

	Management Strategy	Measurable Goals	Milestones	FY	FY	FY	FY	FY	Annual Goal Tracking	Annual Status Update	
				16-17	17-18	18-19	19-20	20-21			
GIS Data Review & Assessment	1. Utilize GIS data to assess shade/canopy cover, prioritize and document planting projects, and to evaluate changes in the City's tree canopy.	1A Assess 2009 Riparian Shade Inventory to determine applicable updates that may include options for improved constraint/opportunities mapping and increasing the number of available shade categories (FY 2016-17).	Convene workgroup to review 2009 Inventory data and to develop project scope that incorporates collective data needs among different sections.	x					Identify workgroup involvement, track meetings and significant decisions/outcomes. Track progress made on desktop tasks and field verification and analysis.	Revisited. The consultant that performed the previous update indicated that they were unable to update the study with our newly requested categories. Upon consultation with the consultant that conducted the tree canopy study (1D), we are looking at different technologies to complete this task. This was submitted and approved in the FY 20-21 budget. We are expecting to do the 10-year comparison during FY 20-21.	
			Develop scope of work with project goals (and budget if consultant services needed).	x							
			Conduct desktop/field analysis internally or with assistance of consultant services.	x	x						
		1B Review Riparian Prioritization Database and weighting criteria for potential improvements and increased utility (FY 2016-17).	Convene workgroup to determine desired functionality for increased use.	x					Identify workgroup involvement, track meetings and significant decisions, and field inspections	Completed. The stormwater retrofit prioritization tool is completed and it uses riparian values in the assessment for those properties that have streams running through them. Riparian projects can be entered into this database and ranked. Generating and ranking riparian sites for planting will be an ongoing process, and if changes to the tool are found that would make it more useful for reviewing and ranking these projects, then they will be incorporated into the tool.	
			Identify high priority areas/taxlots based on data review (shade, constraints, ownership, access, opportunity for community involvement etc.)		x						
			Generate prioritized list of future targeted areas for planting and riparian enhancements (FY 2017-18).		x						
		1C Create GIS database to document all upland and riparian projects (FY 2017-18).	Develop criteria and tracking mechanism for database.	x					Identify workgroup involvement, track meetings and significant decisions/outcomes. Track the number of fines, planting sites, and number of plants planted.	Ongoing. In FY 2017 - 18, the first map of all upland and riparian projects was created. Staff continue to update this map annually after the close of the fiscal year. We are seeking permission to share this map publicly and provide it on our TMDL webpage: https://www.cityofsalem.net/Pages/salems-plan-to-cool-streams-temperatures.aspx . A screen shot of that map is provided below as Figure 1.	
			Work with Community Development to ensure knowledge of priority sites for planting (fines).	x							
			Generate a master map to assist with internal communication and update as needed based on available project data.		x						
		1D Complete next update to 2010 Salem Canopy Study (FY 2020-21).	Develop scope of work, hire COR, and update study.						x	Track progress made on next canopy study.	Completed. The City conducted a tree canopy assessment and discovered that the tree canopy has increased to 24 percent, exceeding the 23 percent goal set in 2013. The 2020 report showed an increase of 6 percent over a 10-year period. This amounts to 9,202 tree acres of the total 38,740-acre study area. Every Salem neighborhood shared the gain. Salem's tree canopy provides \$80 million a year in environmental/ecosystem benefits. The urban canopy report was completed in FY 2019-20 and presented to Council in February 2020. The City completed its second year of a 5-year tree planting and maintenance contract with Treecology where 160 large stock street trees were planted. In addition, under the City contract with Friends of Trees, 204 large stock trees were planted in City parks in FY 2019-20. In 2020 we are continuing the street tree inventory to work towards a complete street tree inventory. The results of the canopy report and the street tree inventory are used to direct and focus the tree planting projects in areas of greatest need based on potential canopy, existing canopy, impervious area, amount of vehicle traffic, and demographics.

2. Partner with local agencies, non-profits, volunteer groups, and local residents to coordinate plantings and to control invasive vegetation along Salem streams.

