

**Inland Rogue Agricultural Water Quality Management Area Plan
Biennial Review Request for Comments from DEQ
September 26, 2015**

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: YES – plan has been updated to include a link to the 2012 integrated report, which is currently under EPA review at the time of this review. Link is current in the Plan.

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

DEQ: Yes – plan identifies Load Allocations (LA) in the form of water quality criteria and applicable standards. However, please use actual beneficial use table (Table 4 and Section 3.4.1) as per rule: 340-041-0271. <http://www.deq.state.or.us/wq/rules/div041tblsfigs.htm>

ODA RESPONSE: *Beneficial use table was added to 2015 Plan as recommended.*

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

DEQ: Partial – The Plan covers a very large area and relies upon on TMDL summaries and overviews of LA as determined in the TMDL. Specific LA and percent reduction targets and seasonality are missing. These data and stream specific targets may be more appropriate for strategic implementation areas or focus areas. More detailed information can be found in the Rogue Basin TMDL.

ODA RESPONSE: *ODA will work with DEQ and the LAC to find an appropriate way to add this information into the Plan at the 2017 Biennial Review.*

DEQ: Note in section 2.5.2 parameters of DO, pH, nutrients should be included in the narratives detailing how these parameters will be addressed by specific actions.

ODA RESPONSE: *ODA will work with DEQ and the LAC to add this information to the Plan at the 2017 Biennial Review.*

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

DEQ: Yes – GWMA plans are not applicable to the Inland Rogue Plan Area, however, the plan does make reference to GWMA within the state as well as references to groundwater impacts due to agricultural activities. Since there are no GWMA in the Rogue Basin, DEQ recommends changing this section to “Groundwater Resources” and focus instead on recent studies that show possible correlations between agricultural practices and nitrate contamination in domestic wells. DEQ is collecting data, identifying possible sources of contamination, and will use these results to guide our efforts to improve groundwater quality (including, if applicable, partnering with ODA and local stakeholders on projects to implement BMPs.)

Ground water issues in the basin are described in the Rogue Basin Water Quality Status and Action Plan 2011:

Ground Water	General Quality	Quantity	Nitrate	Bacteria	Pesticides	Volatile and Synthetic Organic Compounds	Arsenic	Nickel	Lead	Fluoride
Upper Rogue	Yellow	Yellow	Red	Red						
Middle Rogue	Yellow	Yellow	Red	Red			Red			Red
Lower Rogue										
Applegate Subbasin	Yellow	Yellow	Red	Red			Red			Red
Illinois Subbasin	Yellow	Yellow	Yellow	Yellow			Yellow	Yellow		

	Generally poor condition, substantial concern for water quality
	Deteriorating condition, moderate concern for water quality
	Generally good condition, low concern for water quality
	Unknown condition or lack of data

ODA RESPONSE: ODA will work with DEQ and the LAC to integrate these water quality monitoring results into the monitoring data review and evaluation sections of the plan for the 2017 biennial review.

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

DEQ: No – CZARA linkages are discussed in section 1.5.4 and included in Appendix H, however, the linkages between actions specified in the plan and how they apply to CZARA is lacking. Specific CZARA Coastal Zone Management Area connections to agricultural sources includes the following:

- (I) Erosion from cropland;

- (2) Confined animal facilities;
- (3) The application of nutrients to cropland;
- (4) The application of pesticides to cropland;
- (5) Grazing management;
- (6) Irrigation of cropland.

Specific actions identified in the plan should reference CZARA – perhaps on pages 48-52 where prohibited conditions are discussed.

CZMA guidance documents are listed below.

<http://water.epa.gov/polwaste/nps/czara/index.cfm>

http://water.epa.gov/polwaste/nps/czara/upload/czara_chapter2_agriculture.pdf

ODA RESPONSE: The recommended link:

http://water.epa.gov/polwaste/nps/czara/upload/czara_chapter2_agriculture.pdf was added to Appendix H, page 81. 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 for the 2017 biennial review. Language can be adapted from other coastal Plans. The language will likely be added to Chapter 2.

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

DEQ: Yes – Linkages to the PSP and the Pesticide Management Program are provided and are up to date given the current status of pesticide information in the basin. The pesticide stewardship partnership work is mentioned in Table 4.1 Implementation Summary. Programmatic descriptions of the pesticide program are included in the text. PSP is a very new program in the Rogue Basin with data only recently being reported. The PSP program is expected to continue in the Rogue Basin, specifically in the Bear Creek watershed, for the next several years beginning in Fall 2015. DEQ would expect that PSP results for both pesticide detections and implementation actions will be included in the next version of the Inland Rogue Plan. At the time of this writing (Fall 2015), the PSP focus area includes Wagner Creek and will build on the efforts of the SIA for that area.

