

This year, Ecology plans to take additional samples to determine the level of pollutants in the following water bodies and determine whether cleanup plans are needed.

Special Verification Sampling*

WRIA	Primary Location	Water Body	Pollution Problems
27/28	Clark County	Columbia River	Arsenic
26	Cowlitz County	Cowlitz River	Arsenic
8	King County	Kelsey Creek	Pesticides
8	King County	May Creek	Copper, lead, zinc
9	King Co	Springbrook (Mill) Creek	Cadmium, Chromium, Copper, Mercury, Zinc
9	King Co	Green River	Chromium
15	Kitsap County	Dyes/Sinclair Inlets and Port Washington Narrows	Metals, organic materials (waste from plants or animals), arsenic
15	Kitsap County	Eagle Harbor	Arsenic
15	Kitsap County	Port Orchard, Agate, and Rich Passages	Arsenic
31	Klickitat County	Columbia River	Arsenic
10	Pierce County	Puyallup River	Arsenic
10	Pierce County	Chambers Creek	PCB
10	Pierce County	White (Stuck) River	Copper, Mercury
7	Snohomish County	Skykomish River	Copper, lead, silver
7	Snohomish County	Snohomish River	Copper, Mercury
54/57	Spokane County	Spokane River	Chromium, Arsenic
61	Stevens County	FDR Lake	Arsenic
25	Wahkiakum Co	Lower Columbia River	Bis(2-ethylhexyl) Phthalate, Arsenic
1	Whatcom County	Georgia Straight	Metals, Organics, Bioassay
1	Whatcom County	Bellingham Bay	pH
34	Whitman County	Palouse River	Chromium
37	Yakima/Benton County	Lower Yakima River	Mercury, Silver, Arsenic
38	Yakima County	Naches River	Silver

- * Proposed for additional samples to determine the levels of pollution and whether cleanup plans are needed.

WRIAs: Water Resource Inventory Areas are large watersheds.

Definitions of Pollution Problems

Fecal coliform bacteria - Although not necessarily agents of disease bacteria indicate the presence of disease-carrying organisms, which live in the same environment as the fecal coliform bacteria.

Dissolved oxygen (DO) -A certain minimum amount of DO must be present in water for aquatic life to survive.

Temperature – It's important because it governs the kinds of aquatic life that can live in a stream. For instance, streams must be cooler than 61 degrees Fahrenheit for salmon to successfully spawn.

pH - This is a term used to indicate the alkalinity or acidity of a substance as ranked on a scale from 1.0 to 14.0. Neutral pH is 7.0. Acidity increases as the pH gets lower.

PCB – PCB s are highly persistent organic chemicals used primarily in electrical equipment (e.g. transformers). Banned from production in mid-1970s. They accumulate in fish tissue.

DDT, DDE, Pesticides (Chlordane, Dieldrin, Heptachlor, Heptachlor Epoxide, Hexachlorobenzene) – These are highly persistent organic chemicals and can harm aquatic organisms. They accumulate in fish tissue.

Toxics & Metals (zinc) – These can persist in sediments and be present in water and have been shown to have adverse effects on aquatic organisms.

Sediments – Sediment can smother fish eggs, change the aquatic organisms and habitat, and interfere with fish migration, feeding and spawning.

Arsenic – Arsenic is a naturally occurring element. Human activities can increase concentrations to toxic levels in the environment.

Phosphorus – It serves as a nutrient or "fertilizer" for algae and aquatic plants. Too much algae cause aesthetic problems and reduce oxygen levels in lakes and streams.

The entire list of water bodies used to choose from can be viewed on website: http://www.wa.gov/ecology/wq/303d/

Responsiveness Summary Background

The FY2001 TMDL Priority List was developed as a result of a considerable yearlong effort that began in September 2000. This included:

- gathering technical data and information around the state;
- holding workshops last fall to identify priority water bodies for development as TMDLs;
- informally discussing these selections with the public;
- consideration by an Ecology joint management team; and,
- a formal public comment period held between May 2 and June 6, 2001.

Comments were received and considered from 47 individuals and entities (9 letters, 26 emails, 12 phone-calls). Respondents asked a number of questions concerning the water bodies selected. Some questioned and challenged the need for cleaning up specific water bodies. Many expressed interest in why Ecology could not expand their TMDL efforts into more water bodies and asked for assistance with local pollution problems near the residences of the respondents. The general answer to those questions is that there are insufficient resources to do the amount of work that is needed and that Ecology cannot interfere with problems and solutions that are within the domain of local jurisdictions.

There were several telephone conversations with individuals who were environmentally concerned about the health of water bodies in their areas. Their names are: Desiree M. Stefends of Bellingham who supported the work projected for Lake Whatcom; and, Gordon Perkins of Starbuck who supported work in the Walla Walla and Tucannon Rivers. Hopefully, their questions and input were handled during the course of the phone calls. Their level of concern, personal interest, and in some cases, involvement in improving Washington's water quality requires their being noted in this summary.

Each water body listed was also reviewed for its potential for meeting water quality standards through pollution controls other than TMDLs. No water bodies were deferred due to other pollution controls.

After considering all the public comments contained here in, the final FY2001 TMDL Priority List is as shown in the above table.

TMDL Responsiveness Summary

Public comments included in this responsiveness summary came from individuals and entities located in Washington State. The comments and responses have been organized geographically by Ecology Regional Office (Central; Eastern; Northwest, Southwest). The names of respondents are shown in parentheses at the end of each comment. Some editorial adjustments were made to consolidate questions and comments and to promote overall brevity.

