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 Cityowned property.	Continue to enforce drainageway and waterway 20 ft. setback requirements per development code 5.117 Include riparian protection overlay and protection requirements in a City ordinance	Compare aerial photographs at five-year intervals to determine the current state and changes to riparian areas Include the city's riparian monitoring approach in the Riverside District Master Plan	Ongoing; annual review Years 1-2: Create an ordinance to address protection of riparian vegetation Years 2-4: Conduct outreach and education to public and others about vegetation protection ordinance Years 2-4: present to Council, adopt ordinance Year 5: Use publicly available imagery to assess changes in riparian vegetation/.	Adopt new ordinance, Enforce ordinance requirements, track and document violations and follow-up or enforcement actions; Document implementation and enforcement of riparian setback requirement Maintain record of riparian changes determined from aerial imagery assessment	

	Work with property owners and the local watershed council to plan and implement riparian restoration projects	Conduct outreach and education to local property owners of riparian areas. Work with willing local property owners to implement riparian improvement projects on private property.	Establish a good working relationship with all parties involved. At least one riparian tree planting completed every two years.	Years 1-2: Develop list of priority properties for targeted outreach; develop recommendations for riparian improvements for priority properties. Years 1-4: Develop outreach and communication plan; contact property owners per communication plan. and schedule site visit(s) with willing landowners. Years 2-5: Implement at least two projects if landowners are willing	Priority properties for riparian plantings are identified. Complete outreach and education to property owners about riparian improvements Implement at least two riparian planting projects.	
		Partner with local watershed council to provide support for riparian projects.	Be involved with and provide support for at least two projects annually Utilize Transportation Growth Management Grant to create a Riverside District Plan to prioritize one riparian project Utilize the 1135 ACE Grant to prioritize at least one riparian project	Year 1: Meet with local watershed council and identify priority projects, resources and staff time needed to support priority projects. Years 2-5: Support and/ or participate in at least 2 projects.	Track the number of project proposals submitted Document outreach to local watershed partners and watershed council. Develop list of potential projects and city's resource availability to support at least 2-3 projects. Support and/ or participate in at least 2 projects	
2. Wastewater Plant Discharge	Maintain low effluent discharge No Discharge during summer months	Maintain Compliance with NPDES Store wastewater	Provide documentation showing that effluent meets permit conditions Monitor the amount of	In progress and ongoing; annual review In progress and on-	Monitor effluent and river discharge Provide summary	
	Sisting during summer months	discharge during summer months	wastewater stored	going; annual review	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	Status
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	

Stations and segmentation Three area understood and everyon from two contractors and everyon from two contractors Accordance and service distance to select the service distance to the service to the service to the service distance t		1	1	1	-		
Contrained addition of development and one of evaluation of the contrained of the co			educational signs, and			maintaining pet waste	
Contract and extend of contract services of contrac			other information	stations.			
Centre and copins and ordinates to additional control of control o						providing pet waste	
accrease codimentation and encounterior and expense to the contract to the contract of the contract to the con							
Unclease and sedimentation of continue construction from not on sensitivities of the continue construction of the continue construction of the continue cont			Create and adopt an	Adopt and enforce pet	Year 1: Adopt new		
Descent redimentation and exposing from new construction 2. Erosion and Sedimentation City initiative to instruce scoremovier vivient Sedimentation and exposing from some sediment control state of the sediment control s			ordinance to address	waste pick-up	ordinance		
Demonstration and readon from the control from the act of or more, and following light to bottom. Cat initiative to improve stormwater explains cut to the water treatment plant. Somewhater Discharge 3. Stormwater Discharge 3. Stormwater Discharge A stormwater Disch			offenses related to	ordinance		enforcement actions;	
Decrease estimated and entrolling from new construction from new construction from new constructions of the new construction o			animal waste		Years 1-5: Enforce		
2. Erosion and Sedimentation In menu construction City finitiative to improve stormworder system City finitiative to a improve stormworder system City finit					ordinance		
2. Erosion and Sedimentation City hilds/yee to improve stormwater option City hilds/yee to improve stormwater option Sedimentation City hilds/yee to improve stormwater option Sedimentation City hilds/yee to improve stormwater option City hilds/yee to improve stormwater option Sedimentation City hilds/yee to improve stormwater option City hilds/yee to improve stormwater option Sedimentation Sedime		Decrease sedimentation and erosion	Require proof 1200-C	Provide 1200-C fact sheets	Ongoing; Annual	Demonstrate that 100%	
Securior and Sedimentation City instative to improve stormware system City instative to instance sys		from new construction	permits for	to developers, track number		of new developments	
