HABITAT TYPING SURVEY REPORT
FOR LAGUNITAS CREEK, SAN GERONIMO CREEK,
AND DEVIL'S GULCH
MARIN COUNTY, CALIFORNIA
1992-1999

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EXECUTIVE SUMMARY

As part of its efforts to improve salmonid habitat, Marin Municipal Water District (MMWD) began habitat typing of Lagunitas Creek in 1992. In 1995 the State Water Resource Control Board (SWRCB) mandated periodic habitat typing as part of SWRCB Order WR95-17. The goals of these surveys are to

- assess the abundance of habitat for coho salmon (*Oncorhynchus kisutch*) and steelhead trout (*Oncorhynchus mykiss*),
- assist in estimating the populations of these species,
- determine if juvenile salmonid sampling sites are representative of the creek as a whole, and
- measure the benefits of habitat improvements undertaken by MMWD.

Habitat typing surveys of Lagunitas Creek were conducted in 1992, 1997, 1998 and 1999. Habitat typing surveys of San Geronimo Creek and Devil's Gulch were conducted in 1995 and 1998. While results differed between surveys, the general findings of the surveys are listed below:

- Pools are the most common habitat type in Lagunitas Creek, particularly downstream of Nicasio Creek. Riffles comprise a fairly consistent 8-18% of Lagunitas Creek habitats.
- Devil's Gulch contains the highest percentage of riffle habitat of the creeks surveyed.
- Shelter for fish is most abundant in the downstream sections of Lagunitas Creek, particularly in the form of undercut banks, terrestrial vegetation and woody debris. Large woody debris is uncommon upstream of Tocaloma Bridge, as well as in San Geronimo Creek.
- Gravel and cobble were the dominant substrates throughout Lagunitas Creek. Sand, silt and clay substrates are also common in Lagunitas Creek downstream of Devil's Gulch and throughout San Geronimo Creek.
- The effects of flooding from the 1997-'98 El Niño include an overall widening of the creek, reduced sand, silt and clay substrates accompanied by increased gravel, and decreased woody debris cover.

The data show that the Lagunitas Creek drainage has adequate salmonid habitat but also that some habitat elements could be improved through habitat restoration. Sand, silt and clay substrates are common in Lagunitas and San Geronimo Creeks and woody debris is relatively scarce upstream of Tocaloma Bridge. These deficiencies are currently being addressed by reducing sediment inputs and by adding large woody debris and spawning gravels to the creek. The data presented in this report will provide a baseline for quantifying the expected improvements in salmonid habitat resulting from these efforts.

1.0 INTRODUCTION

Lagunitas Creek originates on the north slope of Mount Tamalpais and flows in a northwesterly direction for 25 miles where it discharges into Tomales Bay (Figure 1). San Geronimo Creek, Devil's Gulch, Nicasio Creek, and Olema Creek are the major tributaries to Lagunitas Creek. Devil's Gulch, which flows through National Park and State Park land before entering Lagunitas Creek, is the smallest of these tributaries but it usually has perennial surface flows in addition to good habitat characteristics which make it an important coho producing stream. Much of the land within the Lagunitas Creek watershed is publicly owned by either the Marin Municipal Water District (MMWD), California Department of Parks and Recreation (DPR), or the National Park Service (NPS). The San Geronimo Creek watershed is a mix of private land and county-owned lands of the Marin County Open Space District.

The Lagunitas Creek watershed supports both coho salmon (*Oncorhynchus kisutch*) and steelhead trout (*Oncorhynchus mykiss*). Many agencies, organizations and individuals are working to improve the habitat for these species, including MMWD, NPS, DPR, Marin County Resource Conservation District, California Department of Fish and Game (DFG), National Marine Fisheries Service, Trout Unlimited, and local citizens.