General Comments Applicable Statewide:

Comment: Harmful implications of the Clean Water Act for salmon (Bill Reinard**).** Attachment: Cultural Oligotrophication: Causes and Consequences for Fisheries Resources, May 2000

The mentality of aesthetic improvements and clean water associated with oligotrophication is not consistent with "greener" water and salmon productivity. Nonpoint pollution terminology associated with unappreciated desirable nutrients especially phosphorus must change. Abandon the term pollution in those situations

Response: *As a watershed becomes developed, phosphorus loading increases to the streams and lakes downstream of the developed areas. Increased phosphorus loading has been a major concern in freshwater systems because very small increases in concentrations can cause dramatic increases in algae. Lakes with excessive algae blooms can suffer from low dissolved oxygen concentrations at depth which means reduced areas of cold water habitat for salmonids.*

Many lowland lakes in Washington have been suffering from increased phosphorus loadings. There has been a lot of effort to clean up developments' downstream effects of phosphorus loading to streams and lakes. Certain upland more pristine ecosystems where salmon have historically spawned and where the young hatch and rear before they return to the ocean have become less productive – more oligotrophic. This is mostly because the numbers of returning salmon that have died there in the past and thereby returned marine-derived phosphorus and other nutrients to the upper watershed have been drastically reduced. Ecology is in the process of working with the Washington Department of Fish and Wildlife to determine which of these upper watershed streams could be enhanced for biological production including salmon by planting fish carcasses, processed fish carcasses and nutrient pellets.

First, it must be determined which streams are in fact phosphorus poor and the correct process for enhancing stream production. Some streams have been highly impacted by man through forest practices and other activities. These streams may not be suitable for nutrient enhancement until riparian habitat has been restored enough to make the systems livable. There are also lakes and some reservoirs within the state that may benefit from this approach. We have seen where efforts to increase production in British Columbia lakes, reservoirs and streams have been successful.

At the same time, there are still downstream areas in rivers and streams that would suffer if upstream phosphorus loadings were made too high. The same would apply to lakes and reservoirs. Caution is needed so that increases in phosphorus loading would not exceed needs and result in a degrade of water quality including dissolved oxygen.

Timing is also important. The nutrients and food provided by spawning salmon occurs in the late fall and winter. During this time of cold high stream flows the nutrients and food are quickly utilized by the fish, algae and the invertebrates. By the time that the low warmer flows of summer arrive, most of the nutrients have either been utilized by the in-stream biota or have washed out of the system. As Ecology considers doing the right thing by adding nutrients to streams to enhance biological production, it is essential that the natural historic processes be closely replicated.

Comment: Washington State Department of Transportation (Paul Pickett)

We would like more specific information on what is planned in these watersheds. TMDLs for metals and turbidity are most likely to affect WSDOT, but it is possible that we would have an interest in TMDLs for temperature, bacteria, dissolved oxygen, or other parameters. It would be best to keep WSDOT informed as plans for these TMDLs develop.

There are several ways WSDOT could possibly get involved with a TMDL.

- Provide input on the Project Plan for the technical study.
- Participate in sampling.
- Assist with or comment on data analysis and development of the technical study report.
- Participate in establishing pollutant allocations.
- Participate in developing an implementation plan ("Water Cleanup Plan"), either by identifying pollutant controls for WSDOT facilities or develop an alternative control plan through a watershed-based process.

As one of Ecology's fellow state agencies, we recognize a commitment to take responsibility and participate as a partner in TMDLs where appropriate. With the wide variety of TMDLs and potential interest to WSDOT, the best way to approach the situation is with good communication and flexible opportunities for involvement.

Response: *Ecology agrees with the above outline of possible cross-agency interactions to develop a Water Cleanup Plan (TMDL). The key to selecting the proper response or*

responses is to establish direct communications between Ecology's regional office TMDL personnel and the appropriate WSDOT regional office. To accomplish this, the e-mail along with attached map of WSDOT regions and contact names have been sent to Ecology's regional offices. Further, Ecology's regional offices have been oriented on the value of making these cross-agency contacts. Annually, WSDOT regions will be invited to participate in the initial scoping of water quality management areas (WQMAs). During these fall workshops, WSDOT can select and indicate their desired level of follow-on involvement in particular waterbodies. In this way, channels of communication should be opened and on-site cooperation effected. Ecology appreciates WSDOT's interest in clean water.

Comment: Ann Goos, Director of Environmental Affairs, Washington Forest Protection Association:

- A relatively small number of the prioritized waterbodies (on the suggested list) may include forestland as a primary land use.
- Next year's proposed water quality clean-up plans should take into consideration the applicable BMP measures that control forestry practices on federal, state, municipal, and private forestlands.
- There is uncertainty as to how Ecology incorporated existing programs into the proposed prioritization process, e.g. recognizing current forest practices regulations approved habitat conservation plans, and federal land management planning designed to protect aquatic habitat and water quality issues such as temperature and sediment.
- Clean-up plans should be prioritized so they occur primarily in those watersheds without large-scale ecosystem plans, Endangered Species Act (ESA) approved plans, and or regulatory BMPs addressing habitat protection, beneficial uses, and salmonids.
- WFPA believes it is inappropriate to include implementation plans within the TMDL itself and requests that DOE make this change in the TMDLs developed in FY2002. Such plans should not be submitted to EPA for approval.
- Priorities should focus primarily on non-forested watersheds that do not have the extensive BMP programs evident on forestlands in Washington State.

Response: *It is true that a small number of the above waterbodies on the FY2001 priority list for TMDLs include forestlands as a primary land use. This is a happenstance of the selection process and land uses in the WQMAs in cycle this year. The primary selection criteria are listed on pages 8 and 9 of Ecology's MOA with the EPA settlement agreement (see Water Quality TMDL website). A key consideration in selecting TMDL sites is the provisions of the Forest and Fish Agreement.*

The Forests and Fish Report (FFR) is a science-based plan for fish habitat and water quality protection on non-federal forestland in the state of Washington. Federal and state regulatory agencies, Tribes, county government and private landowners negotiated the major elements of the FFR starting in 1997 and ending in the early winter of 1999. The agencies, tribes, landowners, and other key stakeholders developed a plan for forest practices that would meet the following goals:

1. *To provide compliance with the Endangered Species Act for aquatic and riparian-dependent species on non-federal forestlands.*
2. *To restore and maintain riparian habitat on non-federal forestlands to support a harvestable supply of fish.*
3. *To meet the requirements of the Clean Water Act for water quality on non-federal forestlands.*
4. *To keep the timber industry economically viable in the State of Washington.*

The Forests & Fish Report (FFR) is a consensus recommendation for changes in forest practices statutes, regulations, and management systems to attain the stated goals. The FFR recommends increased resource protection through programmatic and prescriptive standards and guidelines. A primary focus of these new standards and guidelines is to manage riparian vegetation and sediment input to maintain or enhance stream habitats and water quality. The recommendations, which are now incorporated as permanent rules under the Forest Practices Act (76.09), are intended to improve management in several key resource areas.

