

Biennial Review Request for Comments From DEQ (revised 8-28-12)

"The State Department of Agriculture and the State Board of Agriculture shall consult with the Department of Environmental Quality or the Environmental Quality Commission in the adoption and review of water quality management plans and in the adoption of rules to implement the plans." ORS 568.930(2)

Survey Checklist for (basin description): **Curry County**

DEQ Basin Coordinator: Pamela Blake

Date: May 17, 2014

(If answered "no", please provide information and/or example language)

I. Area Plan Content

A. Issue identification

1. Does the Area Plan include all water quality limited water bodies, including 303(d) listed and with approved TMDLs?

DEQ COMMENTS: No it does not.

- Floras Creek and tributaries are 303(d) listed for the parameters aquatic weeds, pH, temperature, biological criteria, chlorophyll a, dissolved oxygen, and iron.
- I made a mistake last review and indicated that Garrison Lake was 303(d) listed for aquatic weeds. That should have stated Floras Lake is 303(d) listed for aquatic weeds.
- In addition the LAC can be advised that EPA proposed 303(d) listings are no longer proposed but are now 303(d) listings. Updated tables have been provided.
 - The 2012 review indicated that; "If these proposed listings result in additions to the 303(d) list in the Management Area, this Area Plan will add strategies to address the new listings during the next biennial review." Will this action have to wait for two more years??
 - Review Period Section states; The ODA, Curry SWCD, LAC, and Oregon Board of Agriculture will consider making appropriate modifications to the basin Plan and/or the associated OARs on a biennial basis.
 - Review Period Section states; The Curry LAC reconvenes every two years. The purpose of reconvening is to address the implementation, language, or newly listed 303(d) parameters of concern to agriculture in the basin.

ODA RESPONSE: ODA will update the 303(d) list prior to 2016 biennial review.

2. Does the Area Plan adequately reflect current TMDL status?

DEQ COMMENTS: No it does not. The table below provides the updated information.

TMDLs in the Rogue Basin - Parameters and Adoption Dates

Basin	Parameter	EPA Approval
Lower Rogue	Temperature	2008
Lower Rogue Tributaries	Temperature	2008
Lobster Creek Watershed	Temperature	2002

ODA RESPONSE: ODA will update the TMDL status prior to 2016 biennial review.

3. Does the Area Plan sufficiently present the TMDL load allocation that it is intended to address?

DEQ COMMENTS: The Plan should state; Lower Rogue tributary streams are assigned generalized load allocations based on potential vegetation and effective shade curves. Site-specific load allocations were developed for the Lower Rogue mainstem upstream of river mile 5.3.

The Plan should state that the monitoring and evaluation of the Plan's effectiveness in meeting agricultural load allocations will include a review of applicable load allocations as found in Rogue Basin TMDL and the progress being made toward reaching applicable load allocations.

ODA RESPONSE: ODA, the LAC, and other partners will review ways to identify appropriate reduction goals for the TMDL load allocation for agriculture. The results will be included in the Area Plan during the next biennial review.

4. Does the Area Plan adequately include items from applicable Groundwater Management Area Action Plans?

DEQ COMMENTS: NA – there is no GWMA in the area.

5. Does the Area Plan present the requirements of Coastal Zone Management Act applicable to agriculture?

DEQ COMMENTS: Need to include hydromodification and wetlands measures. Language provided below.

Channelized Streams

- Evaluate the potential effects of proposed channelization and channel modification on the physical and chemical characteristics of surface waters in coastal areas.
- Plan and design channelization and channel modification to reduce undesirable impacts.
- Develop an operation and maintenance program for existing modified channels that includes identification and implementation of opportunities to improve physical and chemical characteristics of surface waters in those channels.

Eroding Streambanks and Shorelines

- Where streambank or shoreline erosion is a nonpoint source pollution problem, streambanks and shorelines should be stabilized. Vegetative methods are strongly preferred unless structural methods are more cost-effective, considering the severity of wave and wind erosion, offshore bathymetry, and the potential adverse impact on other streambanks, shorelines, and offshore areas.
- Protect streambank and shoreline features with the potential to reduce Non Point Source (NPS) pollution.
- Protect streambanks and shorelines from erosion due to uses of either the shorelands or adjacent surface waters.

