

APPENDIX I OPERATIONS, MAINTENANCE, AND MONITORING PLAN

1.0 Overview

This O&M Plan is intended to provide guidance to City staff and community partners regarding ongoing management of built-out portions of the Yreka Creek Greenway network, including Yreka and Greenhorn Creek corridors, smaller tributary stream corridors, and various connecting trails and “green infrastructure” storm drainage facilities. A summary is provided below, and a table of responsible parties, tasks, and schedule is attached.

2.0 Operations

2.1 Public Use

The Yreka Creek Greenway network is intended to provide day-use non-motorized trail-oriented recreational and transportation opportunities along those Greenway segments where trails are included. Permitted uses include:

- Walking and jogging, including with strollers
- Wheelchair use, including electric
- Cycling
- Rollerblading, skateboarding, and scooters
- Dogs on-leash
- Picnicking
- Nature study and interpretation of natural and cultural resources

Prohibited uses include:

- Motorized use (except electric wheelchairs)
- Horseback riding (except in Upper Greenhorn Park)
- Dogs off-leash (except in designated areas)
- Camping
- Fires and fireworks
- Hunting and discharging of firearms
- Fishing (except in Greenhorn Reservoir)
- Gold panning (except recreational panning in designated areas)
- Gold dredging and other forms of excavation
- Disturbance of native vegetation and cultural sites
- Release of cats, waterfowl, fish, or other pets
- Feeding of wildlife (except ducks and geese at Upper Greenhorn Park?)
- Alcoholic beverages (except in association with picnics and sanctioned events)
- Illegal drugs
- Smoking (except in designated areas)
- Littering
- Panhandling
- Extended loitering and sleeping on picnic tables and benches

2.2 Public Safety

Security operations along all Greenway segments may include:

- Posting of Greenway regulations at all trailheads
- Placement of prohibited use stickers on selected trail sign posts
- Daily patrolling along trails and at parks (by car, quadcycle, bicycle, or on foot)
- Daily gating of MS Title spur trail, Greenhorn Park, etc.
- Surveillance cameras along trail at I-5, Center Street, and N Hwy 3 Bridges
- Surveillance cameras at public schools that cover nearby public trails
- Surveillance cameras at participating private businesses near public trails
- Strict enforcement of Greenway regulations, especially regarding transients
- Safety suggestions for using Greenway trails alone

Emergency operations include:

- Police and ambulance access along primary and secondary trails
- Fire truck access via adjacent roads, parking areas, and businesses

2.3 Storm Water Facilities

Streams with restored floodplains are intended to do the following:

- Contain runoff from large storm events within greenway corridors
- Slow down, filter, and infiltrate runoff from culvert outfalls

Constructed bioswales and retention basins and restored seasonal drainages are intended to do the following:

- Intercept, slow down, filter, and infiltrate runoff from small storm events
- Help the City achieve compliance with MS4 water quality requirements (City of Yreka Phase II MS4 Permit Implementation Plan Sections E.11.i, E.11.j, E.12.i, and E.15.a)

Storm drain inlets that have been retrofitted to re-water seasonal drainages are intended to do the following:

- Bypass runoff from small storm events into restored seasonal drainages
- Continue to intercept and convey runoff from large storm events in underground storm drains

2.4 Fish, Wildlife, and Plants

The fisheries component of the Greenway network is intended to provide the following:

- Salmon and steelhead passage, spawning, and rearing habitat
- Continued recreational fishing in Greenhorn Reservoir following fish ladder installation, with catch-and-release of salmon and steelhead and catch-and-keep of adipose-fin-clipped hatchery trout other fish species present (bass, bluegill, etc.)

The wildlife and plant components of the Greenway are intended to provide the following:

- Active beaver colonies as appropriate to maintain/enhance related fishery and wildlife benefits without compromising road crossings and storm drainage
- Increased native wildlife and plant abundance and diversity
- A network of urban wildlife corridors through town

3.0 Maintenance

Tasks are to be performed by Public Works Department (PW) unless indicated otherwise. Other participating entities include the Police Department (PD), Siskiyou Gardens, Parks, and Greenway Association (SGPGA), California Department of Fish and Wildlife (CDFW), U.S. Fish and Wildlife Service (USFWS), Caltrans, Siskiyou County Agriculture, Animal Control, and Sheriff Departments, and the Shasta Valley RCD (SVRCD).