- *Next year's proposed water cleanup plans would consider the provisions of the forest and fish agreement and the applicable BMPs applicable under forest practices rules in making a selection of waterbodies needing to undergo a TMDL in FY2003.*

- *Each year, Ecology makes selections and develops the recommended waterbodies for TMDLs using the basic watershed approach outlined in the introduction, the prioritization criteria outlined in the MOA with EPA, and a mosaic of existing or ongoing point and nonpoint source activities already occurring on the ground in the WQMAs in cycle. It is this degree of effort that causes the scoping process to consume one year in duration. This work, combined with an effective public process seems to produce the best selection of waterbodies for TMDLs each year.*

- *Ecology attempts to correlate TMDL works with efforts already occurring on the ground. There are times when it is best for Ecology to establish a TMDL where little restoration work is ongoing so as to stimulate activity and corrective action. However, other times it can be quite advantageous to combine TMDL work with ongoing local action. This is especially true when dealing with a host of nonpoint issues. The overall process is somewhat unique to each waterbody and often depends on the situation.*

- *Ecology is required by the provisions of the MOA supporting EPA's settlement agreement to develop and include a summary implementation strategy (SIS) with each TMDL submittal. The SIS is part of EPA's checklist and TMDL review process. EPA does look for the presence of the SIS as a specific element of the* submittal. *However, the SIS itself is not part of the approval process. It is neither approved nor denied and the overall approval of the TMDL is not based on the adequacy of the SIS. EPA commentators acknowledge the SIS as a checklist element, review its contents, and comment on its potential to correct the issues involved. This is seen as an opportunity to provide constructive reviews of Ecology's planned approach to solve*

the TMDL pollution problems. Ecology will continue to honor its agreement by developing and submitting SISs as part of each TMDL submittal throughout the agreed to 15 year schedule.

- *As explained above, Ecology will work with the forest industry and others, and will consider the provisions of the forest and fish agreement in making its selections of waterbodies for TMDL studies. Other considerations on the ground may be unique to the WQMA and waterbodies under consideration in a cycle. Prioritization criteria on pages 8 and 9 of the MOA will also apply in the making the final selections and recommendations for waterbodies to undergo a TMDL each cycle.*

Comment: I believe that I do not have enough information about these streams to make a good judgement of which should receive your attention. I do believe that we are custodians of the environment and have a moral and social obligation to remedy as much as possible within the constraints of budget those problems we have created. Therefore, I strongly urge your department to weigh carefully which streams most need our immediate help and which streams have the best chance of responding favorably to our intervention. I do not want you to spend money and energy chasing dreams that are not likely to come true!

Work on the Umatilla river in Oregon has been successful in returning a salmon run to that area. Similar programs on tributaries of the Columbia River may also help those areas. Therefore, I think similar situations might deserve our first and closest attention! (James Tomlin)

***Response**: The year-long process of identifying these waterbodies for work during our state fiscal year 2002 has been very inclusive and extensive, and has passed management reviews. Please review the process outlined in the above paragraphs of Introduction and Background. The identification process in a yearlong effort and includes both public and management input.*

Ecology is also interested in doing work that will provide positive results and not waste time or money. The driving factor is the list of impaired waterbodies within the state (303(d) list). Ecology has closely scrutinized the work Oregon has done in the Umatilla and Walla Walla basins. Their methodologies and models have been studied and incorporated as appropriate into our cleanup procedures. Should you want to discuss Ecology's selection process or future plans in the Walla Walla area, please feel free to call Mimi Wainwright in the Spokane Office at 509-456-2831. She can fill you in on details and background that lead to the selection of the projects.

Comment: We would like to obtain a copy of the final statewide list of priority Total Maximum Daily Loads (TMDLs) for Fiscal Year 2001 (July 2000 through June 2001). We need this information for the management and implementation of our Wastewater and Stormwater Management Plans (Calvin Canton, USNS Whidbey Island).

Response: *A copy of the list was mailed to you as a FOCUS Sheet shortly after contacting Ecology. The same FOCUS Sheet was also posted to the web-site at:* http://www.ecy.wa.gov/programs/wq/tmdl/index.html

Central Regional Office (CRO)

Comment: I am supportive of and interested in the cleanup planned for the following rivers (Michael Kane, EarthCorps).

Wenatchee, Mission Creek, Skykomish, and the Entiat.

I do have a few questions and would appreciate any resources you can recommend.

What measures are planned to address the pollution in each drainage?
-For example how do you propose to address pesticide issues in Mission Creek?
-Fecal Coliform in the Wenatchee?
-Does this include Chumstick Creek?
-Water Temps in the Entiat?
-How do you address metals in the Skykomish River?
-Are these metals from old mines on the North Fork?

Response*: There are numerous approaches to solving and modeling for the proper load allocations for the pollution parameters noted above. Ecology's new approach is to try and conduct a single entry into watersheds. Thereby, all pollution parameters will be reviewed as much as possible during a single study. Temperature may remain a separate study in the above waterbodies, but combined later into a single report.*

The selected approaches for assessing each pollution parameter and the model requirements will be decided upon during the preparation of the waterbody project plans. These plans for the Wenatchee River and the Mission Creek areas will be developed by the spring of the year 2002. The Chumstick Creek will also be included in the study area. The best way to understand the development of these plans, monitoring practices, and modeling approaches is to become a member of the designated public advisory group. Such a group is formed to assist in the development of each TMDL. Your name and phone number have been sent to Ecology's Central Regional Office (CRO) to be placed on the mailing list, and to the Northwest Regional Office (NWRO) for inclusion in the mailing list for the Skykomish. The purpose of the study is to discern the source of the metals pollution. Please feel free to call Chris Coffin at CRO at 509-454-7860, or Susan Lee at NWRO at 425-649-7213 for additional detailed information or to participate as appropriate.

