

Lower Sidney Gulch Urban Stream Restoration: Phase 2 Final Design & Implementation

Section 1: Summary Information

1. Project type: (Sediment reduction, fish passage, etc.)	Sediment Reduction, Fish and Wildlife Habitat Improvement
2. Project title:	Lower Sidney Gulch Urban Stream Restoration- Phase 2 Final Design & Implementation
3. Applicant name:	Northwest CA Resource Conservation & Development Council, 5C Program
4. Contact person:	Sandra Pérez
5. Address:	PO Box 2571
6. City, State, Zip:	Weaverville, CA 96093
7. Telephone #:	530-623.3967 x112
8. Fax #:	530-623.3979
9. Email address:	sperez@5counties.org
10. Type:	Public Agency ☐ Nonprofit Organization ☒ Indian Tribe ☐ Other ☐
11. Amount requested:	\$ 447,879
12. Total project cost:	\$ 497,540
13. Project objectives:	Reduce sediment delivery from Sidney Gulch and create complex instream habitat in one of the most productive Coho streams in the Weaver basin. ~11,000 yd3 are proposed to be excavated. This project would also increase flood conveyance and significantly improve riparian conditions. The proposed design would facilitate a greater meander, add side channel habitat, add large wood, and remove invasive species.
14. Time frame:	2.3 years from time of contract execution (to allow for proposed monitoring). Currently estimated to occur from September 2014 to December 2016.
15. Stream:	Sidney Gulch, tributary to West Weaver Creek, tributary to Weaver Creek, and tributary to Trinity River

Section 2: Location Information

1. Township, Range, Section:	T 33N, R 10W, Section 7,12,13, and 18; MDBM
2. Latitude, Longitude (in decimal degrees, Geographic, NAD83):	4508500N, 505100E, (NAD 27 UTM zone 10)
3. Location description:	Downtown Weaverville CA along Sidney Gulch between the mouth and the stream crossing on Bremer St (primarily Lee Fong Park).
4. Directions:	Take Main St (Highway 299) to Bremer St. Take Bremer St for 0.1 miles to Lee Fong Park parking lot. Remaining downstream sections are accessible by foot along the Park trail.

Section 3: Watershed Information

1. Watershed name:	Sidney Gulch
2. Watershed area:	~1,000 acres

3. Watershed area directly affected by the proposed project:	~15 acres
4. Land use statement:	Lee Fong Park is an open space park that retains portions of an historic fruit tree orchard, a disc golf course, picnic areas and parking lot
5. Project area ownership:	% Private: <u>9</u> % State: <u>0</u> % Federal <u>0</u> % Special District <u>91</u> However, at the time of proposal submission, a private parcel at the south end of Lee Fong Park is in the process of being donated In fee title to the Park District.9/
6. Project area with landowners in support of proposal:	~95-100%- Weaverville-Douglas City Park and Recreation District has actively participated in the conceptual design development. Private landowners at the downstream end have expressed support for this project. Depending on the final design, this may represent 100% support. .
7. Length of blue line streams directly affected by proposal:	0.5 mile
8. Watershed Plan(s):	Trnity County's Sidney Gulch Urban Stream Plan (1990)

Section 4: Project Objectives

1. Background information:

Sidney Gulch is a highly urbanized stream with many low gradient segments that runs from below Weaver Bally through downtown Weaverville until it reaches its confluence with West Weaver Creek. Shortly downstream of that confluence, West Weaver joins Weaver Creek, which enters the Trinity River at Douglas City. Sidney Gulch and the mountain ridge that formed it were hydraulically mined and washed away from the mid 1880's thru the first quarter of the 1900's. Over the next 60 years, the first 1.5 miles of the creek were reconstructed, channelized and confined to a series of straight runs. The stream banks were narrowed, simplified, and hardened as follows (starting from the mouth):

- From confluence up to Lee Fong Park: roads parallel and cross the stream with boulder rip-rap lining the fill faces;
- Lee Fong Park: boulder rip-rap for approximately 40% of the streambank;
- Lee Ranch House to USFS: welded wire rock basket walls, rip-rap, and parallel and crossing roads;
- USFS Compound and Highway 299 bridge: concrete bed and banks, parallel and crossing roads;
- Highway 299 bridge to Bally View Road: parallel and crossing roads.

