

# City of Salem TMDL Temperature/Mercury TMDL Strategy (2022 - 2026)

	Management Strategy		Measurable Goals	Milestones	FY	FY	FY	FY	FY	T	Hg	Annual Goal Tracking
					21-22	22-23	23-24	24-25	25-26			
GIS Data Review & Assessment	1. Utilize GIS data to assess shade/canopy cover, prioritize sites, and document planting projects and to identify wetlands.	1A	Assess potential impact to stream canopy due to the February 2021 ice storm.	Secure imagery from before (August 2020) and after (May 2021) the ice storm to use for the determination of the change in canopy.	x					◆		Tracking of imagery procurement.
				Conduct desktop/field analysis of riparian canopy before and after the February 2021 ice storm internally or with assistance of consultant services.	x					◆		Tracking progress of study.
				Create a project summary and map showing change of canopy.	x					◆		Summary of findings. Development of map.
		1B	Document all upland and riparian planting projects in a GIS database.	Update the project map annually at the end of the planting project season.	x	x	x	x	x	◆		Map updated with locations of project sites and with number or volunteers and trees/shrubs planted.
				Make map accessible to the public.	x					◆		Status of map availability.
		1C	Assess potential impact to citywide canopy due to the February 2021 ice storm.	Secure imagery from before (August 2020) and after (May 2021) the ice storm to use for the determination of the change in canopy.	x					◆		Tracking of imagery procurement.
				Conduct desktop/field analysis of riparian canopy before and after the February 2021 ice storm internally or with assistance of consultant services.	x					◆		Tracking progress of study.
				Create a project summary and map showing change of canopy.	x					◆		Summary of findings. Development of map.
		1D	Improve GIS mapping for updates of the Local Wetland Inventory (LWI).	Add new delineated wetlands and track State removal/fill permits.			x	x	x	◆		Annual update that includes number of wetlands added, wetlands filled, and/or edits made, if applicable.
				Update annual Scope of Work with contractor to outline project location(s), site preparation, planting plan, maintenance needs, and estimated schedule of activities.	x	x	x	x	x	◆		Annual project scoping meeting with consultant. Development of annual plan.

Trees & Native Vegetation

<p>2. Partner with local agencies, non-profits, volunteer groups, and local residents to coordinate plantings and to control invasive vegetation along Salem streams, streets, and in natural areas.</p>	2A	Continue to use contracted services to coordinate upland planting and multi-year riparian restoration projects on City-owned parcels.	With consideration for the time needed for site prep and invasive vegetation removal, ensure that at least 150 linear feet of streambank are planted with native trees and shrubs and/or receive targeted invasive vegetation removal each year.	x	x	x	x	x	◆	◆	Annual tracking of the number of linear feet planted, number of trees/shrubs planted, and number of volunteers who participated.	
		Reassess contract renewal/continued contracting needs for future planting events.	x	x	x	x	x	◆	◆	Annual signed contract.		
	2B	Contract with arboriculture companies to provide street tree plantings.	Provide Scope of Work identifying street tree locations and suitable tree species. Focus work in low canopy areas and along major roads.	x	x					◆	◆	Number of trees planted.
			Ensure water and maintenance of newly planted trees for three years.	x	x	x	x			◆	◆	Number of trees watered and maintained.
			Reassess contract renewal/continued contracting needs for future planting events.		x	x				◆	◆	Annual signed contract.
	2C	Continue to offer native vegetation to select streamside properties.	Offer native vegetation to streamside residents through the Free Tree and Shrub program to supplement public planting projects.	x	x	x	x	x		◆	◆	Track number of participants and number of plants provided.
Offer native trees, shrubs, and invasive plant removal where needed for up to 20 streamside property owners in low-canopy tree areas. Determine follow up needs.			x	x	x	x	x		◆	◆	Identify properties. Track number of properties offered plants, number that participated, and the number of plants provided.	
2D	Collaborate with organizations or agencies to assist streamside property owners in Salem with invasive vegetation removal and control.	Review existing streamside data and identify a proposed list of taxlots to receive assistance.	x	x	x	x	x		◆	◆	Develop taxlot list.	
		Seek permission from identified streamside residents and initiate control efforts.	x	x	x	x	x		◆	◆	Number of permissions received and assistance provided.	
		Develop treatment list and follow up with treatment success at sites each summer upon availability of staff/stream crew participation.	x	x	x	x	x		◆	◆	Estimated rate of success, which can include number of properties that need retreatment and reduction or elimination of plant population on site.	