Comment: Please make the cleanup of Lake Chelan and the Columbia River your greatest priority. These waters do suffer from pollution and need your attention.

It seems that the Shorelands Act does not apply since homes are being built right at the shoreline. There is much milfoil and other forms of pollution over the lake. (Pam Baker)

Response: *Ecology has selected Lake Chelan and the Columbia River as high priority projects beginning in the year 2002 for many of the reasons that concern you. These waterbodies are listed on the impaired waterbody list (303(d)) and need continued attention. In addition, a great deal of past work has gone into establishing and maintaining Lake Chelan as a highly clean waterbody and that work needs to continue into the future. Please contact you county planning offices concerning the setbacks you refer to concerning the construction of new homes. These land use decisions are within the purview of local governments.*

The Total Dissolved Gas formed as water comes over the dams in the Columbia River can be quite harmful to fish populations. It is the intent of Washington's Ecology and the Department of Environmental Quality of Oregon to work together with the operators of these dams to develop solutions to this problem. You may also be interested to know that the federal Environmental Protection Agency (EPA) has also launched a large and multi-state study (Total Maximum Daily Load) to improve water temperatures in the Columbia system. Hopefully, you will be seeing and hearing more about theses projects and events during the coming year. You may call Chris Coffin of the Central Regional Office (509-454-7860) for continuing detail about these waterbodies. Ecology appreciates your personal interest in clean water.

Comment: I frequently fish for bass and trout in Roses Lake and am therefore interested in plans that impact it. If you could provide additional information I might be able to intelligently comment on a proposed plan (wplcraig@ncwonline.com)

Response*: There are numerous approaches to solving and modeling for the proper load allocations for the pollution parameters noted above. Ecology's new approach is to try and conduct a single entry into watersheds. Thereby, all pollution parameters will be reviewed as much as possible during a single study.*

The selected approaches for assessing each pollution parameter and the model requirements will be decided upon during the preparation of the waterbody project plans. These plans for Lake Chelan and Roses Lake will be developed by the spring of the year 2002. This work will be scheduled by Ecology's Central Regional Office in Yakima, WA. The best way to understand the development of these plans, monitoring practices, and modeling approaches is to become a member of the designated public advisory group. Such a group is formed to assist in the development of each TMDL. Your name and phone number have been sent to Ecology's Central Regional Office (CRO) to be placed on the mailing list. Please feel free to call Chris Coffin at CRO at 509-454-7860 for additional detailed information or to participate as appropriate.

Comment: Will the proposed TMDL on Lake Chelan & Roses Lake also cover Wapato and Dry lakes? (Don Phelps, PE)

Response: *These are all proposed projects needing additional clarification as part of a technical plan. At this point in time it is anticipated that all of the Lake Chelan and Roses Lake, Dry, and Wapato Lakes will be included. All listings were from an examination of fish tissue. Since these waterbodies are part of the overall drainage basin, they could be potential sources of pollution. Ecology plans on doing tributary sampling (water and possibly sediment) as part of this project.*

The selected approaches for assessing each pollution parameter and the model requirements will be decided upon during the preparation of the waterbody project plans. These plans for the Roses Lake area will be developed by the spring of the year 2002. This plan will outline the process, monitoring efforts, project design, and the potential sources of the pollution parameters to be considered. The DDT issue is not always easily determined and could cause a complex investigation. The best way to understand and remain appraised of the developing plans, monitoring practices, and modeling approaches is to become a member of the designated public advisory group. Such a group is formed to assist in the development of each TMDL. Your name and phone number have been sent to Ecology's Central Regional Office (CRO) to be placed on the mailing list. Please feel free to call Chris Coffin at CRO at 509-454-7860 for additional detailed information or to participate in implementation plans.

Eastern Regional Office (ERO)

Comment: Northwest Mining Association (NWMA), (Laura Skaer)

> (1) NWMA questions investigating the Spokane River for only Chromium and Arsenic because other constituents have also been identified. A complete consideration of all constituents would be better.
>
> 2) The NWMA would welcome the news that the Spokane River is only impacted with chromium and arsenic. There are no studies indicating that chromium is related to historic mining activities. There are strong indications that arsenic is a legacy of past agricultural practices.

Response*: Ecology is currently conducting a series of special investigations to verify the level of specific pollutants in selected waterbodies. As indicated in the above table, the Spokane River will be specifically sampled for levels of chromium. This does not mean that other pollution parameters do not exist or that they will be ignored. Ecology is aware of the total pollutants in the Spokane River and is gathering data and developing a schedule to address all pollutants.*

- *A previous Total Maximum Daily Load (TMDL) study for dissolved metals (cadmium, lead, zinc) was developed by Ecology and approved by EPA on August 25 1999.*
- *Other work is also continuing to investigate levels of all pollution in the Spokane River.*

The arsenic parameter has been dropped from the special investigations list of sampling because additional data have been identified from ongoing studies.

Ecology's current policy is "single entry into a watershed". In the past, sub-sets of listings were addressed by a TMDL in a waterbody. Now, Ecology plans to comprehensively address all 303(d) listings within a given geographic area, to the extent possible.

The comments and suggestions of the MWMA will be considered during a future TMDL study for the Spokane River and the scoping of this Water Quality Management Area.

