6.3.4 Type E Nodes

Antelope Creek at Johnson Springview & Antelope Creek Parks

Antelope Creek passes through Antelope Creek Park in within the city of Rocklin. In this area, Antelope Creek Park combines with Johnson Springview Park to form a regional recreational center. Johnson Springview Park contains baseball, soccer, and field hockey fields as well as a skatepark and tennis courts. Antelope Park includes several multipurpose, unpaved trails that parallel the creek (Figure 6-35). In between the two parks is a Frisbee golf course, set amidst native oaks. Drainage is handled above ground in vegetated swales in both of these parks.



Figure 6-35 Creekside Multipurpose Trail

At one location on the creek in Antelope Park, an informal pathway leads from the creekside unpaved trail to the streambank, and continues on the opposite bank near a private residence. The streambanks are riprapped with stone at this location. A sewer line also crosses the stream at this location, presenting a barrier to migrating salmonids. Water was just spilling over the top of the pipe at mid-October flow levels (Figure 6-36). This pipe should be redesigned to improve fish passage.

The existing parking and facilities at Johnson Springview Park provide a primary access point to the Greenway in Rocklin. Existing signage may need to be enhanced to indicate the access points to the trails and the primary staging area. Interpretive signage could be added that explains the role of the creek in wildlife and aquatic habitat as well as a floodwater conveyance system.



Figure 6-36 Sewer Crossing on Antelope Creek

Secret Ravine at Loomis Regional Park

Loomis Regional Park provides access to Secret Ravine on both sides of King Road in Loomis. This park forms the upstream limit to the recommended Greenway potential recreation corridor on Secret Ravine. Provided the cities of Rocklin and Loomis and Placer County can negotiate easements to establish trails in this corridor, this park will function as the northernmost staging area on Secret Ravine for equestrian, bicycle and pedestrian access to the Greenway.

The park currently contains a concession stand, baseball fields, picnic areas with barbeques, porta-potties, unpaved trails and a bridge over the creek (Figure 6-37). A small sign adjacent to the bridge includes a calendar of events at the park. The parking lot has sufficient space for horse trailers, but is not currently striped for vehicles towing trailers.



Figure 6-37 Bridge Over Secret Ravine in Loomis Regional Park

Dry Creek at Royer Park

Royer Park, in downtown Roseville, provides an excellent staging area for the Greenway (Figure 6-38). An existing trail follows the creek for the length of the park, providing access to sports fields, turf grass areas, tennis courts, basketball courts, restrooms, parking lots and other amenities.



Figure 6-38 Dry Creek at Royer Park

The north end of this park is less than 500 feet from the new Roseville Civic Center and the revitalized downtown, providing easy access from this busy urban area via a pedestrian bridge over the creek.



Figure 6-39 Royer Park Creek View

Riparian habitat in this area is marginal (Figure 6-39). The west creek bank is partially riprapped north of Douglas Boulevard, and parking lots are paved to the top of the bank in some cases (Figure 6-40). The riparian band throughout the park is narrow, often from 10 to 20 feet in width, especially in the area discussed above, and trees are relatively sparse. The most that can probably be accomplished in the west bank areas that are encroached upon by pavement is the application of biotechnical bank stabilization techniques that incorporate woody vegetation.



Figure 6-40 Pavement Encroaching on Stream Bank

On the east bank of the stream, through most of the park, the path is separated from the stream bank by an approximately 10 foot strip of mown, unirrigated herbaceous plants, primarily annual grasses. Woody species could be planted in this area to improve riparian cover. As safety is often a primary issue in urban parks, these species might be limited to large trees and low shrubs less than three feet tall. The low shrubs would stabilize the top of bank and provide habitat for small animals, and the trees would improve shading of the surface of the stream and stabilize the banks with their root masses.

A large erosional hotspot is occurring south of Douglas Boulevard on the west bank of the creek where several hundred feet of bank is sloughing into the creek. This problem could be addressed by bank stabilization that includes recontouring. Restoration is currently planned along Dry Creek from Riverside Avenue to Adelante High School as part of the Roseville Creek and Riparian Management and Restoration Plan.

The paved trail is moderately used. This trail is approximately 10 feet wide, and is striped south of Douglas Boulevard (Figure 6-41). In 40 minutes spent walking the trail in the early afternoon on a weekday, four cyclists, six pedestrians including a youth with a fishing rod, two dog walkers, and two people using electric mobility scooters were seen using the trail. This usage would certainly increase if the trail extended upstream and downstream through the Greenway. The paved path turns to a dirt track several hundred feet north of Darling Way.