3.1 Public Use Facilities

Most public use will occur between April and November, which is when most non-storm related maintenance will need to be done.

Trailheads:

- Empty trash/recycle receptacles and pick up trash 2-5x/week during season
- Clean/restock bathrooms 2-4 times/week during season
- Remove outdated/unauthorized flyers/ads on kiosks monthly during season
- Sweep parking areas, decks, and walkways monthly during season
- Prune any encroaching vegetation as needed during season
- Close/winterize bathrooms during the off-season
- Shut-off/drain drinking fountains during the off-season
- Slurry-coat asphalt and re-stripe parking every 5 years as funding allows
- Repair or replace damaged site furnishings as needed and funding allows

Trails:

- Open/close gates daily at MS Title as required by them until deemed unnecessary
- Pick up litter along trails 1-2x/month during season (with help from SGPGA)
- Prune vegetation along all trails 1-3x/season, esp. blackberries (with SGPGA)
- Sweep trails once a year (in early spring)
- Remove transient camps and related trash/debris after cleared by Police Department
- Clean off debris after low-lying trail segments have been inundated
- Repair/slurry-coat asphalt trails approximately every 5 years as funding allows
- Repair/replace concrete trails in high-velocity flood areas if damaged
- Repair or replace damaged signs, benches and picnic tables as needed

Trail Bridges:

- Inspect bridges annually
- Repair bridges as needed

Float Aside Boardwalks:

- Re-set planks after high flows wash them aside
- Repair/replace wheel curbs if damaged
- Replace boardwalk planks if needed

3.2 Public Safety

- Maintain primary and secondary trails in drivable condition
- Inspect/service surveillance cameras as needed (Police Department)
- Reduce vegetative fuels and maintain sight distance along trails as needed

3.3 Storm Water Facilities

- Remove flood-borne trash from creeks and floodplains after high flows
- Remove flood-borne logs/debris from culvert inlets and bridge piers after high flows
- Remove beaver-placed woody materials from culvert inlets as needed
- Move beaver dams slightly upstream from culvert inlets using PAWS (Pole And Wattle Structures) if needed (with USFWS assistance)
- Cut/spray blackberry thickets annually where needed to maintain floodplain function
- Remove sediment below bridges/box culvert outlets as needed (with Caltrans)
- Remove sediment within 3 large attenuation basins (incl. Greenhorn) as needed
- Remove litter from bioswales/retention basins as needed (with SGPGA/schools)
- Clean out small retention basin outlet vaults after high flows
- Clean out seasonal drainage bypass structures after high flows
- Remove/re-install splashboards at Greenhorn fish ladder seasonally to provide attenuation capacity in Reservoir during the wet season (with CDFW assistance)

3.4 Fish, Wildlife, and Plants

Fisheries:

- Adjust splashboards at Greenhorn fish ladder seasonally to augment base flows during dry season (with CDFW assistance)
- Augment spawning gravel downstream from Greenhorn Dam as needed (CDFW)
- Notch large beaver dams during salmon runs for fish passage as needed (CDFW)

Wildlife:

- Wrap trees with wire screen to prevent beaver damage when needed (SGPGA)
- Remove feral cats as needed (County Animal Control)
- Remove non-native ducks and geese at Greenhorn Reservoir as needed (CDFW)

Propagated Native Plants and Cuttings (via contract with SGPGA pending funding):

- Water once a week during hot portion of dry season until well-established
- Weed around plants once a month until plants are well-established
- Re-shape watering basins once a month until plants are well-established
- Replace dead plants as encountered
- Install additional grazing exclosures (deer fencing) when needed
- Remove grazing exclosures after plants are well-established

Invasive Plants (spraying via County Ag and/or contractor pending funding; pulling and replanting via County Sheriff inmates, SVRCD, and SGPGA volunteers and/or contract pending funding):