2A	Continue to utilize contracted services to coordinate multi-year riparian planting projects on City-owned parcels (Annually).	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	Track annually the number of linear feet planted, number of trees/shrubs installed, and number of volunteers involved.	Scheduled. Friends of Trees will be providing continued maintenance of sites. Two tree and shrub planting events are planned at McKay School Park in FY 2020-21. Due to COVID-19, we will need to be flexible to ensure safety of volunteers, contractors, and staff during these events.
		With consideration for the time needed for site prep and invasive vegetation removal in mind, ensure that at least 150 linear feet of streambank are planted with native trees/shrubs and/or receive targeted invasive vegetation removal each year (Annually).	x	x	x	x	x		Ongoing. Five sites have ongoing maintenance (Orchard Heights Park, McKay Park, Eola Ridge Park, Judson Middle School, and Woodmansee Park) for an approximate combination of 1,185 linear feet. Two of the project sites also included planting: McKay Park and Orchard Heights Park totaling 360 linear feet. Volunteers planted a total of 2,404 native trees and shrubs, 1,842 along the creek at Orchard Heights Park and 562 along the creek at McKay Park.
		Reassess and document continued project maintenance needs (Annually).	x	x	x	x	x		Ongoing. Friends of Trees coordinated reforestation contractors to perform Himalayan blackberry, English ivy, and other weedy species removal at McKay School Park, Judson Middle School, Woodmansee Park, Eola Ridge Park, and Orchard Heights Park.
		Reassess contract renewal/continued contracting needs for future planting events.		x					Renewed. The contact with Friends of Trees was renewed for a 5-year period. FY 2019-20 was the first year of the new 5-year period.
2B	Pursue MOA with local school district for multi-year riparian and upland planting projects on school owned lands. (FY 2016-17).	Meet with District staff to discuss possible collaboration and potential concerns.	x					Document collaboration efforts with District, Council acceptance, progress and/or changes made to MOA, and any associated planting activities. Track number of plants provided, and area planted.	Completed in prior years.
		Draft MOA that meets District needs and clarifies project scope, boundaries, and future maintenance responsibilities.	x						Completed in prior years.
		Submit MOA to City Council for approval to execute.	x						Completed in prior years.
		Initiate planting efforts on school owned properties under MOA or alternate agreement.		x	x	x	x		Ongoing. The work at Judson Middle School is in progress and no new school sites are currently planned. We are recommending to complete the work at Judson successfully before continuing on with a new school.
2C	Continue to offer native vegetation to targeted streamside properties (Annually).	Continue to offer native vegetation to at least 20 private streamside residents to supplement public planting projects. These residents are typically adjacent to the contracted project area and identified as having low riparian shade.	x	x	x	x	x	Track number of properties receiving assistance and the number of plants provided.	Ongoing. Friends of Trees reached out to 18 homeowners currently affected by erosion along a 500-foot section of Pringle Creek. Six homeowners joined the project. The Pringle Creek project was temporarily halted in March and April due to COVID-19 concerns, but the first phase of planting was able to be completed in early May. Twenty property owners were selected along the Little Pudding River in a low-canopy reach. They received no interest from property owners. Outreach efforts will be retooled to reach out to the residents again in FY 2020-21.
		If available, continue to provide native trees and shrubs (or offer alternate resources) for additional requests received.	x	x	x	x	x		Reinstated. After a 10-year pause, the City began offering the Free Tree program to Salem residents who own property along a stream. For FY 2019-20, 258 people submitted orders and 228 picked up their orders. The number of native plants ordered was 1,268 and the number picked up was 1,154 plants. The Free Tree webpage is located here: www.cityofsalem.net/Pages/free-tree-program.aspx . See Figure 2.
		Finalize and submit to City Council a staff report with request to enter a MOA. If necessary, identify alternate partnering options.	x					Completed in prior years.	