ODA RESPONSE: ODA will work with DEQ and the LAC to summarize PSP information, and include PSP monitoring data in the monitoring sections of the Area Plan for the 2017 biennial review.

7. Does the Area Plan sufficiently address agricultural pollution threats within public drinking water source areas?

DEQ: Section 1.5.2 provides an overview of the Drinking Water Program, however, data specific to the Rogue is not in the current Plan.

No. DEQ recommends that the Area Plan include more specifics about potential impacts of agricultural practices on public drinking water quality and ways to reduce or prevent these impacts. The primary drinking water contaminants of concern in the geographic area that can be related to agricultural pollution sources include: harmful algae blooms, bacteria, turbidity, nutrients, pesticides, and formation of disinfection by-products associated with increased in organic loading. See suggested language in edits to Section 1.5.2.

ODA RESPONSE: Agricultural water quality regulations currently require that producers prevent and control water pollution to meet Oregon water quality standards, following federal Clean Water Act (CWA) requirements. Ensuring that surface and ground water is suitable for treatment for drinking water is encompassed in the CWA (e.g., 40 CFR Part 403). However, ODA welcomes a summary of information from DEQ about drinking water source areas. ODA will work with the LAC, SWCD, and DEQ to review DEQ's drinking water source information and consider adding it to the Plan at the 2017 biennial review.

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: Yes. In section 3.3, Goals and Objectives clearly state the goal of meeting applicable water quality standards. Currently, objectives are tied to achieving water quality standards to meet defined beneficial uses. This is a great approach and is analogous to the approach taken in the TMDL.

Additional long-term and overall objectives could include the following:

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.

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 continues to work with the LAC and SWCDs to establish measurable objectives, including milestones and timelines. ODA will work with the LAC the SWCD to consider these objectives, review available resources, and write appropriate measurable objectives in the Area Plan at the 2017 biennial review.

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

DEQ: Yes, for Focus Areas as identified by the SWCDs. Additional clarity is needed from the SWCDs to fill in some of the blanks as per targets and annual milestones. Overall, this plan is much more refined and has more measurable objectives as compared to previous plans in the Rogue Basin. DEQ acknowledges the challenges of setting timelines for objectives. DEQ supports adaptive management, and expects milestones and timelines to be reviewed and adjusted over time.

For areas outside of the FAs – (the general plan area), objectives are less clearly defined. Although SIAs are mentioned, there is no discussion of expected progress within the Wagner Creek SIA. Please add a discussion on the SIA and expected results.

ODA response: ODA continues to work with the LAC and SWCD to establish measurable objectives, including milestones and timelines. ODA will work with the LAC the SWCD to review available resources and update the measurable objectives, with milestones and timelines, and include them in the Area Plan at the 2017 biennial review. Additional information regarding progress and expectations in the Wagner Creek SIA will be added at the 2017 Biennial Review.

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, GWMA and Watershed Approach Report and Action Plan priorities?

DEQ:

Pollutant	FA Only (SIA not addressed in Plan)			Management Area Wide		
	Yes	No	NA	Yes	No	NA
Temperature	X			X		
Bacteria	X			X		
Sediment	X			X		
Nutrients	X			X		
DO/pH	X			X		

Please Note DEQ basin-wide priorities as identified in the Rogue Basin Water Quality Status and Action Plan 2011:

Surface Water	DEQ Basin-wide Priorities													
	Bacteria	Biological Stressors Harmful Algae Blooms	Temperature	Dissolved Oxygen	Nutrients, pH Chlorophyll a	Altered Hydrology	Habitat Modification	Sediment / Turbidity	Toxics: Emerging Contaminants Pharmaceuticals, PCPs	Toxics: Metals	Toxics: Arsenic	Toxics: Mercury	Toxics: Pesticides	
Upper Rogue	Red	Red	Red	Yellow	Yellow	Red	Red	Red				Green		
Middle Rogue	Red	Yellow	Red	Red	Red	Red	Red	Red	Yellow	Yellow		Red		
Lower Rogue	Green		Red	Green	Green	Red	Red	Yellow						
Applegate Subbasin	Green		Red	Red	Yellow	Red	Red	Yellow				Yellow		
Illinois Subbasin	Green	Yellow	Red	Green	Yellow	Red	Red	Yellow						

 Generally poor condition, **substantial** concern for water quality
 Deteriorating condition, **moderate** concern for water quality
 Generally good condition, **low** concern for water quality
 **Unknown** condition or lack of data

2. Are geographic scales and implementation actions (Strategies and Management Measures – DEQ added) identified in the Area Plan appropriate to track implementation, progress, and effectiveness?