Comment: Kaiser Aluminum – Trentwood Works (Patrick J. Blau)

1) Kaiser strongly urges Ecology to add the Spokane River to this year's priority list and make TMDL development for PCBs in the river its highest priority.
2) The Spokane River qualifies to be on the TMD list under the criteria announced by Ecology. References are DOE's March 2001 restrictive fish consumption advisory, and the April 2001 ecological hazard in Spokane and Long Lake indicating the Spokane River has the highest known PCB levels among Washington State rivers. These announcements should raise the priority for a TMDL.
3) The Kaiser Aluminum and others are ready to work with Ecology to develop the Spokane River PCBs TMDL. A TMDL would structure the Department of Health's and the community's efforts to respond to PCBs in the Spokane River.

Response: *The current 303(d) List has 26 listings for the main stem of the Spokane River and Little Spokane for PCBs. There are known and suspected sources which continue to enter the river under certain conditions. There are also known and suspected areas of contaminated sediments in both waterbodies. Ecology continues to work with Kaiser Aluminum on their treatment system, and may place limits in their permit which are conditional to a PCB TMDL being developed.*

Ecology's Environmental Assessment Program (EAP) has analyzed fish tissue in several areas of the river (leading up to the recent health warning). EAP has also completed a current round of effluent sampling. Concurrent to this effort, Ecology's Toxics Cleanup Program has developed a list of potentially liable parties (PLPs). Given this, the current level of resources and effort already invested in the PCB issue for the Spokane River, and the level of committed resources for the year 2002, Ecology believes that there is sufficient study and work occurring on this issue to justify delaying a TMDL until the year 2003. This is the year during which the Spokane River is scheduled for scoping. However, should resources become available, Ecology would consider making an out-of-basin selection of the Spokane River for a TMDL in the year 2002 (one year early). This action would be based on the importance of the PCB issue combined with the state of community readiness to proceed.

Kaiser Aluminum's interest in cleaning up the Spokane River is appreciated.

Comment: The Ferry Conservation District in cooperation with the Colville National Forest and the Colville Confederated Tribes is compiling temperature data on Sherman Creek. This creek is an ideal study because approximately 90% of it lies within the boundaries of the Colville National Forest and land owned by the state Department of Fish and Wildlife. This will allow innovative implementation of BMPs to alleviate high stream temperatures. Further, this may be used as a template to alleviate other streams with high temperatures. (Jim Nash)

Response: *Ecology agrees with the assessment and opportunities indicated by the Ferry County Conservation District. Sherman Creek is under active consideration, out-of-cycle, as a high potential for a temperature Total Maximum Daily Load study beginning in the fall of the year 2002. The reason for the delay is simply resource availability to begin the task. In fact, this fall technical contacts will be made directly with the Colville National Forest to establish a focused data collection and assembly effort in preparation for continuing the study the following year. Coordination will be affected through Dennis Murray of the Eastern Regional Office to ensure that all stakeholders interested in Sherman Creek will be included. Ecology appreciates the interest of the Ferry Conservation District and others in meeting water quality standards and encourages your participation.*

Comment: Are there TMDLs for the Spokane River? If so, is there documentation on the Ecology web page that I can download or if not, can you mail to me the documentation? (Kathryn_Carpenter)

Response: *There was a TMDL developed and approved in 1999 for Dissolved Metals (Cadmium, Lead, Zinc) refer to Ecology's Water Quality, TMDL web-page list of Approved TMDLs at http://www.ecy.wa.gov/programs/wq/tmdl/approved_tmdls.html*

Also see Ecology publications 99-49-WQ and 98-329. The local contact for details concerning these and other TMDLs in our Eastern Regional Office is Dave Knight, Spokane, phone 509-625-5191.

The current 303(d) List has 26 listings for the main stem Spokane River and Little Spokane for PCBs. There are known and suspected (Kaiser and the City of Spokane) sources which continue to enter the river under certain conditions. There are also known and suspected areas of contaminated sediments in both waterbodies. There is probably enough work occurring on this issue to justify waiting until 2003 (when it is scheduled) or possibly until next year's scoping (November 2002), when it could be inserted as an out-of basin project request.

Comment: I would like clarification as to the geographical area in Garfield County that feeds into the Walla Walla and Touchet Rivers and/or Mill Creek. I live in the area and would like to know where your work will be going on for those rivers. (Bob Hutchens, hgetc@bmi.net)

Response: *The county designated on the FOCUS Sheet was a mistake. The correct county is Walla Walla and that is being changed on later versions of the News Release and in the Web site FOCUS Sheet. Sorry for the confusion.*

Comment: I'm partial to the cleanup of the Walla Walla and Touchet rivers and Mill Creek as I live in the Walla Walla valley. There are several reasons that these streams should be high on the Department of Ecology's priority list.

First, Mill Creek provides an excellent opportunity for cleanup as its headwaters are protected for the Walla Walla water supply. These streams are also prime locations because, with a minor exception on Mill Creek, they have no reservoirs. Their freestone ecosystem is still intact.

With the economic downturn orchardists are experiencing, specifically with apples, the number and size of orchards on the streams and their subsequent need for irrigation is decreasing.

Each of these three streams could be quickly revived with the establishment of riparian zones off limits to livestock, farming, or development. These zones must extend to the high water marks, excluding catastrophic flood years like 1995. Speaking of 1995, the floods did a lot of natural cleaning that the river sorely needed, including the removal of development that was too close to the river.

Even if you choose not to clean up these streams, please do establish minimum flow requirements to protect the health of these ecosystems in low water year. That requirement alone would do an amazing amount to help these streams. (Jay Ham)

Response*: Ecology currently intends to conduct a water cleanup plan (TMDL) on the Walla Walla and Touchet Rivers and Mill Creek as stated in our information sheet. The purpose of the public comment period is to discern if those of you living in the area of these waterbodies agree or disagree with our intent and priority. Your message is clearly in support of this work and Ecology will log your rationale and priorities.*

Although your desire for establishing minimum flow levels is fully understandable, that parameter cannot be addressed by this TMDL study. Flow levels and water budgets are more within the purview of the Watershed Planning efforts and local Planing Units operating under the provisions of Chapter 90.82 RCW. The implementation of this law is not within the range of responsibilities of the Water Quality TMDL Program. However, Ecology does coordinate with Watershed Planning Units as part of the normal outreach efforts connected with the TMDL program. Results will be shared.