As part of its efforts to improve salmonid habitat, MMWD began habitat typing surveys of Lagunitas Creek in 1992. In 1995 the State Water Resource Control Board (SWRCB) mandated periodic habitat typing as part of SWRCB Order WR95-17. The order stipulates that habitat typing is to be conducted at least every five years, or more frequently if unusually high flow events alter the riparian zone and stream channel (Trihey 1996, Prunuske Chatham 1997). In addition to assessing salmonid habitat composition, habitat typing helps MMWD estimate the size of juvenile salmonid populations throughout the creek. Coho and steelhead densities are estimated yearly at numerous sample sites and these estimates can be extrapolated to similar habitats throughout the creek. Habitat typing also allows MMWD to assess whether the juvenile salmonid sampling sites are representative of the creek as a whole. Finally, habitat typing is critical for measuring improvements resulting from habitat restoration efforts.

This report summarizes the habitat typing data collected in 1992, 1995, 1997, 1998 and 1999 and analyze changes in salmonid habitat during that period.

2.0 METHODS

The methods reported here apply only to the habitat typing surveys conducted in 1995, 1997, 1998 (Lagunitas and San Geronimo Creeks only) and 1999. The 1992 habitat typing was conducted by Don Kelley and Associates and the data was compiled by Entrix, Inc. (Trihey 1995). Habitat typing for Devil's Gulch in September, 1998 was performed by the National Park Service. The results of those two surveys were presented to MMWD without documentation of the protocols used.

Habitat typing surveys were conducted in the following sequence:
- In 1992, Don Kelley and Associates surveyed Lagunitas Creek from Nicasio Creek to Shafter Bridge (Figure 1). The only data collected during this survey were habitat type and lengths of
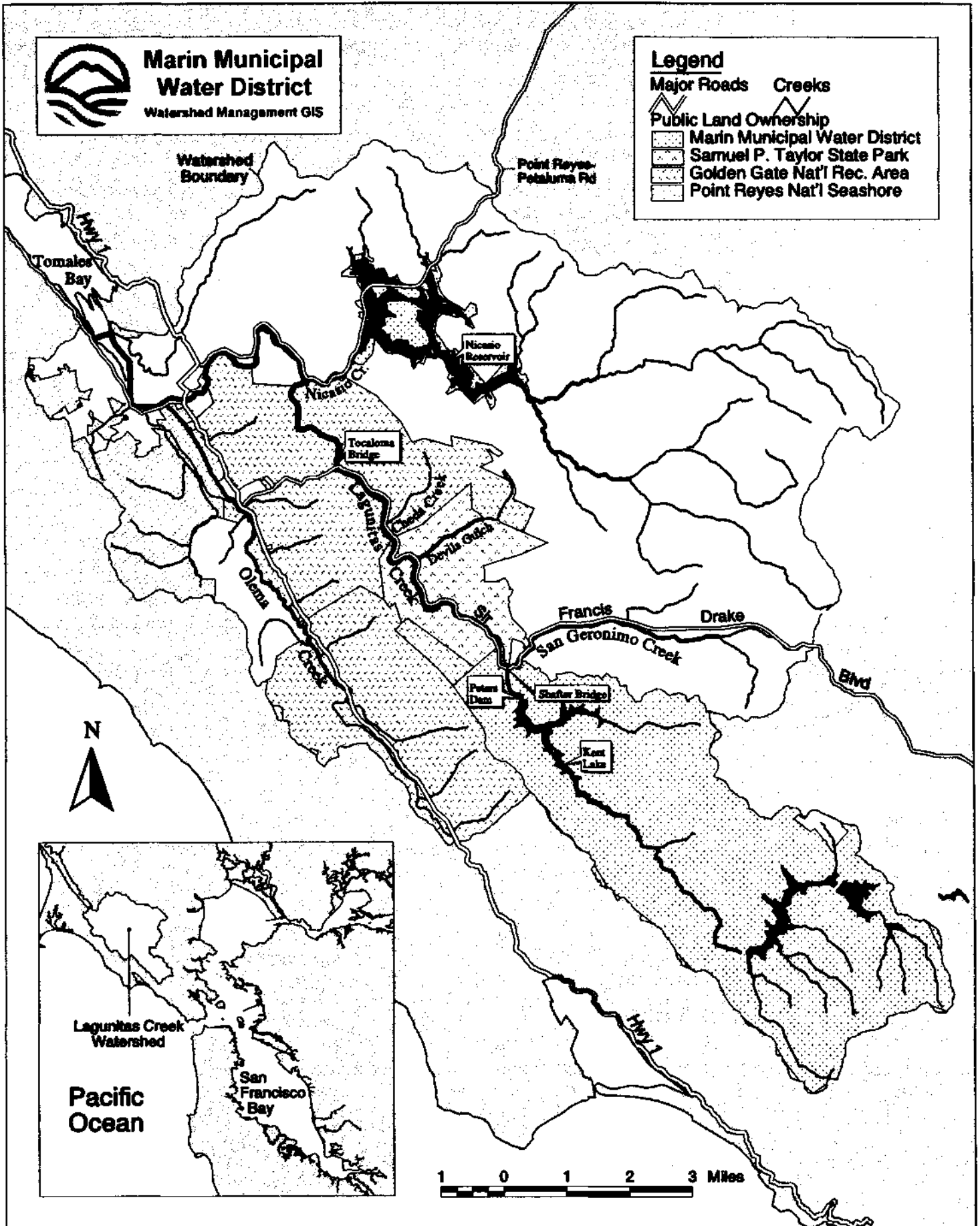
Figure 1. Map of the Lagunitas Creek Watershed