Wetlands and Riparian Areas

- Protect from adverse effects wetlands and riparian areas that are serving a significant NPS abatement function and maintain this function while protecting the other existing functions of these wetlands and riparian areas as measured by characteristics such as vegetative composition and cover, hydrology of surface water and ground water, geochemistry of the substrate, and species composition.
- Promote the restoration of the pre-existing functions in damaged and destroyed wetlands and riparian systems in areas where the systems will serve a significant NPS pollution abatement function.
- Promote the use of engineered vegetated treatment systems such as constructed wetlands or vegetated filter strips where these systems will serve a significant NPS pollution abatement function.

ODA RESPONSE: ODA will work with the LAC to develop appropriate language to refer to those CZMA management measures for which the Oregon Department of Agriculture has program responsibility and regulatory authority. The results will be included in the Area Plan during the next biennial review.

6. Does the Area Plan include sufficient items from the State of Oregon; Pesticide Management Plan for Water Quality Protection?

DEQ COMMENTS: Consider adding:

Pesticides

Always apply chemicals in accordance with the label requirements in order to minimize crop damage, build up of chemicals in the soil, potential runoff, and leaching into groundwater. Read the label, and as required by ORS 634.372(2) and (4), follow label recommendations for both restricted use and non-restricted use pesticides. DEQ now requires a permit for pesticide applications in, over, or within three feet of water. This permit provides coverage for pesticide applications to control mosquitoes and other flying insect pests, weeds, algae, nuisance animals, and area-wide pest control (see: www.deq.state.or.us/wq/wqpermit/pesticides.htm).

Calibrate, maintain, and correctly operate application equipment. Spray rigs need to be calibrated each time there is a change in product and/or application rate. Nozzles need to be replaced often, particularly if an abrasive pesticide formulation (such as wettable powders) is used. Sprayers need to be operated in the correct pressure range (dictated by the material and nozzle combination used), to prevent excess drift to non-target areas (e.g. waters of the state).

Adopt integrated pest management (IPM) strategies. IPM promotes a diverse, multi-faceted approach to pest control. This strategy establishes an economic threshold for control actions, to guide the manager to use a variety of field/orchard sanitation and cultural practices, field scouting, beneficial insects, and other biological controls, and the use of properly selected chemical pesticides. While IPM does not exclude the use of chemical pesticides, it does seek to optimize their use and minimize off-target movement into the environment.

Establish appropriate vegetative buffer strips. Buffer strips will help to retain soil (which may include pesticides) and surface runoff (which may have dissolved pesticides) from making contact with waters of the state.

Store and handle pesticide materials correctly. Storage and handling facilities should be secure and include a leak-proof pad with curbing for mixing and loading. An alternative to a permanent, concrete pad is to always mix pesticides in the field; frequently moving sites prevent chemical buildup. Wash/rinse water should be directly applied to the appropriate crop. Empty liquid pesticide containers should be triple rinsed, then punctured and disposed of in an approved manner. Dry chemical bags should be emptied completely. Bundle and store paper bags until they can be disposed of in an approved manner.

Watch for a pesticide waste collection day in your area. These events allow individuals to safely and anonymously drop off unwanted, unused, or out of date agricultural pesticides, along with some empty containers.

ODA Response: ODA will work with the LAC to add this information to the 2016 Curry Plan as an appendix.

7. Does the Area Plan sufficiently address the needs in drinking water source areas related to agricultural pollution sources within the geographic area of the plan?

DEQ COMMENTS: Consider adding:

Drinking Water

The sensitive areas within the drinking water protection area generally include areas with high soil permeability, high soil erosion potential, high runoff potential and areas within 1,000' from the river/streams. The sensitive areas are those where the potential contamination sources, if present, have a greater potential to impact the water supply.

The drinking water for Langlois Water District is supplied by an intake on the Floras Creek. This public water system serves approximately 250 citizens. The intake is located in the New River Watershed in the Sixes Sub-Basin of the Southern Oregon Coastal Basin. The geographic area providing water to Langlois' intake (the drinking water protection area) extends upstream approximately 93 miles in an easterly direction and encompasses a total area of 61 square miles. Included in this area are a number of tributaries to the main stem, including Jenny, Johnson, Clear, Horner, Dwyer, White Rock, and Huff creeks as well as the North, South, East and West Forks of Flores Creek.