	2D	Initiate a collaborative effort with another partnering agency to assist private streamside property owners in Salem with invasive vegetation removal and control (FY 2015-16).	Review existing streamside data and identify a proposed list of taxlots to receive assistance.	x					Document Council Action, number of properties to receive assistance, and assistance provided.	Ongoing. The City of Salem partnered with the Marion Soil & Water Conservation District again this year to offer knotweed control to property owners with known knotweed growing along their streamside property in Salem and to retreat areas from previous years.
			Seek approval/interest from identified streamside residents and initiate control efforts.	x						Ongoing: Twenty-four sites along Pringle, Croisan, and Claggett Creeks were treated to control knotweed.
			Create tracking mechanism to document location of efforts and continued progress made.	x	x					Ongoing. A map of invasive species has been developed for field data collection by the stream crew. Data from the knotweed efforts will be forwarded to add to the map to indicated years of treatment.
			Continue to provide and track assistance as resources allow.			x	x	x		x
	2E	Develop a process for pursuing strategic planting and/or other riparian enhancements on lands donated/vacated to the City and on newly developed/ re-developed properties (FY 2019-20).	Initiate internal meeting(s) with staff from multiple Divisions/Departments to determine core stakeholders, needs, and discuss options forward.		x	x			Document efforts/progress made on the development of an internal process.	See Strategy 1B above. Strategic planting opportunities and riparian enhancement projects will be prioritized using the Prioritization Tool.
			Finalize and document internal procedures based on predetermined need.					x		
	2F	Develop mechanism to offer replacement trees to residents/businesses where fallen trees have been removed (FY 2017-18).	Develop long-term approach for providing replacement trees/vegetation and planting assistance if needed.		x				Document internal coordination and determined approach for replacement trees.	Ongoing. Replacement trees and vegetation will be offered to residents when the opportunity is identified or requested. No requests or opportunities based on fallen trees were identified during this reporting period.
			Ensure appropriate tracking mechanism for this assistance is developed, as needed.		x					

Stream Mitigation Bank	3. Implement Stream Mitigation Banking (SMB) Program as a means to offset impacts to waterways from public infrastructure improvements projects.	3A	Continue to monitor the approved SMB Project Site (Waln Creek) according to established performance standards (Annually).	Maintain riparian vegetation and control noxious/invasive weeds to ensure establishment of the approved native plant communities.	X	X	X	X	X	Track completion of required monitoring activities. Implement management recommendations.	Ongoing. The site has met vegetation and channel stability requirements. Monitoring by consultant and City staff for vegetation and channel performance has been completed. Although the City has been released from the full monitoring report requirements, the City still keeps an eye on it and hosts the agencies once a year for a field inspection. The City is developing a management plan for the area that will allow for more credits to be released.	
				Monitor established stream cross-sections to ensure continued streambank stability.	X	X	X	X	X			
				Document site conditions with photographs from established points.	X	X	X	X	X			
				Meet permit and SMB standards for channel stability and habitat.	X	X	X	X	X			
		3B	Submit an annual monitoring report and SMB Report to the ACOE and DSL by January 31 of each year (Annually).	Report to agencies for seven years.	X	X	X	X	X	Track completion of required reports.		Ongoing. Staff submitted the report to agencies on January 31, 2020.
				Develop a Long-term Management Plan for the SMB Project Site.		X						Ongoing. The long-term management plan is in final development for completion in FY 2020-21.
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	Complete at least one streambank stabilization/enhancement pilot project per TMDL plan cycle that incorporates bioengineering practices and the instream placement of large woody debris (FY 2020-21).	Evaluate options for project funding (FY 2016-17).	X					Document determined funding mechanism, identified project location/scope, and efforts to project completion.	Completed in prior years.	
				Based on available funding mechanism determine pilot project location and estimated scope of effort.		X					Completed. Determined in prior years for Woodmansee Park in the Pringle Creek Watershed.	
				Finalize project scope and design.			X	X			On hold. Currently a Parks Master Planning Process and Aquifer Storage and Recovery update are occurring at the site. The site still has potential for large woody debris; however, it would need to be coordinated with any pipeline work that crosses the creek. Consequently, the project will not occur within the next several years. In addition, another large woody debris project that was awarded the City's Watershed Protection and Preservation Grant was postponed by the contractor due to COVID-19.	
				Initiate bioengineering methods and installation of large woody debris.					X			
				Complete initial pilot project per final scope and design.							X	Completed. The Pringle Creek Demolition and Restoration Project, just upstream of the confluence of Pringle Creek and the Willamette Slough, is complete. The stream channel restoration was designed as a riffle-pool run with simulated bed morphology and large wood structures for stream roughness and habitat refuge. A greenway corridor is being established with riparian vegetation along both creek banks. In addition, a more natural fishway replaced the old fish ladder.
		4B	Pursue development of no cost home new options/programs to assist residents with streambank erosion and planting (FY 2019-20).	Initiate internal meetings to determine best approach forward toward development of a new alternative for assistance.		X				Identify workgroup involvement, track meetings and significant decisions, and progress made on assistance program.	Completed. In previous fiscal years, it was determined to continue the use of the City's Watershed Protection and Preservation Grant to assist homeowners with streambank erosion. Salem awarded a watershed protection and preservation grant for a streamside project to add woody debris for bank stabilization. That project was scheduled to be completed in FY 2019-20, but was postponed due to COVID-19 restrictions. It is now anticipated to be completed by September 2020.	
				Finalize plan for providing assistance with streambank erosion.					X			
		Riparian Protections	5. Continue to review and revise Salem Revised Code (SRC) provisions to ensure protection of riparian area buffers.	5A	Complete next review of SRC and Administrative Rules to identify inconsistencies and/or barriers to adequate enforcement (FY 2020-21)	Initiate internal workgroup to review recently reorganized SRC.		X			Identify workgroup involvement, track meetings and significant decisions, and changes proposed to SRC.	No update. The trees in the riparian area continue to have protection under Salem Revised Code Chapter 808.
Coordinate with staff from Public Works, Community Development, and Legal on any proposed adjustments to SRC and/or the Administrative Rules.						X	X	X	X			
Ensure protections for areas identified as having ample riparian canopy cover based on available GIS data.						X	X	X	X			

