

9.0 COST ESTIMATE

Full implementation of the Dry Creek Greenway Regional Vision potentially includes a variety of components including development of the trail system and associated infrastructure, habitat conservation and restoration, public education, and expanded stewardship opportunities. This chapter only addresses the estimated implementation costs for the trail system and related improvements because 1) the trail system component is clearly defined, 2) reliable costing information for comparable improvements is available, and 3) local jurisdictions may wish to use the information for future planning and grant writing efforts. The costs associated with implementing the other components of the Greenway vision cannot be estimated at this time since the vision document does not address the myriad possibilities and specific details for how the habitat conservation and restoration, public education, and stewardship projects could be implemented. While suggested measures are provided, the methods for implementation of these measures will be driven by the preferences and availability of resources of the local jurisdictions.

The trail system costs include estimates from Placer County (Table 9-1), the City of Roseville (Table 9-2), and the Town of Loomis (Table 9-3) taken from existing regional and master bicycle plans, and the costs for trails recommended in the Greenway vision that aren't included in existing plans (Table 9-4). The planned trail segment along Secret Ravine within the City of Rocklin is included in the Placer County estimate. The intent of Table 9-4 is to capture costs for Greenway improvements that are not included in existing plans. This includes construction of bikeways for trails recommended by the Greenway Vision as well as costs for all nodes and trail signage along planned and recommended segments. In some cases, costs for bridges and road crossings have been included in Table 9-1 through Table 9-4, if these have been estimated in existing plans; otherwise, they have been specified as TBD.

This estimate does not include the cost of maintaining trails or staging areas, which is a significant funding requirement that must be secured prior to constructing these amenities. This estimate is an approximation in c. 2003 dollars for the cost of implementation and does not include increases in land valuation or construction of site amenities beyond those listed in the spreadsheets presented in Table 9-1 through Table 9-7.

Two scenarios are presented in the Greenway Cost Summary (Table 9-5) and included in the overall Summary of Estimates (Table 9-6). These scenarios differ in the approach to obtaining access to private property for recommended trails (trails not currently proposed in existing City, Town or County plans). The first assumes fee-title purchase from willing property owners of those parcels through which the trail passes. The second scenario assumes that easements can be acquired for the recommended trails. The per-acre price of land is assumed to be approximately the same in both scenarios since the land under consideration is in the floodplain and construction is restricted in this area. This means that the cost of the easement is equal to the cost of the land on which it lies. The actual costs will probably fall somewhere in between these two estimates, since some parcels are likely to be acquired by fee-title and others by easement. This is reflected in Table 9-6 which averages the fee-title and easement estimates.

Table 9-7 shows a cost breakdown of the various node types, including specific site amenities. The unit costs used have been compiled from either actual costs of similar elements in projects that have been built or are under construction or from manufacturer estimates. Five types of nodes have been identified as part of the Greenway vision.

Type A nodes are small neighborhood access points, generally located within neighborhood greenways or open space or where the Greenway passes through residential neighborhoods. Type A nodes will typically have signs designating the Greenway, trail rules, and/or a map of the trail system. Parking is not included.

Type B nodes are community access nodes and are similar to Type A, with the addition of 5-10 parking spaces.

Type C nodes are medium-sized community access nodes. They offer signs, 10-20 parking spaces, access to equestrian trails, and some amenities such as benches or trash receptacles.

The largest nodes are Type D. These nodes are intended for staging areas, rest areas and regional access. Type D nodes have plumbing and a pre-fabricated restroom. Amenities at a Type D node include a drinking fountain, benches, tree plantings, and additional signage, perhaps within a kiosk structure and containing educational information on the Greenway system.

Type E nodes occur where Greenway access points coincide with developed parks. The parks are expected to provide the amenities described for a Type D node, but additional interpretive elements will be added to reflect the junction with the Greenway.

The summary of Greenway costs is presented in three phases. Phase one includes all trails and associated amenities required for construction of the main bikeway connection from the Dry Creek Parkway to the Folsom Lake State Recreation Area. This corridor follows Dry Creek, Cirby Creek, Linda Creek and a tributary to Linda Creek named Swan Stream from the Sacramento County line to the powerline corridor between Sierra College Boulevard and Roseville Parkway. East of this powerline corridor, the Greenway connects to a County off-street bikeway that follows a public easement through the Baldwin Reservoir area to FLSRA. Phase two consists of trail segments running north from the Dry Creek-Cirby Creek confluence to the Secret Ravine/Miners Ravine confluence. From that point, one branch follows Secret Ravine to Rocklin Road and the other follows Miners Ravine to Sierra College Boulevard, eventually connecting the Greenway to the FLSRA along Douglas Boulevard. Phase three includes many smaller segments of bike and equestrian trails that connect trails constructed in phases one and two to neighborhood bike routes, northern Placer County, and on-street bike trails. Figure 9-1 shows the Greenway corridor phasing plan.