The drinking water for the city of Port Orford is supplied by an intake on the North Fork of Hubbard Creek. This public water system serves approximately 1,000 citizens. The intake is located in the Hubbard Creek Watershed in the Sixes Sub-Basin of the South Coast Basin. The geographic area providing water to Port Orford's intake (the drinking water protection area) extends upstream approximately two miles in a northerly direction and encompasses a total area of approximately one square mile.

Over-application or improper handling of pesticides and/or fertilizers may impact drinking water. Some agricultural practices may result in excess sediments discharging to surface waters, but non-irrigated crops are generally considered to be a low risk. Excessive irrigation may transport contaminants or sediments to groundwater/surface water through runoff. Drip-irrigated crops are considered to be a low risk. The improper storage and management of animal wastes may impact drinking water supply. Concentrated livestock may contribute to erosion and sedimentation of surface water bodies.

ODA RESPONSE: ODA will work with the LAC to add this information to the 2016 Curry Plan as an appendix.

B. Goals and Objectives:

1. Do the goals and objectives of the Area Plan clearly state that the purpose of the Area Plan is to prevent and control water pollution and to meet water quality standards?

DEQ COMMENTS: Consider adding:

Long-term Objectives across the Management Area

- All streamside areas along agricultural lands support site-capable vegetation.
- Water from agricultural lands meets water quality standards and load allocations.
- Program effectiveness is measured and documented across the Management Area and across each priority area.
- Voluntary participation is maximized.

Strive to attain water quality standards that serve the beneficial uses designated for the South Coast Basin OAR 340-41-0300 Table 300A and Figures 300A and 300B.

- Public Domestic Water Supply
- Private Domestic Water Supply
- Industrial Water Supply
- Irrigation
- Livestock Watering
- Resident and Anadromous Fish and Aquatic Life
- Salmonid Fish Rearing
- Salmonid Fish Spawning
- Wildlife and Hunting
- Fishing
- Boating
- Water Contact Recreation
- Aesthetic Quality
- Hydro Power
- Commercial Navigation & Transportation

Overall Objectives

- Minimize erosion and sediment from agricultural and rural lands,
- Manage irrigation and tail water runoff to waters of the state,
- Control pollution as close to the source as possible,
- Limit livestock access to streams, wetlands, and riparian areas and promote management of animal waste to minimize runoff to waters of the state.

ODA RESPONSE: ODA will work with the LAC to add additional Measurable Objectives to the 2016 Curry Plan. ODA and the LAC will consider these ideas for inclusion in the Plan in 2016.

2. Does the Area Plan include clear and measurable objectives that are designed to meet water quality standards and TMDL load allocations?

DEQ COMMENTS: The objectives of this Plan only speak to a “Watershed Scale Assessment of Streamside Vegetation” and “Focus Area”. They need to be expanded.

- By the 2014 biennial review (or other appropriate date), areas where visible cropland erosion is occurring will be identified. Goals and timelines will be established to eliminate erosion or have structures in place to capture sediment, and ODA and the LMA will report back to the LAC on the status and conditions in the area at the 2014 biennial review.
- By each of the following seven biennial reviews, the objective described for the first priority area has been completed for the other seven priority areas.
- By the 2030 biennial review, across the entire Management Area, all land where agricultural activities prevented streamside vegetation from establishing, and where landowners accept voluntary assistance, allows site-capable vegetation to establish.
- By the 2020 biennial review, 25 percent of streamside areas along agricultural lands, where the baseline condition in 2012 showed streamside vegetation not at site capability, will have reached site capability.
- Request the Curry SWCD to include the Area Plan in their annual and long-range work plans for administration and outreach associated with biennial reviews and for implementation.
- Ensure adequate administration of the Area Plan.
- Obtain funding for implementation of conservation planning assistance, conservation education, and water quality monitoring through grants and partnerships with agencies and organizations.
- Form partnerships with the agribusiness sector and others for additional funding.
- Identify sound agricultural management strategies, which, through widespread adoption, will lead to achievement of water quality standards and load allocations in the Management Area.
- Review and/or conduct ongoing research on the effectiveness of conservation measures.
- Obtain practical knowledge from agricultural producers and suppliers.
- Provide landowner assistance in planning and implementation from SWCDs, USDA, NRCS and other partner organizations.