A Watershed Planning Unit is forming in the Walla Walla area. For additional information on its status and activities you may call Vicki Leuba at 509-625-5179.

Comment: I believe that I do not have enough information about these streams to make a good judgement of which should receive your attention. I do believe that we are custodians of the environment and have a moral and social obligation to remedy as much as possible within the constraints of budget those problems we have created. Therefore, I strongly urge your department to weigh carefully which streams most need our immediate help and which streams have the best chance of responding favorably to our intervention. I do not want you to spend money and energy chasing dreams that are not likely to come true!

Work on the Umatilla river in Oregon has been successful in returning a salmon run to that area. Similar programs on tributaries of the Columbia River may also help those areas. Therefore, I think similar situations might deserve our first and closest attention! (James Tomlin)

***Response**: The year-long process of identifying these waterbodies for work during state fiscal year 2002 has been very inclusive and extensive, and has passed both public and internal management reviews.*

Ecology has closely scrutinized the work Oregon has done in the Umatilla and Walla Walla basins. Their methodologies and models have been studied and incorporated as appropriate into Washington's cleanup plans and procedures. Ecology's selection process and reviews are outlined above in the Introduction and background sections. Please review these and if you believe that vital aspects are not being considered, please inform the Spokane Office. Should you want to discuss the selection process or future plans in the Walla Walla area, please feel free to call Mimi Wainwright in the Spokane Office at 509-456-2831. She can provide you details on these projects.

North West Regional Office (NWRO)

Comment: Whatcom County Water District 10 (Blair E. Ford, President)

1) Lake Whatcom is inappropriately a candidate for a cleanup plan (TMDL) based upon the inaccurate perception of dissolved oxygen problems.
2) Scientific Issues: the original listing was based on calculations of Hypolimnetic Oxygen Depletion Rates (HODR); the trend we acknowledged to be statistically weak; the methodology followed by Ecology did not follow the methodology described in the literature; for assessing HODR.
3) More recent efforts and calculations of HODR continue to indicate that there is no deteriorating trend in oxygen concentrations or depletion rates.
4) HODR calculations alone are not considered to be a reliable tool for assessing changes in lake condition.

5) Ecology's criteria stated in the FOCUS Sheet do not address the intent of the Clean Water Act 303(D) listing. The dissolved oxygen problem is over 30 years old and is not human caused.
6) Do not develop a TMDL for dissolved oxygen for Lake Whatcom
7) Attachments: Whatcom County Water District No. 10 South Shore Sewage Disposal Alternatives; Draft Supplemental Environmental Impact statement: Additional Analysis of the Nooksack Diversion. April 2001.

Response: *A letter was prepared to respond to The Honorable Blair E. Ford, the above comments and sent to WCWD 10. The text of that letter is repeated below:*

June 26, 2001

Dear Commissioner Ford:

Tom Fitzsimmons has asked me to respond to your recent letter regarding Lake Whatcom. I appreciate your continued interest in protecting the lake. In your letter, you asked two questions related to the Washington Department of Ecology's regulatory responsibilities in protecting Lake Whatcom. Responses to those questions are provided below.

Regarding whether Lake Whatcom should be placed on the list of impaired waterbodies as required under section 303(d) of the federal Clean Water Act: Lake Whatcom is currently listed for dissolved oxygen (DO). The state water quality standard for DO is "no measurable decrease from natural conditions." This criterion is set in consideration of the sensitivity of lakes to nutrient inputs. Lower levels of dissolved oxygen can lead to greater levels of internal phosphorus loading.

The reports cited in your letter identify that the trophic state of the lake has not changed in several years. Importantly, that is not the criterion by which impairment of a lake is judged. By the time that the trophic state has changed it may be too late to clean up the lake. Officials within Ecology and U.S. EPA concur with the report by Greg Pelletier that demonstrates a measurable decrease in dissolved oxygen, using analytical tools appropriate for Lake Whatcom.

Since the mid-1990s, Ecology considered listing Lake Whatcom for phosphorus. In 1996 and 1998, the lake was not listed for phosphorus, given the assurances by county water resources managers that phosphorus would be adequately addressed through implementation of the Lake Whatcom Management Plan.

However, the most recent regulations implementing the Clean Water Act require that water cleanup plans *must assure compliance* with all water quality standards before the next "listing cycle." Toward that end, we have not seen evidence of actions at the local level that will adequately address the phosphorus problem within the time frame required. Therefore, Ecology will begin to address the phosphorus impairment through a Total

maximum Daily Load (TMDL) in anticipation of the lake being listed for phosphorus in 2002. In the course of establishing a TMDL for Lake Whatcom, the extent of the lake that is impaired and the extent of the watershed that *affects* impairment will need to be evaluated.

The second issue you raised regards how Ecology sets TMDL priorities: The memorandum of agreement between Ecology and EPA (which can be found online at http://www.ecy.wa.gov/programs/wq/tmdl/303moa12.pdf) establishes our priority scheme.

The first factor is vulnerability to degradation. As indicated above, lakes can be very sensitive to nutrient inputs. In the last two years, a build-up of hydrogen sulfide has been detected in late summer, indicating more severe anoxic conditions. For these reasons, Lake Whatcom scored high on the vulnerability factor.

The second factor considers risks to public health, aquatic life and other water-dependent wildlife. As Lake Whatcom is the drinking water source for all of the area served by not only Water District 10 but by the city of Bellingham, it has significant public health implications. Recent studies have identified mercury in fish tissue. Dissolved oxygen may be a factor in converting mercury to the form most easily taken up by fish.

For these reasons, Ecology's Northwest Region views Lake Whatcom as its top priority for a TMDL to commence in July 2001.