It is estimated that 40% of the stream banks on Sidney Gulch within Lee Fong Park have been hardened with rip-rap with higher flows scouring away unprotected banks. The banks will continue to slough and fail over time as the stream tries to establish a more natural sinuosity. Segments within Lee Fong Park have been actively raveling. Highways, roads, parking lots, and commercial and residential construction have developed within the former riparian area and floodplain of the stream. This infrastructure now defines the stream meander and habitat opportunities upstream of Lee Fong Park. The portion of the stream system within Lee Fong Park, and the private lands downstream and west of the park, represent the only remaining undeveloped areas along the stream and the best opportunity to: prevent sediment delivery from sloughing banks; remove hardened banks; restore stream channel habitat; increase pool and riffle habitat; create channel sinuosity; and restore flood plain area.

Despite this urbanization and limited, degraded habitat, Sidney Gulch is one of the (if not the) most popular Coho stream in the Weaver basin. Coho salmon have been consistently observed migrating and spawning in various reaches. The segment within Lee Fong Park in particular has hosted numerous redds in the past several years. In recent years, due to the linear, simplified nature of the stream, most of those redds have been washed out in high flow storm events.

In 2011 and 2012, a conceptual design and initial community outreach were completed (funded through the Trinity River Restoration Program's Watershed Restoration Program) for sediment reduction and instream habitat work in this project area, Bremer St down through Lee Fong Park. Broad scale surveys of the project

area were conducted to identify potential botanical, archaeological, and historic resources that could significantly affect the project's footprint. The conceptual design was completed by Michael Love and Associates (Attachment A) in coordination with a technical team of stakeholders. The technical team was intended to assist in developing and analyzing biological, hydrological, physical, and flow data needs and guide design objectives for the project. This team included representatives from Weaverville Douglas City Parks and Recreation District (WDCPRD), Five Counties Program (5C), US Army Corp of Engineers, Trinity River Restoration Program, NOAA Fisheries, CA Department of Fish and Wildlife, North Coast Regional Water Quality Control Board, and Trinity County.

It was decided to achieve restoration and sediment reduction goals by: creating more complex instream habitat (large wood, boulders); allowing more space for the channel to naturally meander and creating more of a meander in some places; and removing blackberries, scotch broom, mullein, and other invasive species. The proposed improvements allow for greater flood conveyance, feature side channel habitat, and instream habitat components. The project area was divided into three reaches (reach 1 is the upstream segment). Because the Park's ownership area and existing infrastructure, the options for riparian improvements are most plentiful in the third, most downstream reach 3. Therefore multiple alternatives were developed for that reach. There, the Park owns ample areas on both sides of the stream. The eastern lot in this reach is undeveloped with only a few disc golf holes at present. Therefore, the most significant changes will occur in that reach 3. The preferred design is Alternative 3 in the downstream reach 3. That was determined by consensus of the technical team after review of the initial designs (Alternative 1 and 2). These detailed conceptual designs are shown in Attachment A. A technical memo accompanies the designs. It explains the approach, data, and analysis used to develop the designs. It also has a detailed description of the project goals, pre-existing conditions, proposed project elements, and construction impacts. This proposed project consists of the development of the final designs, securing permits, implementation/construction of improvements, and monitoring.

2. Need for the project:

The construction of a natural channel condition will reduce bank erosion and sediment delivery to Weaver Creek along approximately 2,600 linear feet of stream bank with a potential to deliver at least 8,660yd³ of sediment to the stream if those banks retreat 10' over a hundred years. The project concept design calls for excavating 11,000 yd³. The stream banks currently exhibit regular sloughing, but no estimate of past sediment delivery has been made. Weaver Creek has been identified as a priority watershed for Coho recovery under the CA Coho Recovery Strategy because its year over year Coho populations. Sidney Gulch is an integral part of the Weaver Creek fish population matrix. There is the potential to increase channel and habitat complexity to support larger populations of Coho, steelhead, and other aquatic species and to improve the run:riffle:pool ratio and increase the stream's carrying capacity. The conceptual designs include additional areas of ideal salmonid spawning habitat. Lee Fong Park (9.8 acres), the Verizon Tract (4.0 acres) and two private parcels (totaling approximately 1.4 acres downstream and west of Lee Fong Park) represent the only areas within the perennial flow portions of the stream that can be physically restored to create or improve stream and riparian habitat to a nearly natural condition. The project will not only reduce sediment inputs into the stream, it will increase and/or improve riparian habitat and floodplain area in a stream system that has little other opportunity to do so.