Figure 6-41 Paved Trail in Royer Park

Other Type E Nodes

Other Type E Nodes exist where the Greenway intersects with existing parks, such as along Clover Valley Creek at Sierra Gardens Park, Eastwood Park and Cirby Creek Park and Antelope Creek at Sunset East Riverwood Park. At these nodes, the Greenway will take advantage of existing facilities for staging areas to access the Greenway trails.

6.3.5 Signage

As indicated in the section on standards, signage within the Greenway consists of rules signs, interpretive signs and directional signs. Rules signs indicate what activities are prohibited within the Greenway, such as dogs without leashes, motorized traffic capable of speeds greater than 5 mph, or equestrians. Rules signs should be posted at nodes, trail intersections and jurisdictional boundaries. Penalties for noncompliance should also be indicated. Specific Greenway rules are up to the local jurisdictions to establish; however, cooperation between jurisdictions to adopt a standard set of rules may make enforcement easier.

Interpretive signs should be posted at larger nodes (type C and D), overlooks or areas of natural or cultural significance. These signs should focus on cultural and natural resources within the Greenway. Some topics might include native vegetation communities, wildlife and wildlife habitat, salmonids and fish habitat, Native American history and cultural sites, impacts of urbanization on the Greenway creeks, impact of beavers in the Greenway, changes to the landscape and creeks due to mining, geology of the area, and importance of the Greenway in the regional recreational system.

Directional signage should be located at all trail intersections and nodes. Signage should indicate directions to major destinations and distances and, in the case of intersections, which route follows the Greenway. Major destinations include city centers, FLSRA, Dry Creek Parkway, Ueda Parkway, American River Parkway, local and regional parks such as Maidu Park or Royer Park, and the end of the Greenway trail. Signage located at nodes should be appropriate to the node type; for example, nodes A and B might include directions to local parks and destinations, where nodes C and D might include directions and distances to more regional destinations. Additional directional signage could include mile posting signs to indicate distances from major trailheads or destinations.

Signs within the Greenway should have a common design element to distinguish them as belonging to the Greenway system. This element might include a logo, design shape and/or overall graphic design standard. Signs should meet ADA standards for readability, be mounted on sturdy supports, resist graffiti, be relatively easily replaced if damaged, and be theft resistant. Smaller directional and rules signs can be mounted directly on a post. Larger signs might be incorporated into kiosks, especially at nodes and interpretive sites.

Interpretive and rules signs should be constructed of metal framed high pressure laminate or other durable material and be vandal and graffiti resistant. The ZED embedded imagery process could be used in kiosk signs that are mounted on larger metal framed panels that protect the edges, since ZED is not as durable as HPL but preserves higher quality images. Mile markers and small direction signs should be made of painted or coated metal for durability.

Directional signage should be consistent with Caltrans standards.

6.3.6 Other Amenities

Other potential amenities with the Greenway include fishing platforms, picnic areas and overlooks. Fishing access along the creeks in the Dry Creek watershed is mostly informal. It is not the intent of this plan to restrict this informal access; however, if extensive,

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uncontrolled access can lead to increased erosion and sedimentation within the creek. This is a particularly sensitive issue in Dry Creek, Miners Ravine and Secret Ravine due to the presence of salmonids in these waters. Fishing access should be monitored locally by citizens groups, trail users and local jurisdictions, and if excessive bank degradation is noted, a plan should be developed to address the problem. This might include educating anglers, installing fishing platforms at popular locations, restricting bank access to designated areas, protecting banks by installing access trails or steps, planting native shrubs in problem areas, or installing bioengineering stabilization. Additionally, fishing platforms with paved access trails should be installed at larger nodes or other appropriate places along the creek to provide fishing opportunities to disabled anglers.

This plan does not specify locations for picnic areas within the Greenway. While they are an appropriate activity within the Greenway, they are likely to be collocated with nodes. Nodes C, D and E are appropriate for picnic areas, trash receptacles and benches. These amenities require regular maintenance and must be supported by the local jurisdiction's maintenance department. Picnic tables and benches should be should be vandal resistant, fire resistant, durable, easily cleaned and maintained, and anchored to the ground. Local maintenance districts are likely to have their own requirements; however, a standard adopted across the Greenway would provide consistency to the system. Readily available standard types such as the Wabash Valley Spyder series Y335 are rugged and mounted in-ground. This style, in a green perforated pattern, would be appropriate in a location surfaced in mulch, packed dirt or decomposed granite. Similar-style benches and trash receptacles are also available. In-ground mounts are preferable to surface mounts for unpaved areas because the concrete post anchors can be set several inches below-grade, which appears more appropriate in natural settings.