Again, I appreciate your continued interest in cleaning up and protecting Lake Whatcom. If you have additional questions or comments, I urge you to contact Richard Grout, manager of the Bellingham Field Office, or Steve Hood, manager of the Lake Whatcom TMDL. Both gentlemen can be reached at 738-6250. You may also call me at (360) 407-6405.

Sincerely, Megan White, P.E. , Manager, Water Quality Program

Comment: I am supportive of and interested in the cleanup planned for the following rivers (Michael Kane).

How do you address metals in the Skykomish River?

Response: *See same response above under CRO.*

Comment: This is to support a clean up plan for WIRA 7 Snohomish River. Please advise me if there is any way our grass roots local group can assist you (Mary Keppler, President Friends of Blackman Lake)

Response: *Ecology appreciates your interest in clean water. Your message, name, and phone have been passed to Ecology's Northwest Regional Office to place you on a*

mailing list for the Snohomish River. For further detailed information please feel free to contact Dave Garland at 425-649-7031.

Comment: Since I have a water right to withdraw from Lake Whatcom and this is my only water source, I am very interested in the TMDL for this lake and feel this is a high priority. I would like to be involved and informed about this as much as is reasonable. (Tom Pratum, Bellingham)

Response: *Ecology appreciates your concern for clean water. Your name has been forwarded to the Bellingham Field Office to Steve Hood (360-738-6254) for placement on the mailing list. Please let Steve know if you desire to become involved and to what extent.*

The selected approaches for assessing each pollution parameter and the model requirements will be decided upon during the preparation of the waterbody project plans. These plans for Lake Whatcom watershed will be developed by the spring of the year 2002. The plan will outline the process, monitoring efforts, project design, and the potential sources of the pollution parameters to be considered. The plan will be developed in coordination with the Lake Whatcom Managers, and the WRIA 1 Watershed Management Project. Your name will be placed on a mailing list to be informed of any public meetings regarding the Lake Whatcom TMDL. Please feel free to call Steve at 360-738-6254 for additional detailed information.

Comment: What about including the Naselle River and Nooksack River on the list? Both have fecal coliform problems that have been cause for action by our office. Shellfish beds adjacent to the Naselle are listed as threatened and the beds adjacent to the Nooksack have been downgraded (Don Melvin, WA Department of Health)

Response: *Ecology completed a TMDL (cleanup plan) for fecal coliform on the Nooksack River in June 2002 (document # 00-10-036). Included in this TMDL are Fishtrap and other creeks in the area. These were just approved by EPA last year in August 2000. Ecology also has a strong dairy inspection program on-going in Whatcom County. The result of all these efforts shows the bacteria issue is being seriously addressed and Ecology's monitoring has already indicated a decrease in fecal coliform levels in the Nooksack River.*

The Naselle is not listed on Ecology's 303(d) list of impaired waters. Therefore, it is not currently under active consideration for a TMDL. However, the information you provided has been passed on to the Bellingham Field office (Steve Hood, 360-738-6254), and to Nora Jewett the 303(d) listing coordinator for consideration, review, and follow-up

Comment: The Boeing Company is reviewing your request for comments on TMDL stream segment prioritization. To conduct a complete review we need to access the underlying stream data that lead to and supports the 303d listing. Please advise where I can find this information on the WEB or at an Ecology office. We are specifically

interested in information on the Green-Duwamish and Springbrook Creek. We also have some interest in the current 303d status of the Cedar River even though it was not on the most recent request for comments (Mel Oleson, The Boeing Company).

Response: *Ecology appreciates Boeing's interest in clean water. For the information you would like to review, please first visit this site: http://www.ecy.wa.gov/programs/wq/303d/index.html*

More detailed information concerning rationale and data used in listing waterbodies on the 303(d) list, please call Alison Beckett at 360-407-6456 or Nora Jewett at 360-407-6479. Both of these individuals have access to the database and files for listings.

Comment: I realize it is difficult to let jurisdictions know when sampling will occur, since there are so many, but if you are able to give us a heads up when Kelsey Creek is going to be sampled, we would appreciate it (Wendy Skony, City of Bellevue).

Response: *For any of these projects that would involve sampling a quality assurance project plan (QAPP) would be prepared. Prior to deciding if sampling is needed, a review would be made of existing data on the site to see if new information has been collected that would help evaluate the listing. It is believed that it is possible that this listing is base on a single fish sample. It is unlikely that any additional sampling would be done before the summer or fall of 2001. Your name has been place on the contact list for this project for notification when the schedule becomes clearer. Please feel free to call Dale Norton of our Environmental Assessment Program (360-407-6765) for additional information.*

Comment: Has Ecology ranked the entire state's WRIAs 303(d) listed waterbodies? Is this list available? What criteria were used for the ranking? (Phyllis Varner)

If an entire state overall ranking has not been done, has Ecology ranked the 303(d) listed waterbodies within each Water Quality Management Area? Are these WQMA ranking lists available? And the criteria used to develop them?

And has Ecology developed a parameter-waterbody-specific schedule, i.e., year or date the TMDL process for that parameter for that waterbody segment will be initiated, for the entire State? Or by WQMAs? What is basis for schedule?

On Attachment A, Schedule for TMDL Submittal, of the PowerPoint program Lisa shared, it lists total #s of TMDLs to be initiated at different five-year cycles. Like to know what waterbodies these total #s apply to. These questions relate to more specifics on that list/schedule. Added question: "What criteria were used for the ranking?" (Phyllis Varner, & Rick Watson, City of Bellevue).

Response: *The entire 303(d) list has not been completely ranked.*

However, Ecology has assembled the 303(d) listings into projects by WQMA for further review and prioritization during Scoping years for WQMAs (five-year cycle). All these projects and waterbodies are not now ranked. Our normal Watershed Approach to Water Quality Management allows prioritization to occur during Scoping every five years. Your area, WRIA 9, is to be Scoped again during 2003. Each Scoping contains an outreach period where stakeholder opinions are solicited.