Priority Areas

A priority area is a relatively small area within the Management Area that is identified jointly by ODA, LMAs, the LAC, and other partners. Outreach and technical assistance is focused in these areas, and every landowner with potential land condition concerns is contacted with an offer of voluntary assistance. ODA and the LMA measure, evaluate, and document effectiveness of the Area Plan by assessing changes in land conditions in the priority area at the next biennial review of the Area Plan.

To measure baseline and post-implementation land conditions in the priority area, ODA and/or the LMA will estimate and map the land condition along stream segments, using broad categories that may also be depicted using color coding. For streamside vegetation, the partners will measure the percentages of streamside agricultural lands in the priority area that:

- Meet the goals of the Area Plan, with site-capable vegetation present,
- Are improving in condition, but not at site capability,
- Have agricultural practices that prevent vegetation from establishing,
- Ensure that streamside vegetation provides streambank stability, filtration of overland flow, and moderation of solar heating, consistent with site capability,
- Eliminate visible sediment loss from cropland through precipitation or irrigation-induced erosion,
- Eliminate significant bare areas (near streams, on pasturelands, and on rangelands) that may contribute waste to waters of the state,
- Ensure that active gullies (near streams, on pasturelands, and on rangelands) have healed or do not exist where they may contribute waste to waters of the state,
- Ensure that livestock manure is stored in a manner and location such that it cannot contribute waste to waters of the state.

Educational Objectives

- Conduct education programs to promote public awareness of water quality issues and their solutions,
- Develop education programs that promote demonstration projects, to showcase successful conservation and management strategies and systems,
- Produce and distribute an SWCD newsletter that includes water quality information,
- Develop an ongoing media program to inform agricultural landowners / operators and the public of conservation issues and events,
- Create and maintain a list of experienced agricultural landowners / operators willing to share their successes with other interested people by speaking, leading tours, and providing tour sites,
- Build partnerships with agribusiness to promote conservation,
- Sponsor workshops and tours,
- Assist landowners and operators conducting agricultural management or land disturbing activities who chooses to develop and implement a Voluntary Water Quality Farm Plan,
- Compile ongoing research results and effective solutions to water quality problems.

ODA RESPONSE: The Program is currently developing improved measurable objectives for all 38 Area Plans. ODA will work with the LAC to insert improved measurable objectives into this Area Plan at the biennial review in 2014. ODA and the LAC will consider these suggested objectives.

C. Strategies to Meet Water Quality Goals and Track Progress

1. Are geographic and/or water quality issue priorities listed in the Area Plan consistent with TMDL and GWMA priorities?

DEQ COMMENTS: Yes.

2. Are geographic scales and implementation actions identified in the Area Plan appropriate to track implementation, progress, and effectiveness?

DEQ COMMENTS: Consider adding:

- Document the number, stream length, acreage, and approximate location of projects that improve water quality – within the priority area and across the Management Area,
- Evaluate the effectiveness of outreach and education programs designed to provide public awareness and understanding of water quality issues - for the priority area and across the Management Area,
- Evaluate the effectiveness of available technical and financial resources in meeting the goals and objectives of the Area Plan – for the priority area and across the Management Area,
- Document prohibited conditions (defined below) and subsequent corrections.

Consider adding these to the focus area process that is already in the plan:

The following steps outline the general process for implementing the Area Plan in a priority area and for documenting effectiveness:

- Identify water quality parameter(s) of concern *and a possible land condition surrogate (e.g. temperature - streamside vegetation),*
- Compile and map available baseline land condition and water quality data,
- Conduct systematic one-on-one outreach to meet with landowners, assess land conditions, and offer voluntary technical assistance ,
- Compile updated available water quality data and quantify changes from the baseline,
- Evaluate and discuss program effectiveness at the next biennial review of the Area Plan.

ODA RESPONSE: The Program is currently developing improved measurable objectives for all 38 Area Plans. ODA will work with the LAC to insert improved measurable objectives into this Area Plan at the next biennial review in 2014. ODA and the LAC will consider these suggested objectives.