habitat units (Appendix A).

- The 1995 habitat survey was performed by Trihey & Associates (Trihey 1995) during one week in April, 1995 (Appendix B).
- San Geronimo Creek was surveyed from its mouth to an impassable fish barrier four miles upstream called Dixon Weir. Devil's Gulch was surveyed from its mouth to 7,400 feet upstream. In July and August of 1997, Greg Aull and Gregory Andrew of MMWD conducted habitat typing surveys on Lagunitas Creek between Tocaloma Bridge and Peters Dam (Appendix C). Field assistance was provided by Nick Olhey (MMWD Watershed Aide). NPS staff provided a one-day orientation.
- The El Niño weather pattern of 1997-1998 caused extensive flooding of Lagunitas Creek and required new habitat typing surveys. In July and August, 1998, and continuing in July 1999, Greg Aull and Gregory Andrew (MMWD) conducted habitat typing surveys on Lagunitas Creek between Highway 1 and Peters Dam (Appendix D) and on San Geronimo Creek (Appendix E). Field assistance for these surveys was provided by Ron Smith and John Brunzell (NPS) as well as Michael Hewson, Colleen Proppe and Matt Cover (MMWD Watershed Aides).
- In 1998, Devil's Gulch was surveyed from it's mouth to 2 miles upstream (Appendix F). Data were collected by the NPS under their Coho and Steelhead Restoration Project.

Following DFG protocols (Flosi and Reynolds 1994; Flosi et al. 1998), we conducted surveys on foot in an upstream direction using a hip chain, logger tape, depth rod, and a float tube in the deeper units. We conducted habitat typing in the summer months when flows were the most constant (8 cubic feet per second) and the water visibility was best. We classified aquatic habitats as pools, riffles, runs, cascades or plunge pools. Habitats shorter than the stream width were not recognized as distinct units and were considered part of the larger upstream habitat unit. In a few instances we subdivided extremely large pools into multiple units when the substrate or bank composition changed significantly over the length of the pool.

The following habitat type definitions from Flosi et al. (1998) were used to classify habitats:

> Riffles: "Shallow reaches with swiftly flowing, turbulent water with some partially exposed substrate."
>
> Runs: "Swiftly flowing reaches with little surface agitation and no major flow obstructions."
>
> Cascades: "The steepest riffle habitat, consisting of alternating small waterfalls and shallow pools."
>
> Plunge pools: "Found where the stream passes over a complete or nearly complete channel obstruction and drops steeply into the streambed below, scouring out a depression."

Finally, generic pools are not defined by Flosi et al., but we define them as areas having a concave bottom profile and low flow.