The proposal for increase the continue of developers of continue of the developers of continue of the developers of continue of the source of			developments that	of 1200-C permits issued in		over one acre obtain	
City initiative to improve stormwater system And proposal for stormwater diseases and treatment for initiative stormwater diseases and treatment control plant The stormwater diseases and treatment control plant Require stormwater diseases and treatment control plant The stormwater diseases and treatment control plant Require stormwater diseases and treatment control plant The stormwater diseases and treatment control plant The stormwater diseases and treatment control plants and treatmen	2 Francisco and Cadimantation		disturb one acre or	Monroe		1200-C permits from	
City initiative to improve atornwater spring catch bytem City initiative to improve atornwater strainty system City initiative to improve atornwater strainty system Druft proposal for facility and transmitted from an distance for interest and transmitted from an distance for implementation and transmitted from an distance for implementation and transmitted from an distance for implementation and transmitted from an and restrict facility and transmitted from an and restrict facility and transmitted from the state of t	2. Erosion and Sedimentation		more, and inform single			DEQ	
City initiative to improve stormwater system Define proposal for fining catch basins Define proposal for fining catch basins and treatment famility next to the water treatment from and treatment famility next to the water treatment for new and extensive determinon and extensive fiderention and extensive fiderent control IMM's somewhater of the control of t			lot developers of				
Stormwater Discharge 3. Stormwater Discharge declaration in the system of the special existing and page 1. Stormwater of the storm and treatment facility near to the water great than one arre			erosion and sediment				
Stormwater Discharge 3. Stormwater Discharge declaration in the system of the special existing and page 1. Stormwater of the storm and treatment facility near to the water great than one arre			control plan				
System Spains Sp		City Initiative to improve stormwater	-	Get approval for fixing catch	Year 1: Approve	Document repair	
Draft proposal for stormwater detention and rearment failty next to the water treatment plant Require stormwater development and featurement for more and recommend for many and recommend for the form of the for		1 '					
Brownwater detention and treatment facility not to the water vectormed plant Require stormwater detention and treatment for new and							
stormwater detention and treatment facility next to the water treatment plant Next to the water treatment plant Next treatment pla			Draft proposal for	Bid for a contractor			
and treatment facility next to the water treatment plant Require stormwater detention and treatment for redention and treatment for redention and sediment control BMP? Stormwater Discharge 3. Stormwater Discharge The pect developments of control BMP? The pect development of control BMP? The pect developm						Track bidding process	
next to the water treatment plant Vears 4.3. Start Require stamwater detention and treatment for new and rethan one acre Require stamwater detention and treatment for new and redevelopment greater than one acre Require stamwater detention and treatment for new and redevelopment greater than one acre Require stamwater development greater than one acre Require stamwater Discharge Require stamwater development greater than one acre Require stamwater down and sell-ment treatment greater than one acre Require stamwater stamwater to require than stamwater than stamwater than stamwater than stamwater than							
Treatment plant I treatment plant Require stormwater detection a treatment facility, which includes estimated cost and implementation timeline Require stormwater detection and treatment for new and re development greater than one acre 3. Stormwater Discharge Require stormwater detection and treatment for new and re development greater than one acre The proposal stormwater detection and development greater than one acre Inspect developments for proper use of erosion and sediment control BMP's defined and development develo					Years 2-3: Repair	Draft proposal for	
Require stormwater detention at treatment of redevelopment for detention and treatment for new and re-development acreed than one acre 3. Stormwater Discharge Require stormwater detention and treatment for new and treatment for new and treatment for new and sediment control BMP's and sediment control development code language to address ensoin and addiment from new and re-development. Waars 1-3: Review examples of erosion and sediment control development code language to address ensoin and sediment control development code language to address ensoin and sediment rom new and re-development. Waars 1-3: Review examples of erosion and sediment control development code language to address ensoin and sediment rom new and re-development. Waars 1-3: Review examples of erosion and sediment control development code language to address ensoin and sediment rom new and re-development. Waars 1-3: Review examples of erosion and sediment control development code language to address ensoin and sediment control development code language to address ensoin and sediment control development. Waars 1-3: Review examples of erosion and sediment control development code language to address ensoin and sediment control development code language to address ensoin and sediment control development code language to address ensoin and sediment control development code language to address ensoin and sediment control development code language to address ensoin and sediment control development code language to address ensoin and sediment control development code language to address ensoin and sediment control development code language to address ensoin and sediment control development code language to address ensoin and sediment control development code language to address ensoin and sediment control development code language to address ensoin and sediment control development code language to address ensoin and sediment control development code language to address ensoin and sediment control development code language to address ensoin and			treatment plant				