A schedule is now being developed and should be complete by the end of November. This schedule will be essentially an arithmetic assembly of the projects (a number of listings) by WQMA into the remaining Scoping years of the 15-year schedule.

The Attachment A schedule to the MOA represents the number of TMDLs to be completed each Fiscal Year in order to meet the total TMDLs on the 1996 303(d) list (1566) during the 15 year period (FY99 - 2014). Each FY total represents a composite number of TMDLs selected from the WQMAs shown in the left-hand column. There has not been an exact number decided upon from WRIA 9. However, there remain only two Scoping years in your WRIA, 2003 and 2008. All TMDLs not currently underway must be programmed into and Scoped during those years. The criteria for prioritization and ranking is also noted in the MOA on pages 8 and 9.

The point of contact in the Northwest Regional Office is Dave Garland 425-649-7031. He can provide additional details as the situation develops.

Comment: The city of Everett has no direct comments on the priority list. However, there are three listings in the Special Toxics Listing Verification section for the Snohomish River for copper or mercury in the water column. These segments are upstream of the city of Everett. We want to make you aware of a study undertaken by the city of Everett in 1993/1994 to characterize trace metals in both the wastewater effluents and the ambient receiving waters of the lower Snohomish River. This study was directed and approved by the NW Regional Office (Dave Wright) per PCHB No. 92-214 Stipulation and Agreed Order of Dismissal. The study was performed using "ultra-clean" sampling techniques and evaluated cadmium, copper, lead, mercury, silver, and zinc. After the clean sampling technique was optimized, none of the parameters were detected in the receiving waters. The study confirmed that the historical copper data were invalid due to contamination in the field (Julie Sklare, City of Everett).

Response: *Ecology appreciates the attached document (study) and will fully consider its contents when designing the quality assurance technical monitoring plan for the Snohomish River. Your interest in clean water is appreciated.*

Southwest Regional Office (SWRO)

Comment: I believe cleanup of the state streams should look at health risk to the public first and then fish and wildlife. As such, in Clark County the most polluted and degraded

stream is Burnt Bridge Creek. Fecal coliform, temperature and low dissolved oxygen are well documented. Many people live along this stream and children play in it the yearlong. I doubt that arsenic in the Columbia River is much of a health problem unless it is being used for drinking water. I don't believe anyone in Clark County uses this for a drinking water source. So why is that listed for Clark County and not BBC (Tom Newman, Clark County).

Response: *The problems and pollutants affecting Burnt Bridge Creek are well known to Ecology. It does rank high for the establishment of a TMDL in the future. The next scoping year for the WQMA encompassing Clark County is 2002. At that time consideration will be given to establishing a TMDL for Burnt Bridge Creek. In the meantime, the city of Vancouver has recognized the seriousness of pollution in the creek and is actively pursuing a number of actions and programs to mitigate the pollutants entering Burnt Bridge Creek.*

The arsenic in the Columbia River will be just a special sampling verification study. This level of effort does not compare to that of a complete TMDL study. Ecology does not have the resources available to establish an additional TMDL study this year. However, a simple verification study can be accomplished. The study is based on a probability that the current data that caused the 303(d) listing may not be correct. Verification of that data is needed and can be accomplished quickly.

Comment: The human and automotive mess on the Thurston-Lewis counties' line has a negative affect on the Chehalis River. There is an old mobile unit with a drain-field within 20 feet of the river. In addition there have been old storage tanks located there also. In the past, dead cattle were thrown in the river. These things need to checked out (D. L. West)

Response: *Thank you for your sincere interest in the water quality of the Chehalis River. The issues you noted in your letter are within the jurisdiction of the county governments and the local health district. Please contact them and ask them for assistance in resolving or checking building setbacks from waterbodies and for a check of the adequacy of the septic tank drain-fields. Land use and enforcement are within the purview of local governments. Ecology cannot directly influence these decisions.*

In addition, your name has been provided to Ecology's TMDL Coordinator for the Chehalis area. You will be placed on a mailing list for additional information about the TMDL and you may be asked to attend a meeting to determine solutions for the pollution problems. Ecology's contact for that area is Dave Rountry, phone 360-407-6276.

Comment: I am a retired tree farmer who had property near the Willapa River. Over a year ago, a contractor fell shade trees into the water all along the Palix River. Why does Ecology allow this to happen? The highway system sprays along highways When you kill a root system you allow erosion and the rain washes silt into the streams, shade is reduced, and fish are killed. Also, the spraying gets on wild berries along the road that people eat. WDOT states it's too expensive to mow rather than spray. They should stop

spraying in the Palix River area to save fish. Also, use of nets causes over harvest of fish (Jack Burkhalter)

Response: *Forest practices and the policy for tree harvesting are approved by Washington's Department of Natural Resources (DNR), not Ecology. Newer laws passed by the legislature are intended to put logging practices in better balance with the long-term health of forests, ecosystems, and salmon. Science and their recommended methods continue to evolve. At one time it was thought to be bad to have large woody debris in streams because they plugged them from easy flows. Now, science tells us that fallen trees provide essential habitat and cool resting places for fish and therefore large woody debris is encouraged.*

You have already asked and received the answer about the WSDOT spraying along highways. You may want to spend some time investigating alternatives to spraying and suggest that to WSDOT. Contact the Northwest Coalition for Alternatives to Pesticides (NCAP) in Eugene, Oregon. They offer publications and advice about how to mobilize local interest and action to work for changing traditional spray programs by transportation departments. A contact for the details is Bill Green at phone 360-407-6795.

Rules and policy governing fish harvests are developed by the Washington's Department of Fish and Wildlife. They are primarily concerned with the science and rules for preserving the species and for establishing the allowable fishing methods. Please feel free to contact them to obtain an explanation for your questions concerning the use of fishnets. Ecology continues to be concerned about providing cool clean water as the basic habitat for fish to swim, live, and reproduce.

Your personal interest in water quality issues is appreciated

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