3. Additional objectives:

Implementation of the Sidney Gulch Urban Streams Plan as well as the CA Coho Recovery Strategy Regional and Watershed Recommendations. Although not part of the purpose of the project, with the increased habitat, enhanced bird watching and other recreational opportunities are likely. The improvements will also surely enrich the aesthetics of the Park. One of the objectives of the project is to maximize compatibility and integration with the disc golf features and other recreational uses at the Park to ensure that improvements are not degraded over time. To help achieve this in the long term, project proponents will work with the Park and project stakeholders on interpretive signage and information that will help Park users and local decision makers understand the purpose, nature, and benefits of the improvements.

Section 5: Project Tasks and Results

1. Detailed project tasks:

- A. Reconvene the technical team from Phase 1 to assist in the development of the final design. This team included a representative(s) of WDCPRD, Five Counties, US Army Corp of Engineers, Trinity River Restoration Program, NOAA Fisheries, CA Department of Fish and Wildlife, North Coast Regional Water Quality Control Board, Trinity County, and others as appropriate. The team will help facilitate discussions on issues, opportunities and concerns in regards to the final design;
- B. Conduct a public meeting(s) with the WDCPRD Board, or its designated representatives, to facilitate public input on the final design;
- C. 95% designs and drawing, monument construction limits, and benchmarks for construction;
- D. Obtain/complete permitting (Federal, State, County);
- E. Complete 100% final design;
- F. Pre-project photo and other monitoring;
- G. Construction and treatment implementation including: non-native tree and understory vegetation removal; large wood and/or boulder habitat structures installation; and other habitat improvements identified in final design. Best management practices for construction will be followed to minimize impacts to natural resources;
- H. Revegetation including native tree and understory species plantings. This will begin upon completion of construction but also will continue the following spring. The planting sites will be irrigated if the weather and plant conditions warrant it. Establishment will be monitored and additional planting may be completed approximately one year after construction if necessary;
- I. Conduct post project monitoring:
 - I. Spawning (redd survey) and juvenile presence/absence surveys for Coho and steelhead;
 - II. Habitat typing within the project segments;
 - III. Thalweg and cross section surveys from the Bremer Street bridge to the confluence with West Weaver Creek;
 - IV. Photo monitoring
- J. Final Report: will describe the improvements as they were built and will also include before and after photographs.

2. Planning and Design:

Tasks A, B, C, D, & E in detailed project tasks above, comprise the planning and design element of this project. A diverse team of designers and stakeholders will help shape the final design. Necessary permits and environmental analysis will also be completed.

3. Project Implementation:

Implementation will consist of Task G in detailed project tasks above. This entails constructing physical improvements of the final design.

4. Revegetation and Monitoring:

Task H describes specific revegetation efforts that will follow construction. Pre-project and post project monitoring will be conducted as described in Tasks F & I above respectively.

5. Reporting:

In addition to the final report described in Task J above, quarterly progress reports will also be submitted.

6. Time frame:

September 2014 to December 2016. Completion dates are estimated below accordingly. However, if a fully executed contract is not received by September 2014, all of the dates and timeframes will be pushed back and re-set relative to the actual contract execution date.

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|--|---|
| • Completion of final design and permitting: | July 2015 |
| • Pre-project monitoring: | August 2015 |
| • Construction: | October 2015 |
| • Revegetation: | Spring 2016 (Fall 2016 if additional plantings are necessary) |
| • Post project monitoring: | November 2016 |
| • Final Report: | December 2016 |

7. Deliverables:

- Meeting Agendas;
- Final Design;
- Bid specifications & contracts;
- Completed CEQA, NEPA, 1600, 401/404, and Section 7 consultation;
- As-built design drawings;
- Monitoring results (reports, photos, etc);
- Final Report.