Stormwater Discharge Require stormwater detention and treatment for new and re-development and development code language to address erection and sediment control BMP's and development to development of the more are development. Years 1-3: Develop internal guidance for implementing new requirements; development of development. Years 1-3: Develop internal guidance for implementing new requirements; developed fast sheet or other outreach materials for developers to include in permit application packet.						which includes	
Require stormwater detention and treatment for new and re development greater than one acre 3. Stormwater Discharge Require stormwater detention and treatment for new and re development greater than one acre Inspect development for proposal Vears 1-3: Review earning of erosion and sediment control BMP's and sediment control development asserting to development than one acre Vears 1-3: Review earning of erosion and sediment control development asserting to development than one acre Vears 1-3: Development and treatment from new and redevelopment. Vears 1-3: Development and redevelopment Vears 1-3: Development and redevelopment. Vears 1-3: Development. Vears 1-3:					Years 4-5: Draft	estimated cost and	
Require stormwater detention and retartment for proper use of erosion and sediment control 8MP's endings and sediment con					stormwater	implementation	
Require stormwater detention and treatment for new and re-development greater than one are Require stormwater Discharge Inspect developments for proposal are developments for development greater than one are Inspect developments for proposal are developments for development standards, develop dirth critanec and and recomments from me wand redevelopment. Years 1-3: Develop internal guidance for implementing new requirements; developing that the proposal are development to de language to address erosion and sediment or other outreach materials for developers to include in permit application packet.					detention &	timeline	
Require stormwater detention and treatment for new and red-development greater than one acre Require stormwater detention and treatment for new and red-development greater than one acre Inspect developments for proper use of erosion and sediment control development standards; develop draft ordinance and development code language to address erosion and sediment from new and red-development from new and red-development from new and red-developments for the development code language to address erosion and sediment from new and red-development. 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.					treatment		
Require stormwater detention and treatment for new and re-development greater than one acre 1. Stormwater Discharge 1. Inspect developments for proper use of erosion and sediment control BMP's definent control development at standards; develop draft ordinance and development code language to address erosion and sediment from new and re-development. 1. Years 1-3: Review examples of erosion and sediment control development development code language to address erosion and sediment from new and re-development. 1. Years 1-3: Review examples of erosion and sediment control development code language to address erosion and sediment from new and re-development. 1. Years 1-3: Review examples of erosion and sediment control banks (and the properties of erosion and development code language to address erosion and sediment from new and re-development. 1. Years 1-3: Review examples of erosion and sediment control banks (and the properties					infrastructure		
Require stormwater detention and treatment for new and re-development greater than one acre 1. Stormwater Discharge 1. Inspect developments for proper use of erosion and sediment control BMP's definent control development at standards; develop draft ordinance and development code language to address erosion and sediment from new and re-development. 1. Years 1-3: Review examples of erosion and sediment control development development code language to address erosion and sediment from new and re-development. 1. Years 1-3: Review examples of erosion and sediment control development code language to address erosion and sediment from new and re-development. 1. Years 1-3: Review examples of erosion and sediment control banks (and the properties of erosion and development code language to address erosion and sediment from new and re-development. 1. Years 1-3: Review examples of erosion and sediment control banks (and the properties					proposal		
detention and treatment for new and re-development greater than one acre 3. Stormwater Discharge a. Stormwater Discharge a. Stormwater Discharge b. Stormwater Discharge a. Stormwater Discharge b. Stormwater Discharge a. Stormwater Discharge b. Stormwater Discharge c. Stormwater Discharg							
detention and treatment for new and re-development greater than one acre 3. Stormwater Discharge detention and treatment for new and re-development greater than one acre development toda language to address erosion and sediment control BMP's Vears 1-3: Develop internal guidance for implementing new requirements; develop fact sheet or other outreach materials for development and redevelopment. Vears 1-3: Develop internal guidance for implementing new requirements; develop fact sheet or other outreach materials for developers to include in permit application packet.							