We collected detailed data on each habitat unit, including the habitat dimensions (length, width, mean and maximum depth and depth of pool tail crest), fish shelter habitat, substrate and bank composition and bank vegetation. We recorded air and water temperatures at the mouth of each significant tributary and when new data sheets were started. Stream flows were taken from data collected at the US Geological Survey gauge in Samuel P. Taylor State Park.

We classified substrate composition into 5 categories: silt/sand/clay (<0.08 inches in diameter), gravel (0.08-2.5 inches), cobble (2.5-10 inches), boulder (>10 inches) and bedrock. We estimated embeddedness as the percentage of cobbles buried in the substrate. Habitat embeddedness equals 100% when no cobbles are exposed at the tail crests of pools. The percentage of the habitat unit consisting of exposed substrate (habitat unavailable to fish) was also recorded. Examples of exposed substrate are mid-stream bars and tops of boulders. Bank composition was classified as either bedrock, boulder or cobble/gravel/sand/silt/clay. We classified bank vegetation as herbaceous, shrubs, deciduous trees, coniferous trees, or no vegetation.

We measured shelter within habitat units in multiple ways. An overall shelter value was given, ranging from 0 to 4, with 0 equal to "no shelter" and 4 equal to "complex shelter." The percentage of the habitat covered by shelter (called percent unit cover) was also estimated. In 1997, 1998 and 1999 we described shelter in more detail than specified in DFG protocols. We rated individual types of shelter (including undercut banks, small and large woody debris, root masses, terrestrial and aquatic vegetation, boulders and bedrock ledges) on a scale from 0 to 6, based on their contribution to the total available shelter. This shelter rating corresponds to the following range of percentages: $0 = 0\%$, $1 = 1\text{-}5\%$, $2 = 6\text{-}15\%$, $3 = 16\text{-}25\%$, $4 = 26\text{-}50\%$, $5 = 51\text{-}75\%$, $6 = 76\text{-}100\%$. Finally, large woody debris, defined as wood greater than 12 inches in diameter, was counted.

3.0 RESULTS

3.1 Habitat Composition

Changes in observed habitat composition of Lagunitas Creek, San Geronimo Creek and Devil's Gulch between 1992 and 1999 are summarized in Figure 2. Since the creek segments surveyed differ from year to year, only creek segments in common are being compared. For example, the section of Lagunitas Creek between Shafter Bridge and Peters Dam was not surveyed in 1992, so the data presented in Figure 2 does not include this section. Creek section lengths vary from survey to survey due to somewhat different measurement methods. Habitat composition summaries for each survey are presented in Tables 1-4.