- Cut/spray blackberries annually where needed
- Plant native riparian trees/shrubs to shade out blackberries as opportunities allow
- Pull dyer's woad (Marlahan mustard), teasel, poison hemlock, star thistle and puncture vine as opportunities allow during growing season
- Spray white-top, Canada thistle, and Italian thistle where needed

4.0 Monitoring

A streamlined monitoring program is included in the O&M Plan in order to provide valuable management information while also keeping staff time and costs to a minimum. Tasks are to be performed by the indicated entities, including Siskiyou Gardens, Parks, and Greenway Association (SGPGA), California Department of Fish and Wildlife (CDFW), U.S. Fish and Wildlife Service (USFWS), NOAA Fisheries, Klamath National Forest (KNF), and Shasta Valley Resource Conservation District (SVRCD). Monitoring components are summarized below.

4.1 Public Use

- Count cars at trailheads if data is needed
- Use laser counting devices along trails if data is needed and funding allows

4.2 Public Safety

- Refer to police and fire department records
- Refer to recent surveillance camera data when useful (data not stored long-term)

4.3 Storm Water Facilities (via SVRCD and SGPGA, pending funding and volunteers)

- Monitor flows via stream gauges on Yreka/Greenhorn Creeks, calibrated every 5 weeks
- Monitor water temperature using "Tidbits" at various locations, checked every 2 months
- Monitor "first flush" runoff above/below specific areas once/year
- Monitor high flows, erosion, and sedimentation via observations and photos

4.4 Fish, Wildlife, and Plants (via SGPGA, pending funding/volunteers, except as noted)

- Monitor vegetation changes via photo-points, with photos taken once per year
- Monitor precipitation (as part of educational programs at schools)
- Monitor salmonids via seasonal stream surveys and redd counts (NOAA Fisheries, USFWS, CDFW, and KNF)
- Monitor wildlife species at schools via observations, track plates, motion cameras

5.0 Staffing

A partnership approach is envisioned for ongoing operations, maintenance, and monitoring of the Yreka Creek Greenway. Partnerships could be formalized by Memoranda of Understanding (MOUs), leases, easements, or via informal agreements, depending on the particular nature of each partnership. Roles of existing and potential partners are summarized below.

5.1 City. The City of Yreka is the lead agency responsible for the Greenway, with staffing to be provided through the Public Works Department and Police Department. The City may also recruit and oversee a trailhead host who will seasonally reside in an RV at the Deer Creek Trailhead, and a park host who may seasonally reside in an RV at Upper Greenhorn Park.

5.2 SGPGA. The Siskiyou Gardens Parks and Greenway Association is a local non-profit organization that has been active in doing the following:

- Recruiting/overseeing volunteers to assist the City in Greenway-related tasks
- Providing grant writing services to assist the City in obtaining Greenway funding
- Obtaining and administering grants to fund project directly undertaken by SGPGA
- Propagating native plants for the Greenway at its Siskiyou Arboretum

5.3 SVRCD. The Shasta Valley Resource Conservation District has provided staffing to assist with vegetation maintenance, invasive species removal, vegetation and water quality monitoring, grant writing, and project administration. The SVRCD and SGPGA will closely coordinate and share in accomplishing various Greenway-related tasks.

5.4 County Sheriff. The County Sheriff's Department has provided a supervised County inmate crew to assist with vegetation maintenance along the Greenway.

5.5 Public Schools and Office of Education. It is anticipated that the following educational facilities assist in the ongoing maintenance of their respective storm drainage and trail facilities associated with the Greenway network, and that their instructors and students will participate in ongoing maintenance and monitoring to take advantage of associated educational opportunities:

- Yreka Union School District has worked with SGPGA to complete a bioswales project at Evergreen School, and is interested in pursuing similar projects at Jackson Street and Gold Street Schools.
- The Siskiyou County Office of Education is considering participating in the Evergreen and Jackson Street bioswales projects, and on an included paved trail that will link these schools with County facilities and Yreka Creek.
- Yreka High School is interested in a network of bioswales, retention basins, and trails on its campus, with a trail and bioswale link through the Community Center property to Yreka Creek.
- College of the Siskiyous has an opportunity to participate in a bioswale and trails project that would link its Yreka campus to Greenhorn Park.