3. Stormwater Discharge treatment for new and re-development greater than one acre sediment control BMP's and sediment control development standards; develop draft ordinance and development. 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.			Require stormwater	Inspect developments for	Years 1-3: Review	Ordinance adopted by	
3. Stornwater Discharge re-development greater than one acre development code language to adders erosion and sediment from new and redevelopment. 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.			detention and	proper use of erosion and	examples of erosion	City Council and all new	
than one acre standards; develop draft ordinance and development code language to address erosion and sediment from new and re- development. 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.			treatment for new and	sediment control BMP's	and sediment control	and re-development	
draft ordinance and development code language to address erosion and sediment from new and redevelopment. 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.	3. Stormwater Discharge		re-development greater			complies with	
development code language to address erosion sediment from new and redevelopment. 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.			than one acre			stormwater detention	
language to address erosion and sediment from new and re- development. 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.							
erosion and sediment from new and re- development. 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.						requirements	
from new and redevelopment. 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.							
development. 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.							
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.							
internal guidance for implementing new requirements; develop fact sheet or other outreach materials for developers to include in permit application packet.					development.		
internal guidance for implementing new requirements; develop fact sheet or other outreach materials for developers to include in permit application packet.							
implementing new requirements; develop fact sheet or other outreach materials for developers to include in permit application packet.							
requirements; develop fact sheet or other outreach materials for developers to include in permit application packet.							
develop fact sheet or other outreach materials for developers to include in permit application packet.							
other outreach materials for developers to include in permit application packet.							
materials for developers to include in permit application packet.							
developers to include in permit application packet.							
in permit application packet.							
packet.							
Voar 3: Adopt					packet.		
Var 3: Mont							
Teal 3. Adopt	I		1	1	Year 3: Adopt	1	

				ordinance and code language		
	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	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	
	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	Information provided at front counter and on website. Track number of storm drains stencilled. Document other outreach efforts, e.g.	
	Reduce runoff from new and redevelopments 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	Draft runoff code for redevelopments article and include in draft ordinance.	counter Ordinance adoption to take place by end of 2020.	newspaper, newsletter Ordinance for new and re-developments to comply with storm water detention requirements	
4. Wastewater Treatment Plant	Maintain effluent low bacteria levels (monitoring indicates compliance	Amend code to include re-developments Maintain compliance with NPDES permit requirements	Provide documentation showing that effluent does not affect bacteria levels in the river	In Progress and ongoing; 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	Review development applications for compliance; Adopt amendment	In progress and on- going	Development applications show steep slopes	
		applications See Bacteria 3 above	See Bacteria 3 above	See Bacteria 3 above	See Bacteria 3 above	

3. Air Deposition Pollutant: ALL POLLUTANTS	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	
Source	Strategy to Reduce Pollutant	Action to	Benchmark Indicators	Timeline	Measures of	Status
Illicit Discharge and Elimination and Illegal Dumping		Implement Strategy	of Progress		Successful Strategy	
	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	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	Educational materials are developed or assembled and disseminated	Years 2-5; Provide annual training to public works staff Years 1-5: Provide information to community members	Track and document outreach and education efforts.	
Watershed	Reduce the amount of hazardous waste that is not properly handled or disposed of	they can take to protect water quality at least three times a year Promote regional annual hazardous waste events; incorporate disposal education into this event and other activities. Evaluate public works faculties and maintenance for hazardous materials	Local waste disposal provider contacted. Event Held Facilities evaluated	at least three times a year 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.	Two meetings attended annually.	On-going; annual review	Attend region-wide water resource planning meetings. Support proposals that work on region-wide coordination	
		Continue to be involved in regional water				

I	City Council support for water quality	Ensure City Council is	Send City Council copies of	Annual report or five	Document annual City
	efforts		·	year review	Council meeting
		requirements and plan	annual city council meeting	presented to City	minutes per TMDL
		and city-wide efforts to	where TMDL is discussion in	Council annually	agenda items
		improve water quality.	the agenda		