Table 1. 1992 Lagunitas Creek habitat composition by creek segment

1992	Nicasio Creek to Tocaloma Bridge (8,723.9 ft)	Tocaloma Bridge to Shafter Bridge (31,182.2 ft)	Nicasio Creek to Shafter Bridge (39,906.1 ft)
Pool	2,733.1 (31.3%)	8,766.2 (28.1%)	11,499.3 (28.8%)
Run	4,094.7 (46.9%)	12,385.3 (39.7%)	16,480.0 (41.3%)
Riffle	1,546.5 (17.7%)	3,593.5 (11.5%)	5,143.6 (12.9%)
Glide	251.2 (2.9%)	5,695.6 (18.3%)	5,946.8 (14.9%)
Braid	62.3 (0.7%)	633.3 (2.0%)	695.6 (1.7%)
Cascade	36.1 (0.4%)	108.3 (0.3%)	144.4 (0.4%)
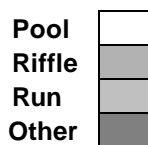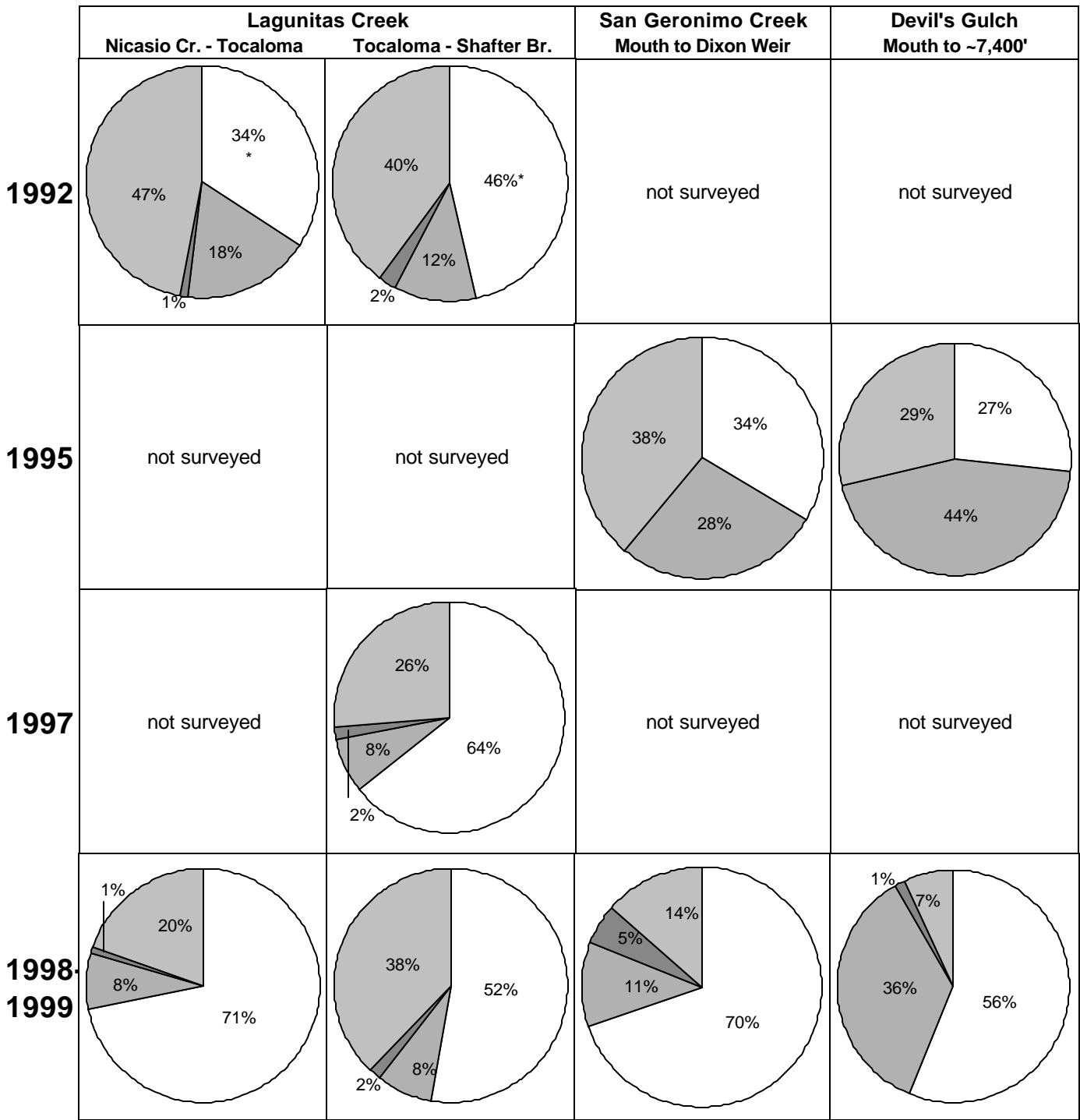
Figure 2. Habitat Typing Summary - Lagunitas Creek Watershed

Table 2. 1995 habitat composition for San Geronimo Creek and Devil's Gulch

1995	San Geronimo Creek (22,106 ft)	Devil's Gulch (7,401 ft)
Pool	7,413 (33.5%)	1980 (26.8%)
Run	6,114 (27.7%)	2111 (28.5%)
Riffle	8,579 (38.8%)	3310 (44.7%)

