



Washington State's TMDL Template

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TMDL Template Goals

- Simpler, Shorter, and More Comprehensible
- One document (TMDL/Implementation Plan)
- Answer upfront and analysis in appendixes.
- Combination of template language and areas that need to be written and tailored by TMDL writer.
- Easier to review and help with approvability (required elements)
- Consistency



Organization

- Chapter 1: Introduction
- Chapter 2: TMDL Allocations
- Chapter 3: Implementation Plan
- Appendixes
 - Appendix A: Background
 - Appendix B: Public Participation
 - Appendix C: References
 - Appendix D: Analytical Framework
 - Appendix E: TMDL Analysis
 - Appendix F+: As needed



Permit WLA Tables

Goal-Make it easy for permit writers:

- Easy to find
- One for each permit.
- Captures all information in one place
- Includes by numeric WLA and other limits/requirements (e.g. monitoring requirements, BMPs, etc.)
- Reviewed by permit writers during the TMDL development process.

Permittee Name	
Permit Number	
Permit Type	
Waterbody Names	
Listing ID of Receiving Water	

WLA	Unit	Pollutant	Critical Period	Additional Information
	Pounds / day			
	Pounds / day			
	Pounds / day			

Other Load Limits and Requirements	<p>Any TMDL requirement that needs to be incorporated into the permit must be included in this cell.</p> <p>For each limit, specify the numeric limit, unit, pollutant, critical period, any other requirement, and any other relevant information. As appropriate, include targets, flow-based limits, and other limits.</p> <p>Include any non-numeric limits as well. Non-numeric limits are monitoring requirements, required implementation actions, requirements to develop plans, or any other required action.</p> <p>For all requirements, include timeframes and, if appropriate, compliance schedules.</p>
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Nonpoint

Focus of Chapter 3-Implementation Plan:

- Identify all potential causes and sources of pollutant loads in the waterbodies.
- Describe them by source type (e.g. row crops, feedlots, residential areas).
- **Describe the nonpoint source BMPs that need to be implemented by source.**
- Describe the areas in which those measures will be needed. Describe the costs of implementation of nonpoint actions.
- Provide details of who will do what, where, and by when.



Example

Suite of Livestock Practices	
Name of BMP	Description of Agricultural Activity
Riparian Buffer (Code 391)	<p>For ephemeral streams, install a minimum 35-foot wide riparian buffer, measured horizontally from the top of the streambank. The buffer should include the reestablishment of streamside vegetation, sufficient to filter out pollutants before they reach the stream, and to stabilize stream banks. The buffer width may be increased, if needed</p> <p>For intermittent streams, install a minimum 35-foot wide riparian buffer, measured horizontally from the top of the streambank. This TMDL recommends a 50-foot-wide buffer to ensure water quality protection. The buffer should include the reestablishment of streamside vegetation sufficient to filter out pollutants before they reach the stream, and to stabilize stream banks. The buffer width may be increased, if needed.</p> <p>For perennial streams, install a minimum 50-foot-wide riparian buffer (75 feet wide, if fish bearing), measured horizontally from the top of the streambank.</p>
Exclusion Fencing (Code 382)	Install exclusion fencing to prevent livestock access to all riparian buffers. Livestock should be excluded from flooded and flood-prone areas during periods of saturation. The use of hardened stream crossings should be used for all livestock movement across the riparian zones. Water gaps, with hardened access, may be used to water livestock in range pastures (not animal confinement or feeding areas).
Off-Stream Water Facility (Code 614)	Off-stream water facilities should be set back a minimum of 100 feet from all surface waters unless it can be demonstrated to Ecology's satisfaction that there is no suitable site more than 100 feet from surface waters. In the latter case, Ecology may approve a design plan to prevent contamination of State waters.
Stream Crossing (Code 578)	Stream crossing are stabilized areas or bridges constructed to provide travel for livestock and prevent discharges of pollution to surface water. Stream crossing should be installed as part of a suite of BMPs if livestock need to access both sides of a stream.
Heavy Use Area Protection (Code 561)	Heavy Use Area Protection is used to stabilize a ground surface that is frequently and intensively used by livestock. Heavy Use Area Protection should be included as part of a suite of livestock practices if intensively used areas increase the risk of polluted run-off.