8. Expected quantitative results (cost per unit):

Type of Work	Total
Permitting and Final Design	\$48,940
Construction & Revegetation	\$425,612
Monitoring	\$15,350
Reporting	\$7,638
Total	\$497,540

9. Other products and results:

Increased suitable spawning areas resulting in additional redds and spawning; increased pool and riffle habitat resulting in greater survival of young fish; increased riparian habitat resulting in reduced stream temperatures and more benthic invertebrate insects, reduced flood risk from metering peak surface water runoff from Bremer, Mill and Lorenz Roads; improved water quality from filtering of road runoff; increased floodplain capacity and reduced flood risk to downstream landowners; increased riparian habitat for song birds and other wildlife; restoration of natural vegetation and removal of non-native trees and understory vegetation; implementation of significant portions of Trinity County's Sidney Gulch Urban stream Plan; increased number of visitor use days to Lee Fong Park, increased tourism within the community including park use, sport fishing, and commercial guide services.

10. Applicant's qualifications and experience:

The 5C staff has extensive experience in developing projects from concept to design, permitting, construction and monitoring. It has successfully managed millions of dollars in federal, state, and local funding. 5C staff is trained in bioengineering techniques. It has been involved in channel reconstruction projects directly and indirectly including the reconstruction of 325' of Little Browns Creek in 2007. Staff has overseen numerous fish passage improvement projects that required extensive instream work and various habitat improvements. The project leader (5C Director) has been the principal in the development of the Sidney Gulch Urban Stream Plan, establishment of fisheries monitoring in the stream, and working with the WDCPRD to consider this project. The 5C Director and Manager developed updated recommendations to the 1990 plan in 2004 based on then current conditions. The 5C staff have worked directly on over 50 habitat or sediment construction projects in the past decade as well as assisted other entities on numerous other projects.

The conceptual designs were developed by Michael Love and Associates, who are well known and regarded in the restoration field – particularly for instream channel work. Part of the hydrology was completed by Graham Matthews & Associates, also well known and regarded in their field. For cost effectiveness, it is anticipated that the same consultants will be retained to complete the final design.

Section 6: Landowners, Access and Permits

1. Landowners Granting Access for Project: (Please attach provisional access agreement[s]) Weaverville-Douglas City Park and Recreation District. The District has already been an active participant in the Phase 1 efforts. Meeting minutes and records document continued support for the project.	
2. Required Permits:	Floodplain development permit (County); 401 and 404 Certification; 1600 Streambed Alteration Agreement, Section 7 Consultation with USFWS and NMFS;
3. Lead CEQA/NEPA agency:	CEQA- Trinity County or CA Dept of Fish and Wildlife NEPA- Bureau of Reclamation or Army Corp of Engineers
4. Required mitigation:	Yes ☐ No ☒

Section 7: Project Budget

	Total Hrs/ Units	Unit Rate	Recipient Funding	Other Funding	Reclamation Funding Requested	TOTAL
Personnel						
Program Director	120	34.32	\$1,030	\$0	\$3,089	\$4,119
Program Manager	425	32.77	\$1,311	\$0	\$12,616	\$13,927
Project Coordinator	180	20.28	\$811	\$0	\$2,839	\$3,650
Skilled Intern, Senior	175	16.44	\$164	\$0	\$2,713	\$2,877
Skilled Intern	100	15.81	\$316	\$0	\$1,265	\$1,581
Accountant	95	18.72	\$0	\$0	\$1,778	\$1,778
Office Manager	30	21.32	\$0	\$0	\$640	\$640
<i>Total Salaries</i>			\$3,632	\$0	\$24,940	\$28,572
Benefits for all above		54.89%	\$1,994	\$0	\$13,690	\$15,684
Subtotal Personnel			\$5,626	\$0	\$38,630	\$44,256
Operating						
Surveyor, Engineer, Hydrologists	250	\$100	\$3,000	\$0	\$22,000	\$25,000
Environmental Review Specialist	100	\$45	\$0	\$0	\$4,500	\$4,500
Fisheries Biologist	130	\$70	\$0	\$0	\$9,100	\$9,100
<u>Construction:</u>						
Permitting/Environmental Analysis	1		\$0	\$0	\$5,310	\$5,310
Equipment & Labor	1		\$34,550	\$0	\$229,338	\$263,888
Materials	1		\$0	\$0	\$68,152	\$68,152
Supplies	1		\$0	\$0	\$9,630	\$9,630
Consultant Travel	3,150	\$0.565	\$0	\$0	\$1,780	\$1,780
Consultant Per Diem	10	\$34	\$0	\$0	\$340	\$340
Consultant Lodging	5	\$84	\$0	\$0	\$420	\$420
Mileage	340	\$0.565	\$0	\$0	\$192	\$192
Subtotal Operating			\$37,550	\$0	\$350,762	\$388,312
Subtotal			\$43,176	\$0	\$389,392	\$432,568
Administrative Overhead		15.02%	\$6,485	\$0	\$58,487	\$64,972
Total			\$49,661	\$0	\$447,879	\$497,540