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

6A	Assess the low-shade audience for development of a targeted outreach plan and schedule (FY 2017-18).	Use updated riparian shade inventory and prioritization database to identify low canopy areas for targeted outreach.	x	x						Determine feasible target number for yearly outreach. Create schedule and track number of contacts, interested parties, and plants planted.	Revisited. Based on consultant recommendations, a proposed updated shade study is scheduled for FY 2020-21. The updated shade study is requested to provide a comparison between the 10-year period from the first study as well as provide increments of shade from top of bank.
		Assess barriers to audience identified above.			x	x					Completed. A survey to assess barriers, values, habits, and actions was conducted in FY 2018/19.
		Develop outreach schedule for targeted properties.			x	x					Ongoing. We are continuing outreach to 38 identified properties, 20 of which are in low shade areas and 18 of which are in an area experiencing erosion.
		Pursue the development of incentives to encourage planting along streambanks.			x	x	x	x			Retooled. Friends of Trees and City staff met to discuss how to make the free offerings the City provides for service more attractive to streamside residents, especially those in low canopy areas.
6B	Update Riparian Outreach Plan, incorporating results of streamside survey (FY 2018-19)	Develop and conduct survey for streamside residents.			x					Track survey development, number of surveys completed, and results.	Completed. A survey to streamside homeowners was conducted in FY 2018-19.
		Update outreach plan based on the survey results.			x	x					Ongoing. The results of the survey will be used in combination with the results of the updated shade inventory to update the action plan.
6C	Use a variety of tools to convey riparian values to the general public (Annually).	Update retooled website with "key components" information from Riparian Outreach Plan.	x	x	x	x	x			Track number/content of updated materials to website. Document planting incentives (materials, trainings, etc.) provided to citizens.	Completed. A new TMDL web page has been created at https://www.cityofsalem.net/Pages/salems-plan-to-cool-streams-temperatures.aspx
		Compile updated information for streamside mailers, online ads, radio, presentations.	x	x	x	x	x				Ongoing. The City's streamside guide is a direct mailer sent to streamside homeowners annually. The mailer was sent in June 2020 to over 1,700 addresses. The City also uses radio and social media to provide information on riparian values and volunteer opportunities for tree plantings along streams.
6D	Continue/develop partnerships to share messages and leverage resources (Annually).	Assist with development and implementation of a local backyard habitat program.	x	x	x	x	x			Track progress made on habitat program, number of applications, partners, and participants.	On hold. Staff continued to assist the Marion Soil and Water Conservation District with the program where needed. However, this item is currently placed on hold by the district. In FY 2020-21, we will explore options for a Clean Streams Streamside Program.
		Continue to participate in MWOG and regional coalition.	x	x	x	x	x				Ongoing. Staff attend monthly MWOG meetings. The two culminating events are the annual Erosion Control Summit designed for construction professionals, agency staff, engineers, and operations staff; and the Water Festival designed for 4th and 5th grade students to learn about water-related urban issues. (ECS registration: 149 and Online Water Festival attendance: 1 class)
		Develop and implement streamside workshops for riparian landowners.				x	x	x			In progress. The FY 2018-19 survey to riparian property owners asks questions aimed to develop these workshops. A review the of the answers to the questions as well as project underway by the City for various degrees of erosion severity will help formulate the outline and content for future workshops. We have discussed hosting workshops with the Marion Soil and Water Conservation District.