DEQ: Outside of the FAs, it is difficult to determine how widespread the implementation of the Plan really is. Identified implementation actions align well with the TMDL. The Plan covers a very large area. As part of biennial review, I would like to see more summaries of progress to date and the linkage of actions taken to measurable objectives. For example, if the goal is to convert 372 acres to sprinkler by 2017 – I would like to see that metric directly reported on. Tracking progress in this way will help determine implementation success and how to focus additional resources including funding if needed. Overall, Implementation of the Plan across the Inland Rogue is increasing – however, grant funding and additional staff time are required to make sure that the Plan moves forward.

ODA response: ODA continues to work with the LAC and SWCD to establish measurable objectives, including milestones and timelines. ODA will work with the LAC the SWCD to review available resources and update the measurable objectives with milestones and timelines and include them in the Area Plan at the 2017 biennial review.

3. If applicable, is the Watershed Approach Action Plan addressed?

DEQ: No – the watershed approach action plan is not addressed in the current Plan. Although the Plan was completed in 2011 and is somewhat dated, the Rogue Basin, the Integrated Watershed Approach Status Report, and Action Plan 2011 to 2015 can provide useful information regarding the status of water and groundwater in the Rogue Basin. Please refer to this document for additional information especially on water quality status and trends.

<http://www.deq.state.or.us/wq/watershed/watershed.htm>

ODA response: This information will be reviewed by ODA and the LAC at the 2017 Biennial Review. The link provided will be added to the Plan.

4. Does the Area Plan provide sound evidence or reasons why implementation actions could lead to pollution reduction?

DEQ:

- 1) Management measures and strategies in the plan are presented in section 2.5.3 in the form of management problems and possible solutions. BMPs are consistent with TMDL and other WQ goals. Identified solutions if implemented and monitored to make sure that they are working as expected will contribute greatly to meeting WQ goals.
- 2) If management measures or BMPs are listed in the plan, do they provide specific information to evaluate their effects on landscape? Yes - as listed the management measures tier directly to prohibited conditions.
- 3) Are there explanations for why those management measures are recommended? No – reference to sources are not linked to the management measures themselves. I believe the management measures came from the work of the LAC.

Information is missing.

Please provide narrative for how the Plan addresses DO, pH, Nutrients as per section 2.5.

ODA response: ODA will work with the LAC to add narrative describing how the Plan addresses DO, pH, and Nutrients at the 2017 Biennial Review.

5. Does the Area Plan include timelines, schedules, and measurable milestones that are consistent with the TMDL WQMP?

DEQ:

Populate the table – Timelines and Milestones						
	FA and SIA			Management Area Wide		
	Yes	No	NA	Yes	No	NA
Timeline for implementation ID'd	x				x	
Timeline for completion ID'd		x			x	
Milestones ID'd	x				x	

DEQ supports ODA's effort to identify priority watersheds (FA) and Strategic Implementation Areas (SIA) to focus implementation in those areas as well as test out a proactive compliance program. Management measures and strategies and associated timelines and milestones in FA and SIA will support ODA to move towards meeting water quality goals across the landscape.

Within the Plan area, Tables 5-10 identify prohibited conditions and provide a menu of corrective actions at a sufficient level of detail to guide implementation. However, within the Plan area, timelines and milestones are missing. Ideally, the Plan area would include:

- Obtain status percent compliance with Rule within Plan area by a specific date.
- Interim milestones and timeline to achieve 100% Rule compliance for each Area Rule.
- Interim Milestones and timeline for implementing and completing the strategies in the Plan.

DEQ hopes to support ODA in developing a strategy to assess the entire management area and in the development of an evaluation strategy that will allow ODA to assess Plan and Rule effectiveness.

ODA response: ODA continues to work to establish measurable objectives, including milestones and timelines. ODA will work with the LAC the SWCD to review available resources and update the measurable objectives, with milestones and timelines, and include them in the Area Plan at the 2017 biennial review.

6. Is monitoring adequate to determine whether progress is being made to achieve the goals of the plan?

DEQ:

Populate the table – Monitoring						
	FA and SIA			Management Area Wide		
	Yes	No	NA	Yes	No	NA
Monitoring implementation of strategies	x				x	
Monitoring effectiveness of strategies		x			x	
Adequate content in biennial	x			x		

report (at the time of review)						
Adaptive Management described		x			x	
Consideration of ongoing monitoring done by local partners	x			x		

DEQ recommends that ODA and the LAC work to include strategies and milestones to ensure monitoring is adequate to determine whether progress is made to achieve the goals and objectives of the Plan. Overall, implementation monitoring seems adequate in the FAs but seems to be lacking in the general plan area.

DEQ recommends ODA and LAC to consider the questions specified in the MOA at a minimum.

- ODA will determine the percentage of lands achieving compliance with the area rules.
- ODA will determine whether the target percentages of lands meeting desired land conditions, as outlined in the goals and objectives in the area plan, are being met.