There are a total of 8 nodes in Phase 1 as follows: 2 Type A neighborhood access nodes, 4 Type B small community access nodes, 1 Type C medium community access node and 1 Type D regional access node. A Type D node is the most expensive at approximately \$100,000, and a Type A node is the least expensive at \$1,100. Some segments of phase one trails are currently planned or under construction as part of residential developments along Dry Creek. Segments known to be in some phase of construction, such as that associated with the Morgan Creek development, were not included in the estimates.

Eight nodes are included in Phase 2: 5 Type A, 1 Type C, 1 Type D and 1 Type E. Trails along Antelope Creek, the upper portion of Secret Ravine Creek, Cirby Creek, and

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Clover Valley Creek are all included in phase three. A total of 19 nodes are included in this phase: 11 Type A, 2 Type B, 2 Type C and 4 Type E.

Watershed Boundary

Nodes

- A - Neighborhood Node, no parking
- B - Local Node, parking
- C - Equestrian Node
- D - Regional Node, parking, facilities
- E

Greenway Phasing

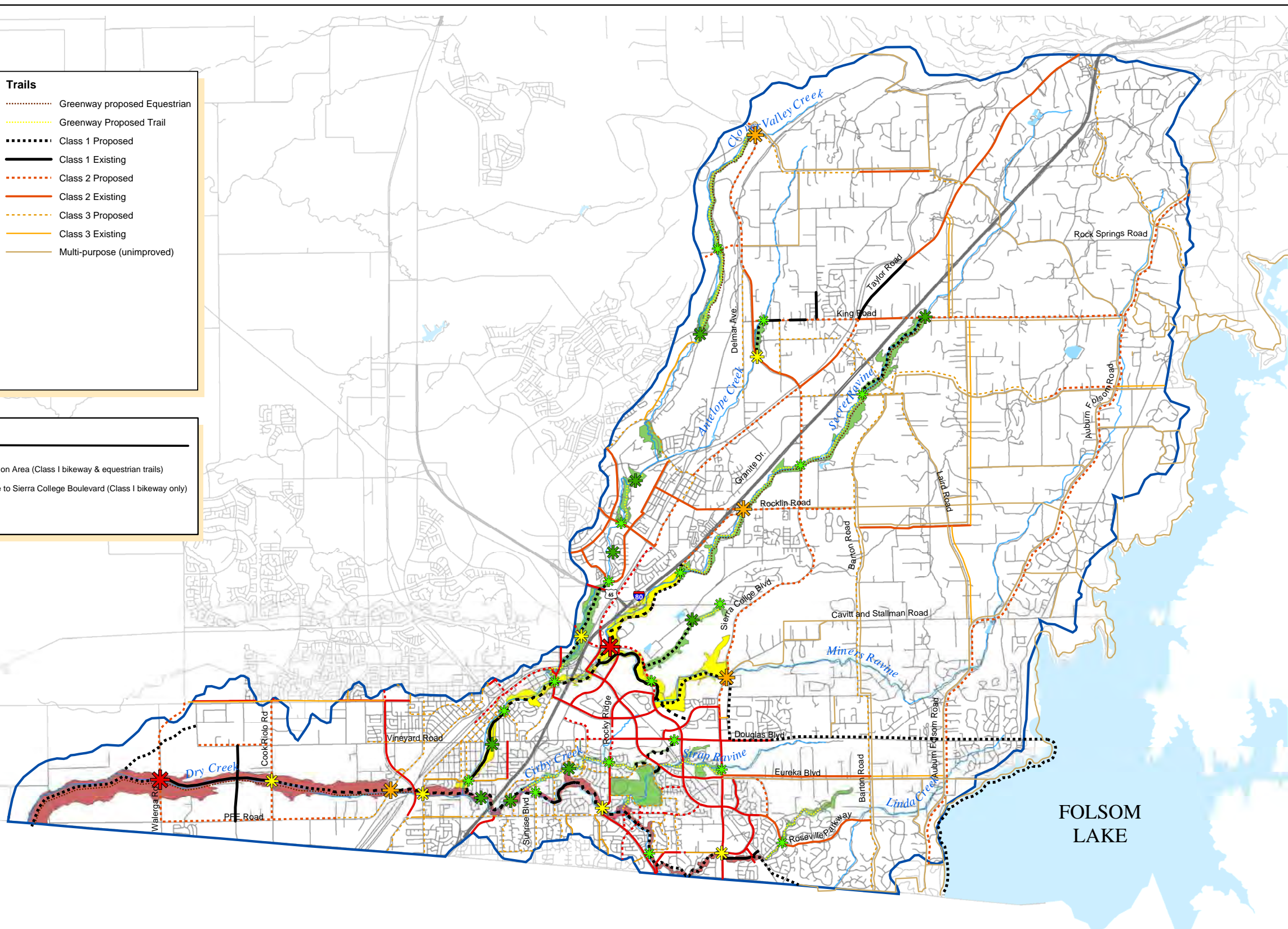
- Phase I Trails
- Phase II Trails
- Phase III Trails