		<p>6E Continue to support/promote weed control efforts of Salem-based volunteer groups (Annually).</p>	<p>Promote efforts by local volunteer groups by providing materials to the public during community events, utilizing social media and internal communications, and advertising their efforts and the associated benefits through other tools as the resources are available.</p>	x	x	x	x	x		<p>Ongoing. The Salem No Ivy Coalition provides education and assistance with ivy pulling in Salem parks.</p>
			<p>Pursue options to utilize volunteer weed removal services to supplement both public planting projects and efforts to assist private streamside properties.</p>	x	x	x	x	x	<p>Track advertising activities and all efforts associated with planting projects on public or private streamside properties.</p>	<p>Outreach: Hosted a booth at the Englewood Forest Fest: August 2020 Maintains a Facebook page that promotes invasive species removal: https://www.facebook.com/salemnoivycoalition/</p> <p>Ivy pulls: 1. No Ivy event was held with teens at Westminster Presbyterian City Camp. 2. Make a Difference Day at Englewood Park focused on ivy removal 3. Three additional events occurred at Englewood Park 4. Four individual volunteers removed English ivy throughout the year at Minto-Brown, Waldo, Wallace and other various locations.</p> <p>Totals: A total of 110 volunteers spent 486 hours pulling ivy and saving trees by cutting an ivy girdle.</p>

	<p>9. Support protection and enhancement of North Santiam River Watershed</p>	<p>9A</p>	<p>Provide mechanisms for the support and enhancement of the North Santiam River function.</p>	<p>Assist efforts with the North Santiam Watershed Drought Contingency Plan.</p>		<p>List efforts of coordination.</p>	<p>Ongoing. Salem provided a letter of support for a technical assistance grant for the Partners of the North Santiam (PNS), which was fully funded Jan 2020. PNS previously contracted with GSI Solutions who developed the Drought Contingency Plan and continues to work extensively with Salem on watershed planning. Grant funds will be used to hire a qualified consultant to facilitate communications and outreach to stakeholders, and identify and seek opportunities to increase diversity and commitment of stakeholder engagement; to align, integrate, and complete planning projects and facilitate implementation and coordination of watershed planning efforts conducted to date (including the North Santiam Drought Contingency Plan and the Partners of the North Santiam Watershed Resiliency Action Plan); and to identify any gaps or missing components to existing administrative frameworks and action plans that should be addressed. The Santiam Water Control District was awarded a Bureau of Reclamation WaterSMART grant that will help develop a unified outreach strategy for both the PNS efforts and for the Drought Contingency Plan implementation efforts within the Watershed.</p> <p>Salem, NSWC and Marion County held the North Santiam Basin Summit in April 2020. The summit celebrated 10 years of North Santiam Summit successes.</p>
<p>Other: Streambank erosion</p>	<p>10</p>	<p>10A</p>	<p>Assist with identifying potential causes to erosion concerns</p>	<p>Perform hydromodification analysis and develop remediation plan to address erosion issues along Goldcrest Brook.</p>		<p>Track activities and efforts associated with efforts along Goldcrest Brook.</p>	<p>Ongoing. In FY 2019-20, the City received results from a hydromodification analysis of the Goldcrest Brook catchment in the Glenn-Gibson watershed. The study, performed by WEST Consultants, was in response to concerns regarding bank erosion and channel incision along the upper and lower portions of Goldcrest Brook. Results include hydraulic analysis and design/site recommendations for instream grade control, which may arrest further downcutting and, due to access constraints, may be installed by hand. This study also evaluated potential scenarios for increasing detention to more closely match pre-development hydrology. In addition to continued flow monitoring within this catchment, the City is exploring the feasibility of implementing these grade control and detention recommendations and will be contracting with WEST Consultants to present the results of this study to area residents and the Glenn-Gibson Watershed Council. City staff also performed riparian enhancement activities on a 600-foot reach of Goldcrest Brook, which contains jurisdictional wetlands. Enhancement activities comprised removal of blackberry and live staking locally harvested willow and wild rose.</p>