Stream Mitigation Bank	3. Implement Stream Mitigation Banking (SMB) Program as a means to offset impacts to waterways from public infrastructure improvements projects.	3A	Implement the Waln Creek Mitigation Bank Long-Term Management Plan.	Monitor the site for occurrence of conservation threats, such as accumulation of sediment, illegal dumping, and invasive weeds.	x	x	x	◆	Record findings via GIS app or asset management software and provide a monitoring report including map of invasive species extent and location of conservation threats and list of management strategies needed.			
				Maintain the area within the Mitigation Bank for enhanced flood storage, improved water quality, and habitat functions.	x	x	x	x	◆	Report of site maintenance performed.		
Stream Stabilization	4. Pursue options for streambank stabilization and riparian enhancement projects that incorporate bioengineering practices, the instream placement of woody debris, and native plants.	4A	Initiate at least one streambank stabilization/habitat enhancement project per TMDL plan cycle that incorporates bioengineering practices and/or the instream placement of large woody debris.	Identify location and evaluate options for project funding.	x	x		◆	Determine location and funding mechanism.			
				Finalize project scope and design.		x	x		◆	Consultant hired. Project and scope identified.		
				Secure permits for project(s), if needed.			x	x		◆	Permits identified and applied for.	
				Initiate project implementation per final scope and design.				x		◆	◆	Efforts to construct project.
		4B	Provide information and resource assistance to streamside owners regarding stream stabilization and riparian enhancement projects.	Identify and designate lead staff person to conduct site visits and to coordinate with other City personnel.	x				◆	◆	Staff identified. Number of site visits requested/ conducted.	
				Continue to offer the Watershed Protection and Preservation Grant to assist with funding for erosion control and streambank stabilization projects.	x	x	x	x	x	◆	◆	Number of grant applications provided, submitted, and approved. Track grant process including permit status, if needed.
				Develop streamside erosion information webpage for streamside home and business owners.		x	x	x	x	◆	◆	Staff meetings to draft content. Development of materials, if needed. Final webpage layout and information.

			Conduct at least one streamside restoration project and/or site monitoring with the Stream Crew in years that the Stream Crew is available.	x	x	x	x	x	◆	◆	Site identified. Plan created and completed. Monitor shading, survival, and maintenance needs at restoration sites.
Riparian Protections	5. Continue to review and revise Salem Revised Code (SRC) provisions to ensure protection of riparian area buffers.	5A	Increase riparian buffer protection through local assessment.	Coordinate with Planning Commission for implementation of Goal 5 riparian inventory.	x					◆	Progress made on letter from Planning Commission to Council.
				If approved by City Council, begin implementation of Goal 5 Riparian Inventory work.		x	x			◆	Hire consultant to perform inventory. Tracking of process.
				Monitor progress on the Oregon Implementation Plan for NFIP-ESA Integration.			x	x		◆	Track progress for local ordinance implementation.
6. Assess and engage the community in education efforts focused on stream temperature.	6A	Update and implement Riparian Outreach Plan	Identify new and refined strategies, including incentives and barrier reductions, based on canopy survey results and streamside shade inventory to update the plan.	x	x					◆	Review of study regarding incentives and barriers. Document incentives (materials, trainings, etc.) provided to residents.
			Use updated riparian shade inventory and prioritization database to identify low canopy areas for priority outreach.		x	x				◆	Develop outreach schedule for targeted properties.
			Implement updated Riparian Outreach Plan.		x	x	x	x		◆	Track the number of tasks implemented and their outcome(s).
			Assess and adaptively manage strategies			x	x	x		◆	Update strategies based on review.
	6B	Use a variety of tools to convey riparian values to the general public.	Update website design for TMDL page and content and with "key components" information from Riparian Outreach Plan and information for streamside assistance as indicated in 4B.	x	x					◆	Track number/content of updated materials to website.
			Review webpages at least quarterly to determine that content remains relevant and up to date.	x	x	x	x	x		◆	Document outcome review for updates and changes.
			Use an assortment of means to share information, such as streamside mailers, online ads, radio, presentations, and web updates.	x	x	x	x	x		◆	Indicate sources of outreach, frequency, and distribution, if applicable.

6. Assess and engage the community in education efforts focused on stream temperature.

6C	Pilot an outreach program to help residents increase shade along their streams.	Develop a streamside buffer program.	x	x			◆	Progress made on program development. Program included in budgeting process.			
		Implement streamside buffer program.			x	x	x	◆	◆	Indicate number of applications, participants, and partners.	
		Develop and implement streamside workshops/videos for riparian landowners.		x			x		◆	◆	Number of offerings and participants.
6D	Continue/develop partnerships to share messages and leverage resources	Participate in local, regional, and/or statewide stormwater communications groups.	x	x	x	x	x	◆		Document events and event attendance. Document project progress, outcome(s), and message(s).	
6E	Continue to support/promote weed control efforts of Salem-based projects and volunteer groups (e.g., SOLVE, No Ivy Coalition, and Willamette Riverkeeper).	Coordinate with and/or promote volunteer groups on weed control projects on or near waterbodies.	x	x	x	x	x	◆		Track number of projects, items of coordination, and project outcome.	
6F	Provide new streamside homeowners with welcome packets.	Explore the ability of determining new streamside property owners. Only if able, develop system to identify change of property owners for new homeowner outreach.		x	x				◆		Development and progress of a tech team to explore the possibility. List/number of streamside properties with ownership change.
		If system can be developed, create homeowner packet and provide to new owners. If it cannot, do not proceed.					x	x	◆	◆	Development of packet. Number of new streamside properties identified and number of packets sent.
6G	Continue Tree City USA status.	Continue meeting the Arbor Day Foundation Tree City USA requirements.	x	x	x	x	x	◆		Acknowledgement from Arbor Day Foundation meeting Tree City USA requirements.	