Trails

- Greenway proposed Equestrian
- Greenway Proposed Trail
- Class 1 Proposed
- Class 1 Existing
- Class 2 Proposed
- Class 2 Existing
- Class 3 Proposed
- Class 3 Existing
- Multi-purpose (unimproved)

PHASES

- I - Dry Creek Parkway to Folsom Lake State Recreation Area (Class I bikeway & equestrian trails)
- II - Secret Ravine to China Garden Rd, Miners Ravine to Sierra College Boulevard (Class I bikeway only)
- III - All others.



GREENWAY PHASES

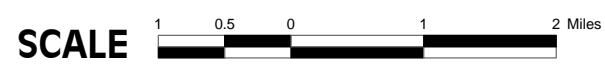


Table 9-1 Placer County Class I Bike Path Cost Estimate²⁶

Placer County Regional Bikeway Plan Class I Bike Path Cost Estimates							
Segment	Description	Length (miles)	Bike Path	Creek Crossing	Roadway Crossing	Other Costs	Estimated total
Dry Creek	County line to Walerga Road	1.9	\$760,000	TBD	TBD	TBD	\$760,000
Dry Creek	Cook Riolo Road to Roseville City limits	1.9	\$760,000	TBD	TBD	TBD	\$760,000
Secret Ravine	Roseville City limits to China Garden Road	0.6	\$240,000	TBD	TBD	TBD	\$240,000
Swan Stream	Roseville City limits to Sierra College Boulevard	1	\$400,000	TBD	TBD	TBD	\$400,000
Total		5.4	\$2,160,000	TBD	TBD	TBD	\$2,160,000

Placer County assumes \$400,000 per mile of Class I bikeway

²⁶ Placer County Regional Bikeway Plan

Table 9-2 City of Roseville Class I Bike Path Estimate²⁷

City of Roseville Bicycle Master Plan Class I Bike Path Cost Estimate							
Segments included in 10 Year Plan							
Segment	Description	Length (miles)	Bike Path	Creek Crossing	Roadway Crossing	Other Costs	Estimated total
Antelope Creek	Atlantic Street to Rocklin City limit	1.5	\$600,000	\$100,000	\$700,000	None	\$1,400,000
Dry Creek	I-80 to Royer Park	TBD	\$1,000,000	None	\$700,000	None	\$1,700,000
Cirby/Linda Creek	Oakridge Dr. to ped bridge at Eastwood Park	0.8	\$320,000	\$100,000	Existing	\$128,000	\$548,000
Cirby/Dry Creek	Ped bridge at Eastwood Park to Darling Way	0.9	\$360,000	\$200,000	\$600,000	\$312,000	\$1,472,000
Linda Creek	Connecting two existing paths near Sierra Gardens and Eich Schools	0.2	\$80,000	None	None	\$14,000	\$94,000
Cirby Creek North	Johnson Ranch Dr. to E. Roseville Parkway	0.8	\$320,000	\$40,000	\$400,000	\$162,000	\$922,000
Darling Way	Undercrossing	0.01	None	None	\$200,000	\$100,000	\$300,000
Subtotal	10 year plan	4.21					\$6,436,000
Segments not included in 10 Year Plan							
Segment	Description	Length (miles)	Bike Path	Creek Crossing	Roadway Crossing	Other Costs	Estimated total
Dry Creek	City limits to Cirby Creek	1.4	\$560,000	TBD	TBD	TBD	\$560,000
Linda Creek	Sierra Gardens Drive to City limits	1.7	\$680,000	TBD	TBD	TBD	\$680,000
Miners Ravine	I-80 to Secret Ravine confluence	0.5	\$200,000	TBD	TBD	TBD	\$200,000
Secret Ravine	Confluence with Miners Ravine to City limits	1.2	\$480,000	TBD	TBD	TBD	\$480,000
False Ravine	Confluence with Miners Ravine to Secret Ravine Pkwy	1	\$400,000	TBD	TBD	TBD	\$400,000
Miners Ravine	End of existing trail to Sierra College Blvd	1.2	\$480,000	TBD	TBD	TBD	\$480,000
Subtotal	Beyond 10 year plan	7	\$2,800,000	TBD	TBD	TBD	\$2,800,000
Total							\$9,236,000

