

City of Monroe TMDL Implementation Plan Matrix

Receiving waters: Schaffer Creek, Long Tom River

Pollutant: TEMPERATURE						
Source	Strategy to Reduce Pollutant	Action to Implement Strategy	Benchmark Indicators of Progress	Timeline	Measures of Successful Strategy	Status
1. Solar Radiation	Protect and enhance existing shading vegetation, plant additional vegetation along waterways on City-owned property.	Continue to enforce drainageway and waterway 20 ft. setback requirements per development code 5.117	<p>Compare aerial photographs at five-year intervals to determine the current state and changes to riparian areas</p> <p>Include the city's riparian monitoring approach in the Riverside District Master Plan</p>	Ongoing; annual review	<p>Adopt new ordinance, Enforce ordinance requirements, track and document violations and follow-up or enforcement actions;</p> <p>Document implementation and enforcement of riparian setback requirement</p> <p>Maintain record of riparian changes determined from aerial imagery assessment</p>	
		Include riparian protection overlay and protection requirements in a City ordinance		<p>Years 1-2: Create an ordinance to address protection of riparian vegetation</p> <p>Years 2-4: Conduct outreach and education to public and others about vegetation protection ordinance</p> <p>Years 2-4: present to Council, adopt ordinance</p> <p>Year 5: Use publicly available imagery to assess changes in riparian vegetation/.</p>		

	Work with property owners and the local watershed council to plan and implement riparian restoration projects	<p>Conduct outreach and education to local property owners of riparian areas.</p> <p>Work with willing local property owners to implement riparian improvement projects on private property.</p>	Establish a good working relationship with all parties involved. At least one riparian tree planting completed every two years.	<p>Years 1-2: Develop list of priority properties for targeted outreach; develop recommendations for riparian improvements for priority properties.</p> <p>Years 1-4: Develop outreach and communication plan; contact property owners per communication plan. and schedule site visit(s) with willing landowners.</p> <p>Years 2-5: Implement at least two projects if landowners are willing</p>	<p>Priority properties for riparian plantings are identified.</p> <p>Complete outreach and education to property owners about riparian improvements</p> <p>Implement at least two riparian planting projects.</p>	
		Partner with local watershed council to provide support for riparian projects.	<p>Be involved with and provide support for at least two projects annually</p> <p>Utilize Transportation Growth Management Grant to create a Riverside District Plan to prioritize one riparian project</p> <p>Utilize the 1135 ACE Grant to prioritize at least one riparian project</p>	<p>Year 1: Meet with local watershed council and identify priority projects, resources and staff time needed to support priority projects.</p> <p>Years 2-5: Support and/ or participate in at least 2 projects.</p>	<p>Track the number of project proposals submitted</p> <p>Document outreach to local watershed partners and watershed council.</p> <p>Develop list of potential projects and city's resource availability to support at least 2-3 projects.</p> <p>Support and/ or participate in at least 2 projects</p>	
2. Wastewater Plant Discharge	Maintain low effluent discharge	Maintain Compliance with NPDES	Provide documentation showing that effluent meets permit conditions	In progress and on-going; annual review	Monitor effluent and river discharge	
	No Discharge during summer months	Store wastewater discharge during summer months	Monitor the amount of wastewater stored	In progress and on-going; annual review	Provide summary report on the amount of wastewater stored	
Pollutant: BACTERIA						
	Source	Strategy to Reduce Pollutant	Action to Implement Strategy	Benchmark Indicators of Progress	Timeline	Measures of Successful Strategy
1. Pet and Animal Waste	Reduce the amount of Pet Waste that is not properly disposed of	Maintain pet waste stations including bags,	Determine locations and prepare news release to inform	Ongoing; annual review	Pet waste stations maintained with bags; document cost of	Status

		<p>educational signs, and other information</p>	<p>residents about new stations.</p>		<p>maintaining pet waste stations and cost of providing pet waste bags.</p>	
<p>2. Erosion and Sedimentation</p>	<p>Decrease sedimentation and erosion from new construction</p>	<p>Create and adopt an ordinance to address offenses related to animal waste</p>	<p>Adopt and enforce pet waste pick-up ordinance</p>	<p>Year 1: Adopt new ordinance</p>	<p>Track citations issued and follow-up or enforcement actions;</p>	
<p>3. Stormwater Discharge</p>	<p>City Initiative to improve stormwater system</p>	<p>Require proof 1200-C permits for developments that disturb one acre or more, and inform single lot developers of erosion and sediment control plan</p>	<p>Provide 1200-C fact sheets to developers, track number of 1200-C permits issued in Monroe</p>	<p>Ongoing; Annual Review</p>	<p>Demonstrate that 100% of new developments over one acre obtain 1200-C permits from DEQ</p>	
		<p>Repair existing catch basins</p>	<p>Get approval for fixing catch basins</p>	<p>Year 1: Approve proposal for fixing current catch basin infrastructure; hire consulting firm</p>	<p>Document repair approval, and completion of repairs.</p>	
		<p>Draft proposal for stormwater detention and treatment facility next to the water treatment plant</p>	<p>Bid for a contractor</p>	<p>Years 2-3: Repair infrastructure</p>	<p>Track bidding process</p>	
		<p>Require stormwater detention and treatment for new and re-development greater than one acre</p>	<p>Inspect developments for proper use of erosion and sediment control BMP's</p>	<p>Years 4-5: Draft stormwater detention & treatment infrastructure proposal</p>	<p>Draft proposal for treatment facility, which includes estimated cost and implementation timeline</p>	
				<p>Years 1-3: Review examples of erosion and sediment control development standards; develop draft ordinance and development code language to address erosion and sediment from new and re-development.</p>	<p>Ordinance adopted by City Council and all new and re-development complies with stormwater detention and treatment requirements</p>	
				<p>Years 1-3: Develop internal guidance for implementing new requirements; develop fact sheet or other outreach materials for developers to include in permit application packet.</p>		
				<p>Year 3: Adopt</p>		