3. If applicable, is the Watershed Approach Action Plan addressed?
4. Does the Area Plan provide sound evidence or reasons why implementation actions could lead to pollution reduction? If some of the implementation actions are not consistent with TMDL and other WQ goals, explain why those practices do not contribute toward meeting those WQ goals.
5. Does the Area Plan include timelines, schedules, and measurable milestones that are consistent with the TMDL WQMP?

Consider adding these:

- By the 2016 biennial review, XX% of streamside areas along agricultural lands where the assessment identifies agricultural activities as likely preventing riparian vegetation establishment will be in a condition where agricultural activities no longer prevent streamside vegetation from establishing.
- By 2020, XX% of streamside areas along agricultural lands where the assessment identifies agricultural areas as likely preventing riparian vegetation establishment will be in a condition where agricultural activities no longer prevent streamside vegetation from establishing.
- By 2022, XX% of streamside areas along agricultural lands where the assessment identifies agricultural activities as allowing riparian establishment but not at site capability will have reached site capability.
- By the 2014 biennial review, ODA and the LMA will compile information about the location, number, and size of water quality improvement projects completed in the management area since Area Plan and Rules adoption, as resources and grant program privacy rules allow.
- The LMA will identify areas of concern across the Management Area, where agricultural practices are not allowing streamside vegetation to establish. The LMA will provide one-on-one voluntary technical assistance to landowners to achieve land conditions that contribute to good water quality.

ODA RESPONSE: The Program is currently developing improved measurable objectives for all 38 Area Plans. ODA will work with the LAC to insert improved measurable objectives into this Area Plan at the biennial review in 2014. ODA and the LAC will consider these suggested objectives.

6. Is monitoring adequate to determine whether progress is being made to achieve the goals of the plan? If no, are monitoring needs identified and is there a strategy to meet those needs?

DEQ COMMENTS: Has this been completed?

“ODA will work with LMAs and other partners to design and conduct an assessment of streamside areas along agricultural lands in the management area prior to the next biennial review.”

ODA RESPONSE: ODA has developed and implemented the Streamside Vegetation Assessment (SVA) for use throughout the state. The Curry SWCD has completed the SVA in the Focus Area. ODA is currently working on selecting/approving a method to use for Management Area-wide assessments of streamside areas and conditions on agricultural lands pertaining to water quality.

II. Implementation/evaluation

Beth – I will need to see the “Area Plan and Rules Effectiveness Evaluation” that will be presented to the LAC to answer questions A-C below.

- A. Are voluntary efforts sufficient to implement the Area Plan or are additional incentives needed to increase the rate of participation?
- B. Are milestones and timelines established for Area Plans achieving the goal of the Program?
- C. Is reasonable progress being made towards accomplishing milestones and timelines in the Area Plan?

ODA RESPONSE: The Program is currently developing improved measurable objectives for all 38 Area Plans. ODA will work with the LAC to insert improved measurable objectives into this Area Plan at the biennial review in 2014. ODA and the LAC will consider these suggested objectives.

III. Area Rules

- A. Are the prohibited conditions likely to be effective in making reasonable progress towards meeting state water quality goals?

DEQ COMMENTS: Currently, the area rules “Unacceptable Conditions” only address riparian conditions. Because other water quality parameters are limiting to beneficial uses the breadth of unacceptable conditions needs to be expanded to address sedimentation, nutrient runoff, irrigation, and waste management.

Sediment Management

Soil erosion associated with agricultural cultivation shall not deliver sediment sufficient to violate water quality standards.

Nutrient Management

The application and storage of manure, commercial fertilizer, and other added nutrient inputs to agricultural lands will be done in a manner that minimizes the introduction of nutrients into waterways.

Pesticide Management

Effective three years after rule adoption, in cranberry production, water storage systems that intercept agricultural drainage containing pesticides and that reapply this water will be designed to minimize percolation of drainage waters to groundwater or overflow of the impoundment to surface waters.

Irrigation Management

Effective three years after rule adoption, application (direct, chemigation, and fertigation) and irrigation systems will be managed to minimize runoff and the introduction of nutrients and farm chemicals into waterways.

Waste Management

Effective upon adoption, no person subject to these rules shall violate any provision of ORS 468B.025 or ORS 468B.050.