The agencies will review and evaluate existing information with the objective of determining:

- Whether additional data are needed to conduct an adequate evaluation.
- Whether goals and objectives need to be revised to facilitate better measuring of progress.
- Whether existing strategies have been effective in achieving the goals and objectives of the area plan.
- Whether the rate of progress is adequate to achieve the goals of the area plan. Achievement of area plan goals will occur consistent with legislative direction to achieve water quality standards and within the time frames established under TMDLs.
- Whether existing prohibited conditions, and compliance activities to implement those conditions, are sufficient to implement the area plan.
- Whether additional prohibited conditions or other mandatory control measures are needed. This evaluation will occur in accordance with OAR 603-090-0000 through 603-090-0120.

ODA response: ODA continues to work to improve tracking of all available applicable monitoring and include the information in the Plan. Efforts including FAs and SIAs have associated assessments and monitoring mechanisms. ODA continues to work to implement these mechanisms and develop additional monitoring and assessment tools. ODA will work with the LAC the SWCD to review available resources and update monitoring information in the Area Plan at the 2017 biennial review.

II. Implementation/evaluation

A. Are voluntary efforts sufficient to implement the Area Plan or are additional incentives needed to increase the rate of participation?

DEQ: It is not clear if voluntary actions are or are not going to be sufficient. Implementation reports would indicate that great progress is being made, however, additional information is needed to get a better feel for implementation across the entire Plan landscape. Once timelines are set to achieve 100% Rule compliance, and methodology for obtaining that information becomes clear, ODA and LAC can determine if Area plans are being implemented at a reasonable rate. The rate of implementation should be identified in the Plan.

ODA response: ODA is implementing FAs and SIAs and tracking voluntary implementation through these strategies. ODA continues to work to create additional methodologies for tracking implementation progress.

B. Are milestones and timelines established for Area Plans achieving the goal of the Program?

DEQ: ODA is working to provide detailed information for FA and SIA. Once ODA begins to collect and share information for FA and SIA, DEQ would be able to evaluate and respond to this question.

It's not clear if the current milestones are sufficient. Section 4.4 discusses remote sensing of riparian vegetation in a narrative format however the assessment as presented lacks a method to track progress. I would suggest that remote sensing data be presented numerically in a table format so that changes over time can be tracked.

ODA response: ODA continues to work to establish measurable objectives, including milestones and timelines. ODA will work with the LAC the SWCD to review available resources and update the measurable objectives, with milestones and timelines, and include them in the Area Plan at the 2017 biennial review.

C. Is reasonable progress being made towards accomplishing milestones and timelines in the Area Plan?

It seems like great progress is being made and that the updated Plan reflects this. The combination of FAs, SIAs and other efforts have a great potential to meet water quality goals. Continued effort and consistent funding are needed to continue the progress realized to date.

III. Area Rules

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

DEQ: Prohibited conditions are clearly stated in the Plan as per OAR 603-095-1440 and clearly address soil loss, soil erosion, riparian vegetation, irrigation return flows. Manure management is not addressed in Rule directly but it is addressed through Management Problems as per Table 7. Through the implementation of the Plan, landowners are allowed to self-evaluate if they are meeting Area Rules.

Agricultural roads are not addressed in the Inland Rogue Plan. DEQ recommends that roads on agricultural land be explicitly addressed in sufficient detail in the Rules by establishing performance standards and BMPs to achieve them. This objective can be accomplished either through (a) identification of minimum design and construction standards, maintenance and BMPs (e.g., Oregon Forest Practices Act), or (b) alternatively, the Rules should contain a prohibited condition for roads on agricultural lands such as “minimize hydrological connection to waters of the state to the maximum extent practicable” or a similar standard that can be assessed by ODA for compliance.

Additional information could be added to the effectiveness monitoring section in the Plan. In section 3.5.4, additional sources for monitoring data should be added and include: DEQ, SWCDs, WSC, RVCOG, OWRD, the Freshwater Trust and other NGOs. Data is available but needs to be compiled and evaluated. Example: the JSWCD has bacteria reduction numbers for their work on Little Butte Creek wild-flood irrigation conversions. That type of data defines the benefit from the project and helps garner support for similar projects in the future.

ODA response: Prohibited conditions regarding manure management are addressed in 468B. 468B is included in all Area Rules across the state. Prohibited conditions related to agricultural roads are also addressed by 468B. ODA will work with the LAC to discuss the inclusion of more detail regarding agricultural roads at the 2017 Biennial Review. ODA will work with the LAC and area partners to compile and evaluate monitoring data and add this information to Chapter 4 at the 2017 Biennial Review.

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

DEQ: See answer to A above for discussion and additional measures.