5.6 Government Facilities. Opportunities exist for various government agencies to participate in storm drainage maintenance at the following facilities:

- Siskiyou County: Planning, Behavioral Health, and Emergency Services facilities along Yreka Creek; Fairgrounds facilities along Yreka and Juniper Creeks; Public Works facility along Sharps Road; Juvenile Hall facility along Sharps Road; recycling facility along Ranch Lane; STAGE facility along Oregon Street; and County Library next to City Hall.
- Caltrans: Service Center along Main Street.

- Department of Fish and Wildlife: Screen Shop along Ranch Lane.
- Klamath National Forest: Service Center along Yreka Creek.

5.7 Regulatory Agencies. Biologists from various state and federal agencies have been involved in stream surveys (wading and snorkeling), redd counts, electroshocking, out-migrant trapping, beaver dam notching for fish passage, and bird surveys along Yreka and Greenhorn Creeks, and it is anticipated that they will continue to do so. Agencies involved include:

- California Department of Fish and Wildlife
- California Conservation Corps
- AmeriCorps
- Klamath National Forest
- NOAA Fisheries
- U.S. Fish and Wildlife Service

It is also anticipated that CDFW will provide adipose fin-clipped trout for the recreational fishing program in Greenhorn Reservoir. An electronic fish counter could also be installed and operated by CDFW at the Greenhorn Dam fish ladder.

5.8 Participating Private Businesses. Various private businesses located along Yreka and Greenhorn Creek and/or having onsite bioswales and retention basins could be recruited through a business partners program overseen by the City and/or SGPGA to assist in maintaining those portions of Greenway facilities located on or near their properties.

5.9 Participating Private Residential Landowners. A similar partners program could be initiated for private landowners who choose to participate in restoration of backyard ephemeral drainages. These restored drainages will be a part of their residential landscapes and could be managed as such, with guidance from the City and/or SGPGA.

6.0 Schedule

An O&M Schedule is provided at the end of this Plan.

7.0 Costs

Costs will vary depending on the extent of involvement of each partnering entity and the extent of Greenway build-out.

8.0 Funding

Funding for O&M is not usually covered by grant funding. A very notable exception is that DWR included \$200,000 in the FHR grant for creation of an endowment fund for ongoing non-structural flood hazard reduction maintenance, which will primarily involve ongoing Himalayan blackberry removal. The City would like to add to this endowment fund over time in order to cover other Greenway O&M costs, and will be encouraging contributions from the local community.

As the Greenway network becomes larger and more complex over time, it may become necessary to pursue additional ways to fund O&M. Options include:

- SGPGA could evolve into having a paid staff, which would greatly increase its capacity to coordinate other partners, recruit and oversee volunteers, conduct grant writing and other forms of fund raising, administer grants and other funds, and directly implement Greenway-related projects like the Evergreen School Bioswales Project.
- The community could pass a measure to create a Parks and Recreation District, which in turn would provide staffing to manage the Greenway and various parks in Yreka. Funding for the District could include a local assessment as well as funds provided by the State and other sources (including developer fees).
- The City could initiate a storm water assessment that would pay for additional staffing, materials/supplies, and contracting for ongoing operations and maintenance of existing conventional storm water infrastructure within the City to satisfy MS4 requirements, thereby greatly reducing the burden of maintaining Greenway-related stormwater facilities.
- The community could support the City in including operations and maintenance of new Greenway-related stormwater facilities in the storm water assessment. This would include restored floodways along creeks, thereby ensuring continued flood hazard reduction benefits, as well as including bioswales, retention basins, seasonal drainages, and other forms of “green infrastructure.” Included facilities would be those that fall under City jurisdiction to maintain (i.e., on City property, rights-of-way, and drainage easements), in contrast to those facilities that would be the responsibility of others to maintain (including Caltrans, schools, and private landowners).