1. Summary project costs (Please attach detailed budget[s]):

Sources of Funds	Cash	In-kind (if applicable)	Status: S,P,U (secured, pending, unknown)	Anticipated award date	Total
Trinity River Restoration Program	447,879				447,879
State Agencies Name(s) and amount(s) of each: CA Coastal Conservancy	47,596		P	7/1/2014	47,596
Federal Agencies Name(s) and amount(s) of each:					
Applicant:					
Other Sources Name(s) and amount(s) of each: Weaverville-Douglas City Park District		2,065			2,065
Total	495,475	2,065			497,540

Estimated Project Cost by Task

Lower Sidney Gulch Urban Stream Restoration: Phase 2 Final Design & Implementation			
Type of Work	Cost Share	Amount Requested	Total
Permitting and Final Design	\$5,484	\$43,456	\$48,940
Construction & Revegetation	\$42,557	\$383,055	\$425,612
Monitoring	\$1,620	\$13,730	\$15,350
Reporting	\$0	\$7,638	\$7,638
Total	\$49,661	\$447,879	\$497,540

3. Budget justification:

Salaries were calculated based on the current salary schedule for the period of the proposed project, Consultant costs are based on actual rates in other contracts and/or past work. Construction costs are based on data from actual past bids for similar work. Construction elements include:

Construction Details	Unit Type	Total Units	Unit Rate
Permit costs	LS	1	\$ 3,140
Prepare Water Pollution Control Plan (SWPPP)	LS	1	\$ 2,170
Construction Signage	LS	1	\$ 2,300
Safety/exclusion fencing & stakes	LF	2,860	\$ 0.64
Clearing & Grubbing; includes invasive vegetation removal	LS	1	\$ 6,175
Stream Diversion	LS	1	\$ 5,000
Channel Excavation	CY	11,000	\$ 20
Engineered Streambed Materials	CY	670	\$ 70
Rock for instream features	Ton	190	\$ 70

Construction Details	Unit Type	Total Units	Unit Rate
Large Wood Material: root wads & logs	LS	120	\$ 5
Erosion Control Supplies: tarps, straw, seed, mulch	LS	1	\$ 2,500
Sediment Control Supplies: silt fencing, coir rolls	LS	1	\$ 1,500
Place Foot bridge (ADA compliant, safety rails, over side channel)	LS	1	\$ 5,000
Revegetation: materials, labor, irrigation	LS	1	\$ 30,000
Construct ADA accessible trail	LF	275	\$ 4
Relocate disc golf features	LS	5	\$ 350
Interpretive signage	EA	4	\$ 600
Post project Monitoring Supplies & Equipment: total station rental, survey flagging, stakes, stream gauges	LS	1	\$ 1,500

4. Administrative overhead:

Fifteen point zero two percent overhead is proposed to cover all indirect costs as well as materials costs required during the course of the implementation work. This will cover applicant overhead expenses (rent, communications, utilities, general liability insurance), office supplies and services (paper, printing, mailing), and cost of using existing survey equipment or field equipment (e.g., total station, GPS, distance measurer).