City of Roseville assumes \$400,000 per mile of Class I bikeway

²⁷ City of Roseville Bicycle Master Plan

Table 9-3 Town of Loomis Class I Bike Trail Estimate²⁸

Town of Loomis Bikeway Master Plan Class I Bike Path Cost Estimates							
Segment	Description	Length (miles)	Bike Path	Creek Crossing	Roadway Crossing	Other Costs	Estimated total
Secret Ravine	King Road to Brace Road/Town limits	1.5	\$600,000	TBD	TBD	TBD	\$600,000
Antelope Creek	King Road to Sierra College Boulevard	1.9	\$760,000	TBD	TBD	TBD	\$760,000
Total		3.4	\$1,360,000	TBD	TBD	TBD	\$1,360,000

Town of Loomis assumes \$400,000 per mile of Class I bikeway

²⁸ Town of Loomis Bikeway Master Plan

Table 9-4 Dry Creek Greenway Recommended Improvement Estimate

COST ESTIMATE FOR GREENWAY RECOMMENDED IMPROVEMENTS												
Trail Segment	Description	Length (miles)	Bike Path	Nodes	Trail Intersection	Minor Roadway Crossing	Major Roadway Crossing	Other Roadway Crossing	Equestrian Trail	Creek Crossings	Phase	Subtotal, segment
Dry Creek	County Line to Cirby Creek	0	\$0	\$146,000	\$1,800	\$0	\$0	\$0	\$115,500	\$0	1	\$263,300
Cirby Creek	Dry Creek to Linda Creek	0	\$0	\$0	\$600	\$0	\$0	\$0	\$0	\$0	1	\$600
Linda Creek	Cirby Creek to Swan Stream	0	\$0	\$14,300	\$3,600	\$0	\$0	\$0	\$0	\$0	1	\$17,900
Swan Stream	Linda Creek to Powerline corridor	0	\$0	\$12,100	\$1,200	\$0	\$0	\$0	\$0	\$0	1	\$13,300
Dry Creek	Cirby Creek to Miners Ravine	0	\$0	\$12,050	\$600	\$0	\$0	\$0	\$0	\$0	2	\$12,650
Miners Ravine	Dry Creek to Sierra College Blvd.	0	\$0	\$23,050	\$3,000	\$0	\$150,000	\$0	\$0	\$0	2	\$176,050
Secret Ravine	Miners Ravine to China Garden Rd.	0	\$0	\$100,950	\$600	\$0	\$0	\$0	\$0	\$0	2	\$101,550
Cirby Creek	Linda Creek to Douglas Boulevard	1.8	\$720,000	\$2,200	\$2,400	\$6,000	\$300,000	\$0	\$0	\$100,000	3	\$1,130,600
Strap Ravine	Linda Creek to Sierra College Blvd.	1.16	\$1,384,000	\$1,100	\$2,400	\$4,000	\$0	\$20,000	\$0	\$100,000	3	\$1,511,500
Swan Stream	Powerline corridor to Pastor Dr.	0.88	\$352,000	\$1,100	\$0	\$1,000	\$0	\$0	\$0	\$0	3	\$354,100
Antelope Creek	Miners Ravine to Springview Dr.	0.36	\$144,000	\$13,200	\$1,800	\$1,000	\$0	\$10,000	\$0	\$0	3	\$170,000
Antelope Creek	Sunset Boulevard to Farron Str.	0.84	\$336,000	\$9,850	\$0	\$0	\$0	\$0	\$0	\$0	3	\$345,850
Antelope Creek	Sierra College Blvd. to King Rd.	0.48	\$192,000	\$13,200	\$0	\$0	\$0	\$0	\$0	\$0	3	\$205,200
Secret Ravine	China Garden Road to King Rd.	3.86	\$1,544,000	\$43,900	\$0	\$3,000	\$150,000	\$5,000	\$81,060	\$200,000	3	\$2,026,960
Clover Valley Ck.	Rawhide Rd. to Sierra College Blvd.	3.22	\$1,288,000	\$31,800	\$0	\$2,000	\$0	\$0	\$67,620	\$200,000	3	\$1,589,420
False Ravine	Secret Ravine to Scarborough	0.42	\$168,000	\$9,850	\$0	\$1,000	\$0	\$0	\$0	\$0	3	\$178,850
Totals		13.02	\$6,128,000	\$434,650	\$18,000	\$18,000	\$600,000	\$35,000	\$264,180	\$600,000		\$8,097,830
Dry Creek Greenway assumes \$400,000 per mile of Class I bike path												

*This table does not include the cost of property acquisition.