In addition, the riparian rule as stated applies to perennial streams only while the Lower Rogue Temperature TMDL and the WQ OARs apply to all perennial and intermittent streams. Ephemeral streams are not included in temperature TMDLs but may need to be included for other parameters. Appendix C – Enforcement Procedures also states perennial and does not reference intermittent.

ODA RESPONSE: The Curry Area Rules address riparian vegetation as well as agricultural waste. Waste is addressed by incorporating ORS 468B ORS 468B covers any pollution to waters of the state, including nutrients, sediment, pesticides, irrigation runoff, etc. ODA will work with the LAC to determine if augmenting the existing discussion of agricultural wastes would be beneficial.

B. Are additional prohibited conditions or other mandatory control measures needed?

DEQ COMMENTS: Yes – see A

*** I am not sure where this comment belongs but it is an important one. This language could be added to Appendix F but needs to be recognized.

The water quality standard for the protection of cold water is articulated in 340-041-0028 (11) and applies to the area covered by this Plan in addition to biologically based numeric criterion.

340-041-0028 (11) Protecting Cold Water.

(a) Except as described in subsection (c) of this Rule, waters of the State that have summer seven-day-average maximum ambient temperatures that are colder than the biologically based criteria in section (4) of this rule, may not be warmed by more than 0.3 degrees Celsius (0.5 degrees Fahrenheit) above the colder water ambient temperature. This

provision applies to all sources taken together at the point of maximum impact where salmon, steelhead or bull trout are present.

(b) A point source that discharges into or above salmon & steelhead spawning waters that are colder than the spawning criterion, may not cause the water temperature in the spawning reach where the physical habitat for spawning exists during the time spawning through emergence use occurs, to increase more than the following amounts after complete mixing of the effluent with the river:

(A) If the rolling 60 day average maximum ambient water temperature, between the dates of spawning use as designated under subsection (4)(a) of this rule, is 10 to 12.8 degrees Celsius, the allowable increase is 0.5 Celsius above the 60 day average; or

(B) If the rolling 60 day average maximum ambient water temperature, between the dates of spawning use as designated under subsection (4) (a) of this rule, is less than 10 degrees Celsius, the allowable increase is 1.0 Celsius above the 60 day average, unless the source provides analysis showing that a greater increase will not significantly impact the survival of salmon or steelhead eggs or the timing of salmon or steelhead fry emergence from the gravels in downstream spawning reach.

(c) The cold water protection narrative criteria in subsection (a) do not apply if:

(A) There are no threatened or endangered salmonids currently inhabiting the water body;

(B) The water body has not been designated as critical habitat; and

(C) The colder water is not necessary to ensure that downstream temperatures achieve and maintain compliance with the applicable temperature criteria.

ODA RESPONSE: The Curry Area Plan Prevention and Control Measure for riparian vegetation addresses cold-water criteria as influenced by streamside vegetation.

DEQ COMMENTS: Updated table of 303d listed Parameters Requiring a TMDL

ODA RESPONSE: ODA will work with the LAC to update this information in the 2016 Plan.

Table 1 - Sixes Sub-basin 2010 303d Listed Parameters Requiring a TMDL			
Waterbody (Stream/Lake)	River Miles	Parameter	Season
Boulder Creek / Floras Lake	0.8 to 2.1	Aquatic Weeds	Undefined
Garrison Lake	0 to 0		
Floras Creek	0 to 12.8	Biological Criteria	Year Round
Fourmile Creek	0 to 9.3		
North Fork Sixes River	0 to 5.1		
Sixes River	0 to 13.1		