Section 8: Supplemental or Specialized Information

Please attach the following required items to the application:

1. Project location 7.5 minute topographic quadrangle map, (USGS).

Sidney Gulch Urban Streams Restoration Project



2. Photographs of Project.

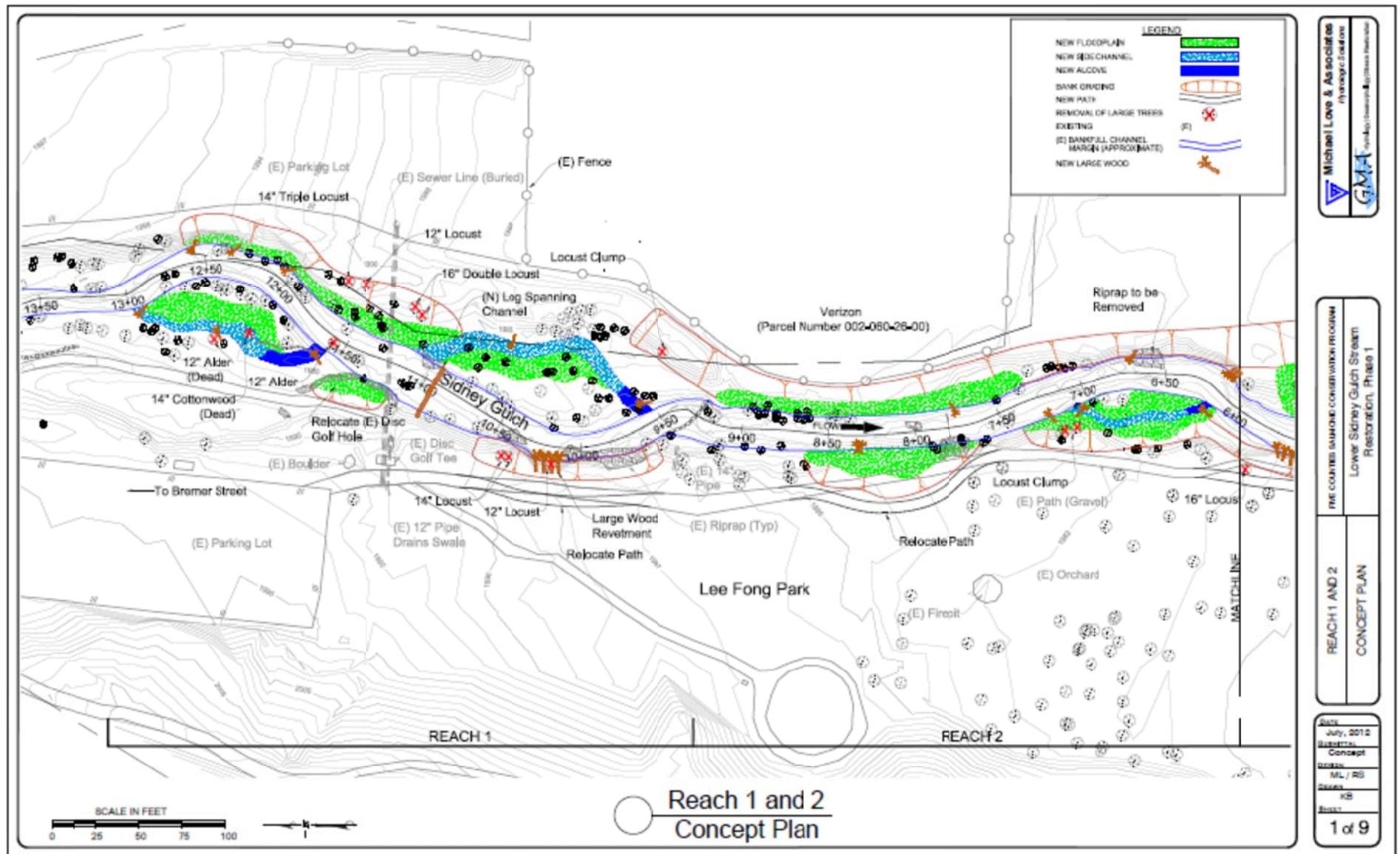


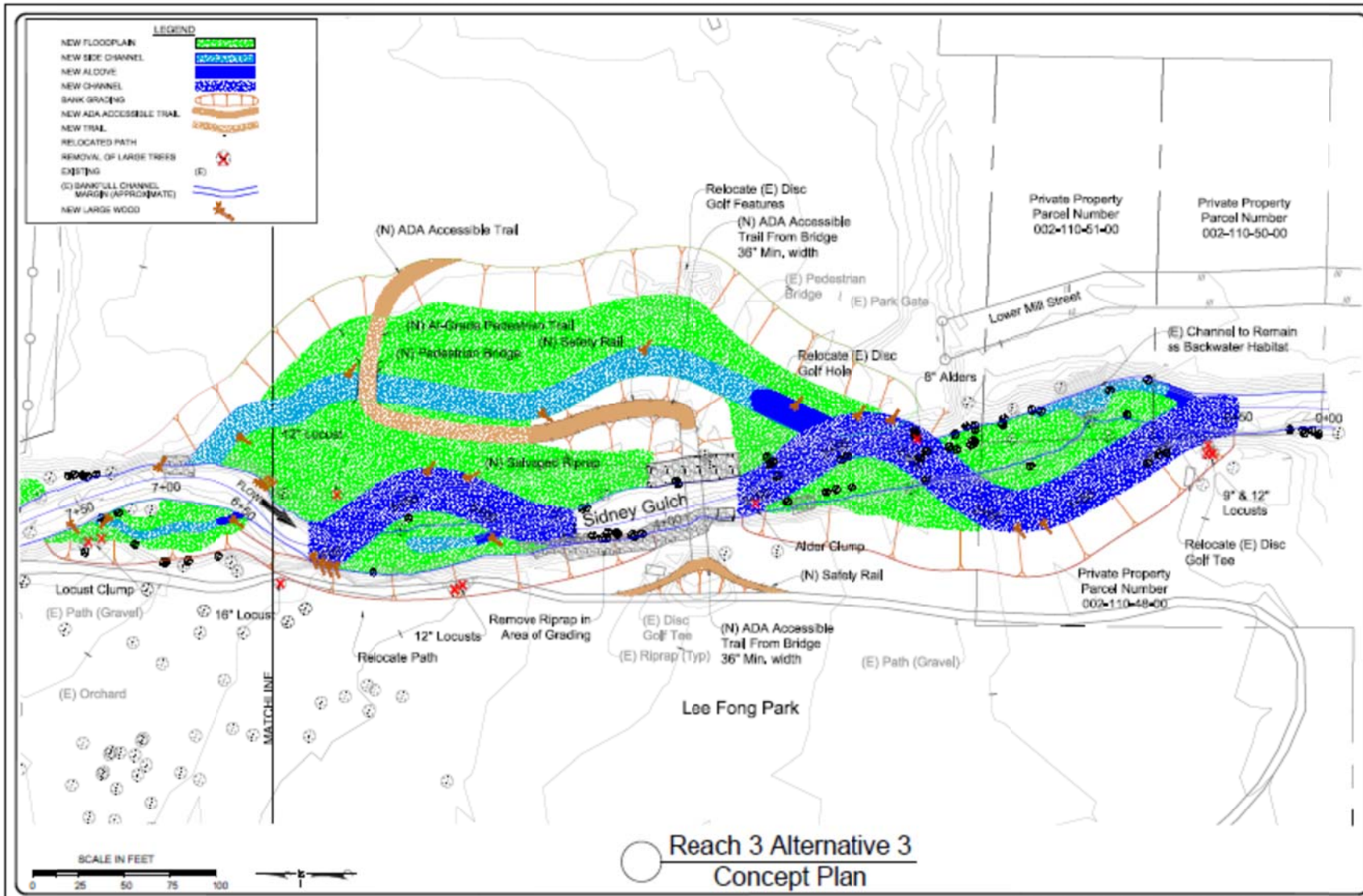
Boulder cluster in Lee Fong Park constructed in 19991 as part of Trinity County's Urban Stream Project (photo taken in 2006).



View of the Verizon Tract (east o stream in project area) purchased by the WDCPRD.

Concept Design Overview: Alternatives Preferred by Design Team





Michael Love & Associates
Hydrologic Solutions
GMA
Hydrologic Solutions

THE COUNTY OF SAN DIEGO COUNTY WATER RESOURCE
Lower Sidney Gulch Stream
Restoration, Phase 1

REACH 3 ALTERNATIVE 3
CONCEPT PLAN

DATE: July, 2012
SUBMITTER: Concept
DESIGNER: ML / RS
APPROVER: KB
SHEET: 4 of 9