Table 9-5 Greenway Improvements Cost Summary

GREENWAY COSTS - SUMMARY				
Trail Segment	Phase I	Phase II	Phase III	Total segment costs
Dry Creek	\$263,300	\$12,650		\$275,950
Cirby Creek	\$600		\$1,130,600	\$1,131,200
Linda Creek	\$17,900			\$17,900
Strap Ravine			\$1,511,500	\$1,511,500
Swan Stream	\$13,300		\$354,100	\$367,400
Clover Valley Creek			\$1,589,420	\$1,589,420
Antelope Creek			\$721,050	\$721,050
Secret Ravine		\$101,550	\$2,026,960	\$2,128,510
Miners Ravine		\$176,050		\$176,050
False Ravine			\$178,850	\$178,850
Total Capital Costs	\$295,100	\$290,250	\$7,512,480	\$8,097,830
Easement acquisitions*	\$0	\$0	\$1,960,000	\$1,960,000
Total costs-easement	\$295,100	\$290,250	\$9,472,480	\$10,057,830
Fee Title acquisitions*	\$0	\$0	\$6,575,000	\$6,575,000
Total costs-fee title	\$295,100	\$290,250	\$14,087,480	\$14,672,830
Average: fee title+easement acq.	\$295,100	\$290,250	\$11,779,980	\$12,365,330

Table 9-6 Overall Greenway Summary of Costs

Dry Creek Greenway Summary of Estimates

Jurisdiction	Cost
City of Roseville planned improvements ¹	\$7,884,000
Placer County planned improvements ²	\$2,160,000
Town of Loomis planned improvements ¹	\$1,360,000
Dry Creek Greenway recommended improvements ³	\$9,737,230
Grand Total	\$21,141,230

¹Does not include items marked TBD

²Includes City of Rocklin planned improvements

³Assumes mix of easement and fee title acquisitions

Table 9-7 Node Cost Estimate

NODE COST BREAKDOWN					
TYPE A - NEIGHBORHOOD ACCESS					
DIRECTIONAL SIGNAGE	1	LS	\$500.00		\$1,100
BOLLARD/TRAFFIC CONTROL	1	EA	\$600.00		\$500
					\$600
TYPE B - SMALL PUBLIC ACCESS					
DIRECTIONAL SIGNAGE	1	LS	\$500.00		\$12,100
5-10 PARKING SPACES	1	LS	\$11,000.00		\$500
BOLLARD/TRAFFIC CONTROL	1	EA	\$600.00		\$11,000
					\$600
TYPE C - MEDIUM PUBLIC ACCESS/ EQUESTRIAN					
INTERPRETIVE/DIRECTIONAL SIGNAGE	1	LS	\$1,000.00		\$21,950
BENCH	1	EA	\$500.00		\$1,000
10-20 PARKING SPACES	1	LS	\$19,250.00		\$500
BOLLARD/TRAFFIC CONTROL	2	EA	\$600.00		\$19,250
					\$1,200
TYPE D - PUBLIC ACCESS/ STAGING AREA					
INTERPRETIVE/DIRECTIONAL SIGNAGE	1	LS	\$1,750.00		\$99,850
KIOSK	1	LS	\$1,000.00		\$1,750
20-40 PARKING SPACES	1	LS	\$37,400.00		\$1,000
TREE PLANTING	15	EA	\$300.00		\$37,400
DRINKING FOUNTAIN	1	EA	\$3,000.00		\$4,500
BENCH	2	EA	\$500.00		\$3,000
PRE-FAB RESTROOM	1	LS	\$50,000.00		\$1,000
BOLLARD/TRAFFIC CONTROL	2	EA	\$600.00		\$50,000
					\$1,200
TYPE E - PARK					
INTERPRETIVE/DIRECTIONAL SIGNAGE	1	LS	\$4,750.00		\$8,750
KIOSK	1	LS	\$4,000.00		\$4,750
					\$4,000