



Greenway Restoration, Establishment & Maintenance

Problem Statement

Tigard’s Strategic Plan envisions a walkable city and recognizes the value of the City’s greenways.

Tigard’s surface water system combines built infrastructure and open natural drainages. The system relies heavily on stream corridors for conveyance of both natural flows and increased runoff resulting from urbanization. Many stream segments in Tigard have public greenway corridors associated with them, which the City values as an integral component of its trail and parks and recreation system. Many of Tigard’s sanitary sewer pipes also are located in stream greenways.

When open natural drainages and greenways are healthy, they provide water quality enhancement along with effective stormwater conveyance.

A preliminary analysis shows that Tigard

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Greenway Zone	Current	Goal
Stream	<ul style="list-style-type: none"> Remove debris Install & maintain beaver deceivers Notch channel spanning logs Install small woody material, beaver analogs, Envirolok bags 	<ul style="list-style-type: none"> Continue current activities
Stream Bank	<ul style="list-style-type: none"> Place small woody debris to move flows away from eroding stream banks Install beaver analogs Install Envirolok bags (dams, stream bank protection) Report illicit discharges 	<ul style="list-style-type: none"> Continue current activities Place rock for erosion protection when needed Plant native cuttings Manage vegetation Inspect for animal activity Integrated Pest Management for nutria and other pests (Clean Water Services (CWS))
Sanitary Sewer	<ul style="list-style-type: none"> Brush to provide access to manholes Inspect manhole seals 	<ul style="list-style-type: none"> Continue current activities
Trail	<ul style="list-style-type: none"> Remove hazard trees Remove obstructions Brush for trail clearance (4x per yea) Leaf blowing (10x per year) Clean trail surface Resurface trail 	<ul style="list-style-type: none"> Continue current activities Spot spraying Mitigate roots Patch pavement
Shoulder	<ul style="list-style-type: none"> Remove hazard trees Spot spraying Mow shoulder next to trails 	<ul style="list-style-type: none"> Continue current activities Replant shoulder with low-lying native plants
Natural Area	<ul style="list-style-type: none"> Spot spray every two years to remove invasive plants Remove hazard trees Code enforcement 	<ul style="list-style-type: none"> Continue current activities Thin dense native plantings (resulting from CWS standards)

Problem Statement, Continued

has approximately 550 acres of greenway in designated parks and in unofficial open space on public property adjacent to streams. Some of these are currently managed and some are not. Despite the importance of the open natural drainages and greenway corridors, the City has not developed or funded a coordinated management plan for them.

A coordinated management plan focused on native plant communities could be cost-effective. Native plants hold the soil, provide shade for cooling, reduce erosion, and provide habitat for native animals. The cost to maintain a healthy, native plant community is relatively small once plants are established. Many acres within the City are already in a condition that requires minimum effort to maintain. However, many more acres will require restoration of native plant communities. Tigard does not have an ongoing program to rehabilitate portions of greenways that are overgrown with weeds to a healthy sustainable condition.

The City's current activities and goals for greenway management are described in the table on the front. Maintenance activities are categorized by zone. Management responsibilities are shared between the sanitary, parks, and stormwater divisions depending on which piece of infrastructure requires maintenance. That means the City could send three different crews to the same area to perform similar work.

Recommendation

Develop a coordinated maintenance plan with management goals for publicly-owned greenway segments. Balance the needs for water quality, habitat, and conveyance functions of the channels with the transportation, recreation, and utility uses of the corridors, and equitably distribute the costs and benefits among the Public Works divisions – Parks, Wastewater, and Stormwater.

Build upon data collected for the Stormwater Master Plan to identify a level of service need on each property and develop decision-making criteria for evaluating conditions. The plan should describe activities, frequency, and responsibility.

Review the role of the newly-formed "Green Team" and how the team might be best utilized to perform greenway restoration, establishment, and/or maintenance activities.

Plan for a partnership with Clean Water Services (CWS) to develop an annual program to install light touch grade controls using natural materials (see photo at right) to stabilize stream channels. Work with a CWS geomorphologist to properly train City staff.

Develop an annual riparian restoration program to rehabilitate those segments of greenway which are overgrown with invasive species or where native vegetation has grown too thick.

Cost Estimate

A detailed GIS analysis was performed to delineate public parks and greenspace limits that would likely be managed as natural area and to estimate the current condition.

The cost estimate below is for approximate costs for restoring, establishing, and then providing long-term maintenance of the City's public greenway areas for the next 20 years. Annual costs assume restoration will occur in the first five years, establishment would occur during the first ten years, and then long-term maintenance would occur on all public greenway spaces for 20 years.

Ongoing Costs		Recommended Budget		
Greenway Restoration		\$1,150,000		
Vegetation Establishment		\$900,000		
Long-term Greenway Maintenance		\$3,900,000		
Project Administration, 15% of Services		\$890,000		
<i>Ongoing Budget by Year</i>				
Ongoing Annual Budget (Years 0 to 5)		\$585,000		
Ongoing Annual Budget (Years 6 to 10)		\$320,000		
Ongoing Annual Budget (Years 11 to 20)		\$220,000		
One-time Costs				
Item	Qty	Unit	Unit Price	Total
Professional Services	1	CONTRACT	\$50,000	\$50,000
Project Administration, 15% of Services				\$7,500
One Time Total				\$57,500



Tigard crew installing light touch grade control using "sticks in the creek"