Table 1 - Sixes Sub-basin 2010 303d Listed Parameters Requiring a TMDL			
Waterbody (Stream/Lake)	River Miles	Parameter	Season
Sixes River	15.1 to 30.1		
Sunshine Creek	0 to 1.2		
Boulder Creek / Floras Lake	0.8 to 2.1	Chlorophyll a	Fall-Winter-Spring
Sixes River	4.4 to 29.4	Dissolved Oxygen	October 15 - May 15
Boulder Creek	0 to 2.6	Dissolved Oxygen	Oct 15 - May 15
Floras Creek	1 to 9.2		May 16 - Oct 14
North Fork Floras Creek	0 to 10.9		May 16 - Dec 31
Sixes River	0 to 30.1		May 16 - Oct 14
Unnamed Boulder Creek Tributary	0 to 1.4		May 16 - Dec 31
Unnamed Boulder Creek Tributary	0 to 1.4		Jan 1 - May 15
Hubbard Creek Beach	NA	Enterococcus	Summer
Boulder Creek / Floras Lake	0 to 1.4	Iron	Year Round
Floras Creek	12 to 12.8	pH	
Garrison Lake <i>Point source only TMDL Approved</i>	0 to 0		Undefined
		Phosphorus	Year Around
Bald Mountain Creek	0 to 2.3	Temperature	Year Around (Non-spawning)
Cedar Creek	0 to 4.5		
Crystal Creek	0 to 7.3		
East Fork Floras Creek	0 to 7.5		
Edson Creek	0 to 5.8		
Elk River	0 to 29.9		
Euchre Creek	0 to 12.8		
Floras Creek	0 to 12.8		
North Fork Floras Creek	0 to 10.9		
Sixes River	0 to 30.1		
South Fork Floras Creek	0 to 3.7		
Swamp Creek	0 to 1.5		
Willow Creek	0 to 6.9		
Bethel Creek	0 to 5.9		
Butte Creek	0 to 3.6		
Davis Creek	0 to 4.2		
Fourmile Creek	0 to 11.6		
Morten Creek	0 to 6		
Twomile Creek	0 to 9.1		
Pea Creek	0 to 1.4		
Boulder Creek	0 to 6.1		

Table 2 - Chetco Sub-basin 303d Listed Parameters Requiring a TMDL			
Waterbody (Stream/Lake)	River Mile	Parameter	Season
Chetco River	0 to 57.1	Biological Criteria	Year Round
East Fork Winchuck River	0 to 7.5		
Harris Beach	NA	Enterococcus	

Table 2 – Chetco Sub-basin 303d Listed Parameters Requiring a TMDL			
Waterbody (Stream/Lake)	River Mile	Parameter	Season
Mill Beach			
Pistol River	0 to 19.8	Fecal Coliform <i>Shellfish Growing</i>	
Hunter Creek	0 to 18.4	Dissolved Oxygen	May 16 - Oct 14
Pistol River	1.08 to 12.91		May 16 - Oct 14
Pistol River	0 to 1.08		Year Round
Winchuck River	0 to 11.1		May 16 - Oct 14
Winchuck River	1 to 11.1		October 15 - May 15
Pistol River	0 to 19.8	pH	Summer
Hunter Creek	0 to 7.2		
South Fork Pistol River	0 to 0.5	Temperature	Year Around (Non-spawning)
Chetco River	0 to 57.1		
Deep Creek	0 to 2.1		
East Fork Winchuck River	0 to 7.5		
Hunter Creek	0 to 18.4		
Jack Creek	0 to 1.2		
North Fork Chetco River	0 to 12.1		
North Fork Hunter Creek	0 to 4.8		
North Fork Smith River	0 to 1.6		
Pistol River	0 to 19.8		
Winchuck river	0 to 11.1		
Boulder Creek	0 to 9.5		
Crook Creek	0 to 2.3		
Eagle Creek	0 to 6.8		
East Fork Pistol River	0 to 4.6		
Emily Creek	0 to 8.1		
Fourth of July Creek	0 to 4.6		
North Fork Pistol River	0 to 2.8		
Turner Creek	0 to 1.5		
Wheeler Creek	0 to 11		

Table XX – Lower Rogue 303d Listed Parameters Requiring a TMDL			
Waterbody (Stream/Lake)	River Mile	Parameter	Season
Coyote Creek	0 – 7.4	Biological Criteria	Year Around
Grave Creek	0 – 37.6		
Jim Hunt Creek	0 – 4.3		
Jumpoff Joe Creek	0 - 14		
Squirrel Camp Creek	0 – 2.7		
Unnamed	0 – 1.6		
Lower Rogue	0 – 27.2	Fecal Coliform	Year Around
	33.8-131.8	Dissolved Oxygen	October 15 – May 15
	83.4 – 90.9	pH	Fall Winter Spring
	68.3 – 94.9		Summer