4. Wastewater Treatment Plant	Conduct regular maintenance on catch basins, and use BMP's during public works operations	Regularly clean out catch basins and sediment traps before they overflow. Flush storm sewers and provide downstream sediment barriers.	Create inspection schedule for catch basins	ordinance and code language Ongoing; annual review	Inspect and clean 50% of the sewer and catch basin system annually for sediment deposition Maintain records of cleaning operations; have newly hired Public Works employee create and maintain inspection schedule Information provided at front counter and on website.	
	Raise awareness of actions that individuals can take to minimize stormwater impacts	Publish a series of educational materials relevant to stormwater and water quality Stencil storm drains	Materials reviewed and selected. Review and update annually. Provide storm drain stencilling.	Year 1: Begin reviewing existing information immediately Years 1-5: Maintain timely and relevant information on city's website and at front counter Ordinance adoption to take place by end of 2020.	Track number of storm drains stencilled. Document other outreach efforts, e.g. newspaper, newsletter Ordinance for new and re-developments to comply with storm water detention requirements	
	Reduce runoff from new and re-developments which require a city zoning permit	Require post construction stormwater runoff rates not to exceed bare land runoff rates, based on City of Corvallis standards per Development Code Section 5.126 Amend code to include re-developments	Draft runoff code for re-developments article and include in draft ordinance.			
	Maintain effluent low bacteria levels (monitoring indicates compliance)	Maintain compliance with NPDES permit requirements	Provide documentation showing that effluent does not affect bacteria levels in the river	In Progress and on-going; annual review	Monitor effluent as a condition of DEQ discharge permit	

Pollutant: MERCURY

Source	Strategy	How	Measure	Timeline	Milestone	Status
1. Natural Background in Soil and Rock	Decrease soil disturbance in areas sensitive to erosion	Create code amendment to require that steep slopes and unstable soils are identified and protected in development applications	Review development applications for compliance; Adopt amendment	In progress and on-going	Development applications show steep slopes	
2. Erosion and Sedimentation	Decrease sedimentation and erosion from new construction including	See Bacteria 3 above	See Bacteria 3 above	See Bacteria 3 above	See Bacteria 3 above	

3. Air Deposition	development on small developments < one acre					
	Prevent erosion and reduce the amount of stormwater discharged	Pursue strategies outlined above that address erosion and stormwater management	Meet specific strategy benchmarks	Follow timelines in specific strategies	Meet specific strategy completion measures	

Pollutant: ALL POLLUTANTS

Source	Strategy to Reduce Pollutant	Action to Implement Strategy	Benchmark Indicators of Progress	Timeline	Measures of Successful Strategy	Status
Illicit Discharge and Elimination and Illegal Dumping	Provide training for public works staff about good housekeeping, and other actions to protect water quality	Incorporate existing training materials to augment current public works training programs	Identify appropriate, existing training materials. Training topics selected and scheduled	Year 1: Review training materials that are available. Set meeting with Public works director to make a decision on what trainings to pursue by the end of 2019 Years 2-5; Provide annual training to public works staff	Track and document trainings provided, topics covered and staff attendance	
	Implement outreach and education targeted at the general public	Distribute educational materials to community members about actions they can take to protect water quality at least three times a year	Educational materials are developed or assembled and disseminated	Years 1-5: Provide information to community members at least three times a year	Track and document outreach and education efforts.	
Watershed	Reduce the amount of hazardous waste that is not properly handled or disposed of	Promote regional annual hazardous waste events; incorporate disposal education into this event and other activities. Evaluate public works facilities and maintenance for hazardous materials	Local waste disposal provider contacted. Event Held Facilities evaluated	Ongoing communication with Hosts of event & promotion of event through the City	Track and document number of participants or mass of material collected, e.g. tons of waste collected.	
	Secure funding for stormwater system upgrades	Collect stormwater system development charges	Track amount of SDC's collected annually	Ongoing; annual review	Document fees collected	
	Identify and pursue opportunities to partner with other local governments and organizations to implement mutual strategies	As Implementation of the strategies listed begins, contact other entities about coordinating efforts. Continue to be involved in regional water	Two meetings attended annually.	On-going; annual review	Attend region-wide water resource planning meetings. Support proposals that work on region-wide coordination	

City Council support for water quality efforts

Ensure City Council is aware of TMDL requirements and plan and city-wide efforts to improve water quality.

Send City Council copies of TMDL materials ahead of annual city council meeting where TMDL is discussion in the agenda

Annual report or five year review presented to City Council annually

Document annual City Council meeting minutes per TMDL agenda items