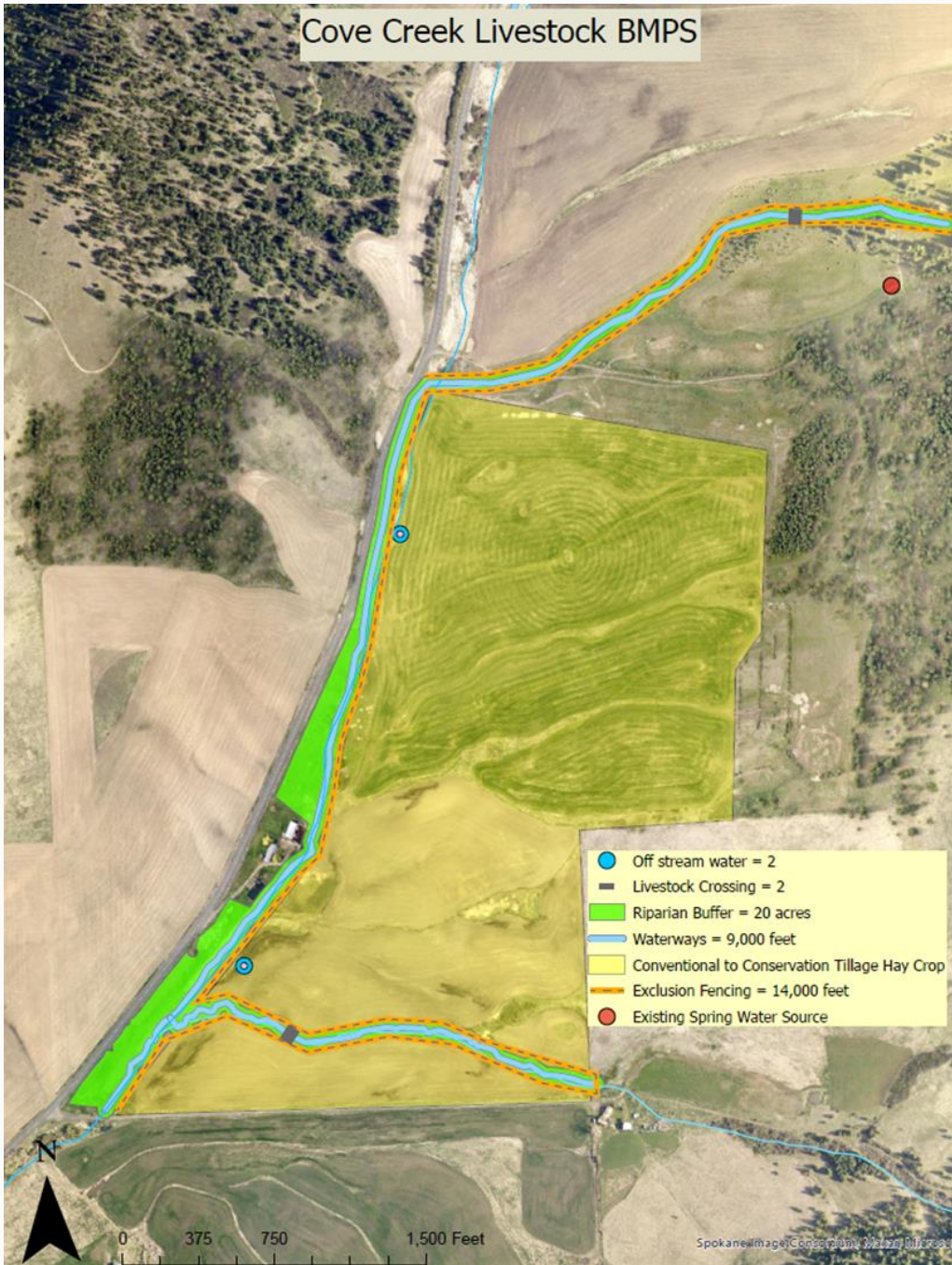
What does this look like on the ground?



Example

Suite of Cropland Practices	
Name of BMP	Description of Agricultural Activity
Riparian Buffer FOTG 391	<p>For ephemeral streams, install a minimum 35-foot wide riparian buffer, measured horizontally from the top of the streambank. The buffer should include the reestablishment of streamside vegetation, sufficient to filter out pollutants before they reach the stream, and to stabilize stream banks. The buffer width may be increased, if needed</p> <p>For intermittent streams, install a minimum 35-foot wide riparian buffer, measured horizontally from the top of the streambank. This TMDL recommends a 50-foot-wide buffer to ensure water quality protection. The buffer should include the reestablishment of streamside vegetation sufficient to filter out pollutants before they reach the stream, and to stabilize stream banks. The buffer width may be increased, if needed.</p> <p>For perennial streams, install a minimum 50-foot-wide riparian buffer (75 feet wide, if fish bearing), measured horizontally from the top of the streambank.</p>
Conservation Tillage FOTG 329	Implement reduced tillage practices that achieve a minimum residue coverage of 60 percent. The residue coverage expectation is based on the minimum observed from harvest to the time of planting, or a soil Tillage Intensive Rating (STIR) of 30 or less as determined by the Natural Resources Conservation Service (NRCS).
Fertilizer Management Code 590	Operations should only apply the amount of fertilizer needed and consider timing of application to reduce or eliminate the potential for run-off to surface water. A comprehensive nutrient management plan is recommended that incorporates precision ag practices that use technology for nutrient placement.
Irrigation Water Management	<p>Irrigation systems should only apply the amount of irrigation water needed by the crop and in a manner that limits waste, prevents surface losses of nutrient and soil, and prevents nutrient leaching.</p> <p>In no event should runoff occur when using any irrigation method, including runoff into subsurface drainage through inlets, vents, and manholes. Rill irrigation should be eliminated, whenever possible.</p>
Tile Drain Management	Tile drainage should be eliminated when possible to reduce drainage intensity. Controlled drainage or drainage water management, such as riparian buffers to filtrate pollutants, set-backs from surface waters at end of tile locations, and winter cover crops

Cove Creek Livestock BMPS



What does this look like on the Ground?

TMDLs and Resources

- Budd Inlet DO TMDL:
<https://apps.ecology.wa.gov/publications/SummaryPages/2210012.html>
- Little Spokane DO and pH TMDL:
<https://apps.ecology.wa.gov/publications/SummaryPages/2010033.html>
- Lower White River pH TMDL (mix of new template on old approach):
<https://apps.ecology.wa.gov/publications/SummaryPages/2210011.html>
- Copy of TMDL Template: email Ben Rau (ben.rau@ecy.wa.gov)
- BMP Guidance document that we are using for Agricultural BMPs:
<https://apps.ecology.wa.gov/publications/SummaryPages/2010008.html>