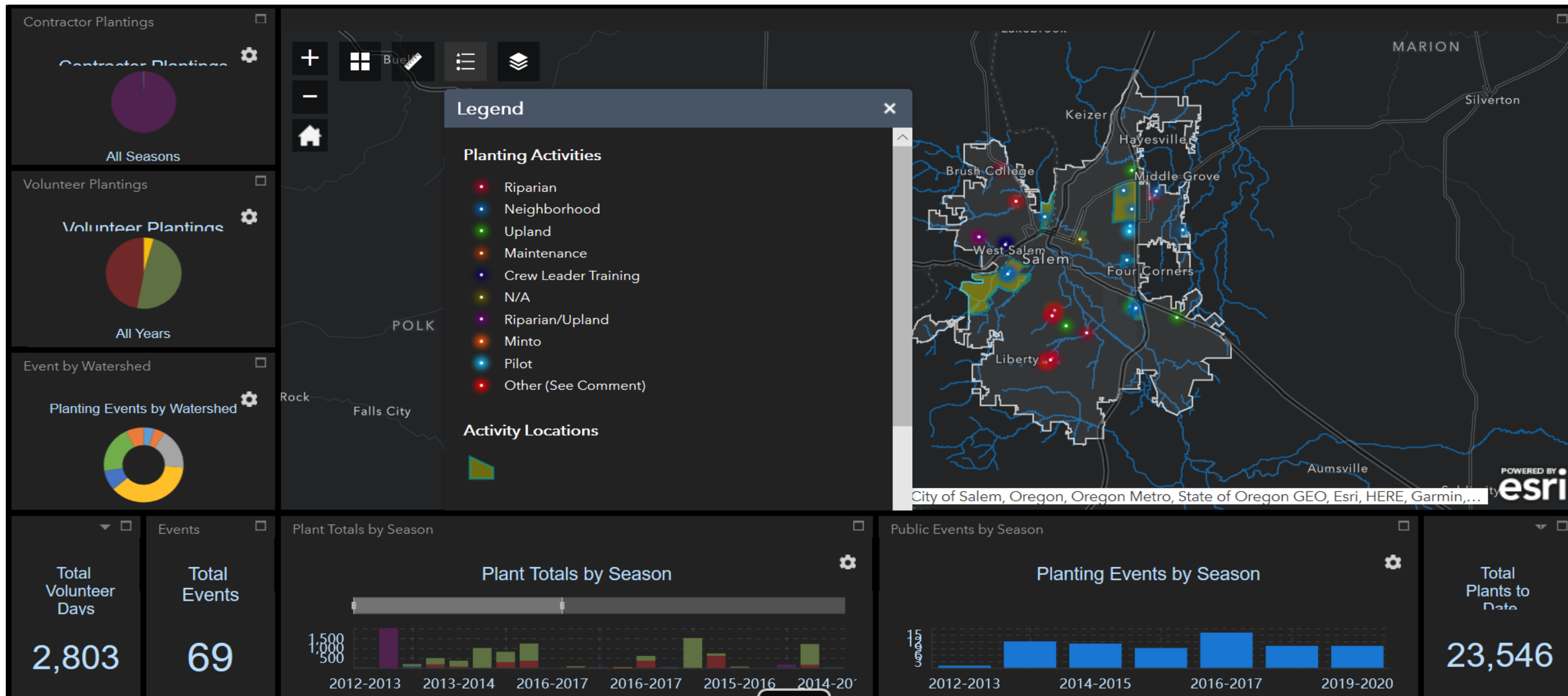


Figure 1: Dashboard showing the locations, numbers, and plant species planted per year since the City of Salem began contracting with Friends of Trees to increase the riparian and urban canopies.