Overlooks should be placed along the Greenway at scenic locations. A scenic assessment was not conducted as a part of this Regional Vision, and should be performed prior to locating scenic overlooks. This assessment might include resident surveys to identify favored viewpoints as well as a photographic record of the Greenway. Areas identified for overlooks might be vista views or locations along the streams that have high scenic beauty. Overlooks could be combined with interpretive sites or picnic areas.

6.4 Habitat Improvements

One of the overall goals of habitat improvement in the Greenway is to create a healthy, connected riparian corridor along Dry Creek and its tributaries. This can be accomplished by both preserving existing valuable fish and wildlife habitats and enhancing degraded habitats. Current causes of habitat impairment in the area of fisheries management include²⁴:

- Reduction in and modification of riparian habitat leading to reduced cover and shading, reduced food supply, reduced in-stream structures for escape from predators and protection from flooding, increased bank and surface erosion, and reduced barriers to overland water runoff and chemicals,
- Predation and competition from introduced fish and habitat modifications,
- Invasive aquatic plants leading to reduced food supply, changes in predation and competition, and reduced dissolved oxygen supply,
- Impacts to the flow regime, specifically changes in timing and duration of peak flows, changes in total flow volume and velocity, changes in flow depth, potential increased bed scour, and impacts on spawning habitat and behavior,
- Existence and placement of barriers to fish passage due to beaver dams, water diversion structures, culverts, dams and other manmade structures,
- Changes in stream geomorphology, including channelization, bank stabilization, placer mining, flow regime modifications, etc.,
- Increased sedimentation due to stream channel modifications, flow regime changes, surface erosion increases, bank erosion increases, livestock, off road vehicles, horses, etc..
- Pollution of runoff water from roads, developed communities, commercial and industrial facilities, settled air pollutants, landscape care products, agricultural chemicals and improper use of household chemicals,
- Varying water supply and waste water impacts.

Factors leading to riparian and floodplain habitat degradation in the watershed include:²⁵

- Reduction in riparian and floodplain habitat area due to development,
- Modification of vegetation communities,
- Changes in flow regime,
- Increased bank erosion.

These primary factors of degradation, identified in the draft Dry Creek Watershed Coordinated Resource Management Plan (CRMP), can be directly translated into objectives for habitat improvement in the Greenway, as follows:

²⁴ ECORP, 2003.

²⁵ Ibid.

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- Increase riparian canopy cover, both over the stream channel and within the riparian zone,
- Restore floodplain area and habitat,
- Reduce populations and impacts of non-native fish species,
- Reduce populations and impacts of non-native invasive plants,
- Mitigate impacts of changes to the flow regime, through on-site, on-channel and offchannel detention.
- Mitigate impacts of barriers to fish passage, through redesign or removal of barriers,
- Restore or improve stream modifications through removal of bank armoring and restoration of channelized reaches,
- Decrease sedimentation in the stream channel through on-site detention including sediment basins, bioengineering approaches to bank stabilization, and reduction in access to the stream and streambank by livestock and off-road vehicles,
- Improve water quality through reduction in sedimentation and pollutants in runoff,
- Stabilize water supply and water supply demands through public education and reduction in water demand,
- Improve riparian canopy diversity, both in species and in vertical structure (healthy trees, shrubs and groundcover).

Some of these objectives, such as those involving improving riparian canopy, can be achieved through implementation of specific restoration projects on public land. These restoration projects might entail planting of vegetation to achieve the desired riparian community structure, improvement of in-stream habitat structure through placement of large boulders, recontouring of stream banks and/or replacement of bank armoring with bioengineering techniques such as vegetated geotextiles, restoration of channelized stream segments through realignment of the thalweg and recontouring of the floodplain, etc. Regardless of the techniques used, habitat enhancement in the Greenway must be done in a manner that balances the multiple beneficial uses in the Greenway, including recreation, flood water conveyance, wildlife and aquatic habitat, and others.

The overriding goal in restoration projects of this nature should be to understand the existing and most probable future hydrologic regime and geomorphic condition of the stream and develop a restoration plan in which the stream is hydrologically and geomorphically stable, ecologically healthy, and provides high quality habitat to fish, other native aquatic species, and wildlife.