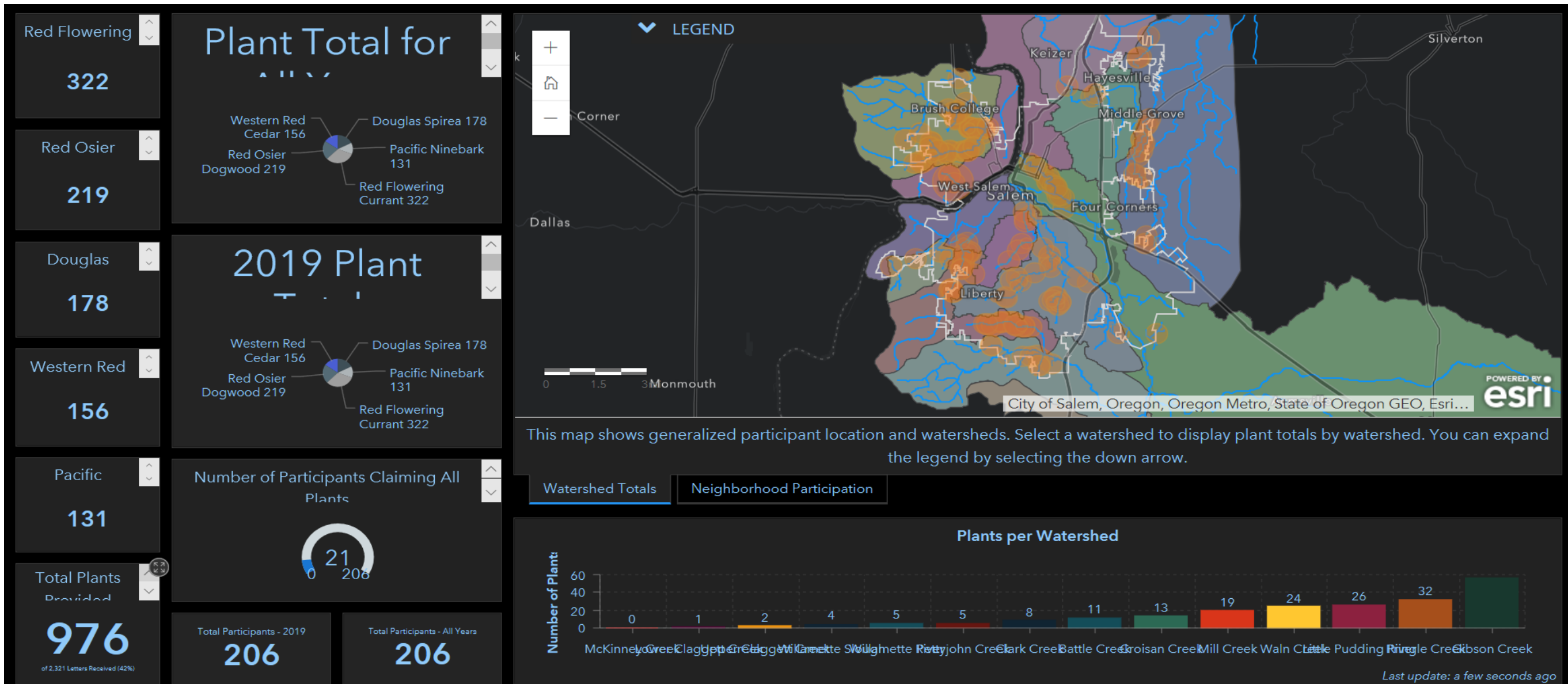


Figure 2: Dashboard showing the plant species, number, and approximate locations of the free tree program.