Some of the above objectives, such as stabilizing the water supply and water supply demands, or decreasing pollutants in runoff, involve increasing public education and awareness. A directed public outreach campaign can work to educate watershed residents on the effects of homeowner actions on local creeks. Some of the major impacts of residential users on creek ecosystems include:

 Pollution from herbicides, pesticides and fertilizers carried in runoff from residential landscaping,

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- Importation of water into the watershed and increased runoff from irrigation to support high water-use landscaping, which disrupts the natural flow regime of the creeks (this includes discharge of wastewater and water treatment plants),
- Introduction of invasive non-native plants into the local ecosystem,
- Increase in runoff through increasing impervious surfacing as development of an area occurs,
- Litter, illegal dumping, and discharge of chemicals used in car washing.

The goal of public outreach and education is to increase awareness of the likely negative behaviors, reduce the occurrence of these behaviors and increase public stewardship for the waterways and watershed.

Strategies to preserve and enhance riparian and aquatic habitat must be different for private land than those undertaken on public land. Public education and outreach can be effective at improving habitat on private land. In addition to the above education objectives, private landowners that own property along the creeks can be encouraged to preserve and restore native vegetation within the riparian zone. Increasing public awareness on existing regulations and the value of maintaining healthy riparian vegetation in reduced erosion, improved aesthetics, potentially reduced insect pests, and other benefits may lead to improved stewardship.

Incentive programs may be considered for restoring riparian vegetation and degraded streambanks. Incentives could take the form of tax credits, financial assistance, development credits, professional advice, or other county and/or city sponsored programs. As development continues to occur in the watershed, preservation and restoration of riparian areas can be tied to conditions of approval.

All of the local jurisdictions within the Dry Creek Greenway have adopted regulations protecting native oaks trees, although Roseville and Placer County include exemptions for single-family residential properties. Table 6-5 summarizes the existing regulations within Placer County and city jurisdictions for preservation of oak trees and riparian vegetation. These preservation ordinances help to protect healthy oak trees. Loomis and Placer County regulations extend protection to other large native trees, and Placer County regulations protect riparian zones as well. These regulations do not mean that native trees will necessarily be preserved, but that a tree permit is required to take or damage a protected tree. Extending these regulations to protect healthy native trees within the riparian zone would help preserve stream corridor habitats for those jurisdictions that currently only protect native oaks, as would requiring individual homeowners to obtain permits for work within the riparian zone that may impact valuable vegetation.

Table 6-5 Tree Preservation Ordinances in the Dry Creek Watershed

	Trees protected	Exemptions	Additional Notes	General Mitigation Requirements
Roseville	Native oaks 6" DBH (single trunk or total of multiple trunks)	Health and safety issues, Public utilities operations, single family and two-family residences	Permit is required to remove or harm protected tree or to work within the dripline.	Inch for inch replacement using #15 size trees. A minimum of 50% shall be native trees, while up to 50% may be non-native. On-site replacement is preferred alternative but developer can relocate trees, implement a revegetation plan, or pay in lieu fees.
Rocklin	Oaks trees with 6" DBH single and aggregate multistemmed.	Dead or dying trees on undeveloped single family lots.	Permit is advisory for single family, duplex and triplex, but removal must be mitigated. Removal on mutlifamily, commercial and industrial LU and undeveloped land is subject to approval and mitgation.	Two #5 size native oak trees for each tree removed, five #5 size native oak trees for removed heritage trees (oaks w/ DBH > 24"), or payment of in lieu fees.
Loomis	Heritage trees defined as: 1) Native oaks 6" diameter measured at narrowest diameter below 1st major branch, not to exceed 4' above the ground, 2) Any tree, excluding eucalyptus, alder, cottonwood, foothill pine & willow with 18" diameter measured as above, 3) Trees designated by council resolution.	Health and safety issues, Public utilities safe operation, (no single family exemption)	Permits required to remove, endanger, move or destroy trees.	
Placer County	1) Protected trees defined as native california species 6" DBH for single trunk or 10" aggregate DBH for multiple trunk, excluding foothill pine 2) Any tree in a riparian zone defined as within 50 feet of intermittent stream or 100 feet of perennial stream, regardless of size, 3) Removal of more than 50% of trees on-site of any size.	- Health and safety issues, - Commercial tree removal lots, - Agricultural land, - Single family residential lots, - Commercial firewood cutting of less than 2 cords, - Routine repairn and maintenance of County roads and public works dept.	Tree Permit or Minor Tree Permit required.	Inch for inch replacement using #15 size trees (50% similar native tree), implementation of a revegetation plan, payment of in lieu fees.