Table 3. 1997 habitat composition for Lagunitas Creek

1997	Tocaloma Bridge to Peters Dam (35,847 ft)
Pool	22,393 (62.5%)
Run	9,320 (26.0%)
Riffle	3,197 (8.9%)
Cascade/Plunge	937 (2.6%)

Table 4. 1998-1999 habitat composition

1998-1999	Highway 1 to Tocaloma Br. (29,981 ft)	Tocaloma Br. to Peters Dam (31,403 ft)	San Geronimo Creek (24,818 ft)	Devil's Gulch (10,889 ft)
Pool	24,230 (80.8%)	16,181 (51.5%)	17,274 (69.6%)	6,086 (55.9%)
Run	3,063 (10.2%)	11,660 (37.1%)	3,358 (13.5%)	699 (6.4%)
Riffle	2,342 (7.8%)	2,580 (8.2%)	2,845 (11.5%)	3,915 (36.0%)
Cascade/ Plunge	346 (1.2%)	982 (3.1%)	1,341 (5.4%)	189 (1.7%)

3.2 Fish Cover

In 1995, data on fish cover were collected for pools in San Geronimo Creek and Devil's Gulch. These data include total cover available for fish and the percentage of cover provided from root masses and woody debris. In 1998 and 1999 we collected more detailed data for all habitat types in Lagunitas and San Geronimo Creeks. Only habitat unit dimensions were measured for Devil's Gulch in 1998. Table 5 shows the amount of pool cover available to fish in San Geronimo Creek and Devil's Gulch.

Table 5. Fish Cover in San Geronimo Creek and Devil's Gulch, 1995 & 1998.

Note: Percentages indicate the proportion of the pool area covered.

Average of all pools:	Devil's Gulch 1995	San Geronimo Creek 1995	San Geronimo Creek 1998
Undercut Bank	No Data	No Data	4.0%
Small Woody Debris	No Data	No Data	2.3%
Large Woody Debris	No Data	No Data	0.9%
Total Woody Debris	5.2%	5.2%	3.2%
Root Mass	4.9%	3.7%	6.2%
Terrestrial Vegetation	No Data	No Data	1.7%
Aquatic Vegetation	No Data	No Data	0.2%
Boulder	2.1%	2.1%	2.4%
Bedrock Ledge	No Data	No Data	1.1%
Total Cover	**12.2%**	**11.0%**	**19.8%**

We collected the first detailed data on fish cover in Lagunitas Creek between Tocaloma Bridge and Peters Dam in 1997. In 1998, after El Niño, we re-surveyed the same section of Lagunitas Creek. Total fish cover in pools between Tocaloma and Devil's Gulch declined from 35% in 1997 to 25% in 1998, while slightly increasing upstream of Devil's Gulch. A sharp decline in large woody debris accounted for most of this decline. On average, large woody debris covered over 14% of pools in 1997 but only 1.6% in 1998. Other types of cover changed only slightly between 1997 and 1998. Fish cover for 1998 and 1999 is presented in Figure 3.

3.3 Creek Dimensions

Measurements of creek physical dimensions such as widths and pool depths were collected starting in 1995. Table 6 summarizes the dimensions of San Geronimo Creek and Devils Gulch in 1995 and 1998. Tables 7 and 8 summarize the dimensions of Lagunitas Creek in 1997 and 1998-1999, respectively.

Table 6. Physical Dimensions for San Geronimo Creek and Devil's Gulch, 1995 & 1998

	Devil's Gulch April, 1995	Devil's Gulch Sept., 1998	San Geronimo Creek April, 1995	San Geronimo Creek July, 1998
Creek Width (ft)	10.1	8.2	13.5	14.0
Average Pool Depth (ft)	Not collected	Not collected	Not collected	1.3
Maximum Pool Depth (ft)	1.9	1.5	3.0	2.7
Residual Pool Depth (ft) *	1.5	1.2	2.5	2.3

* Residual pool depth is the maximum pool depth minus the depth of the pool tail crest.
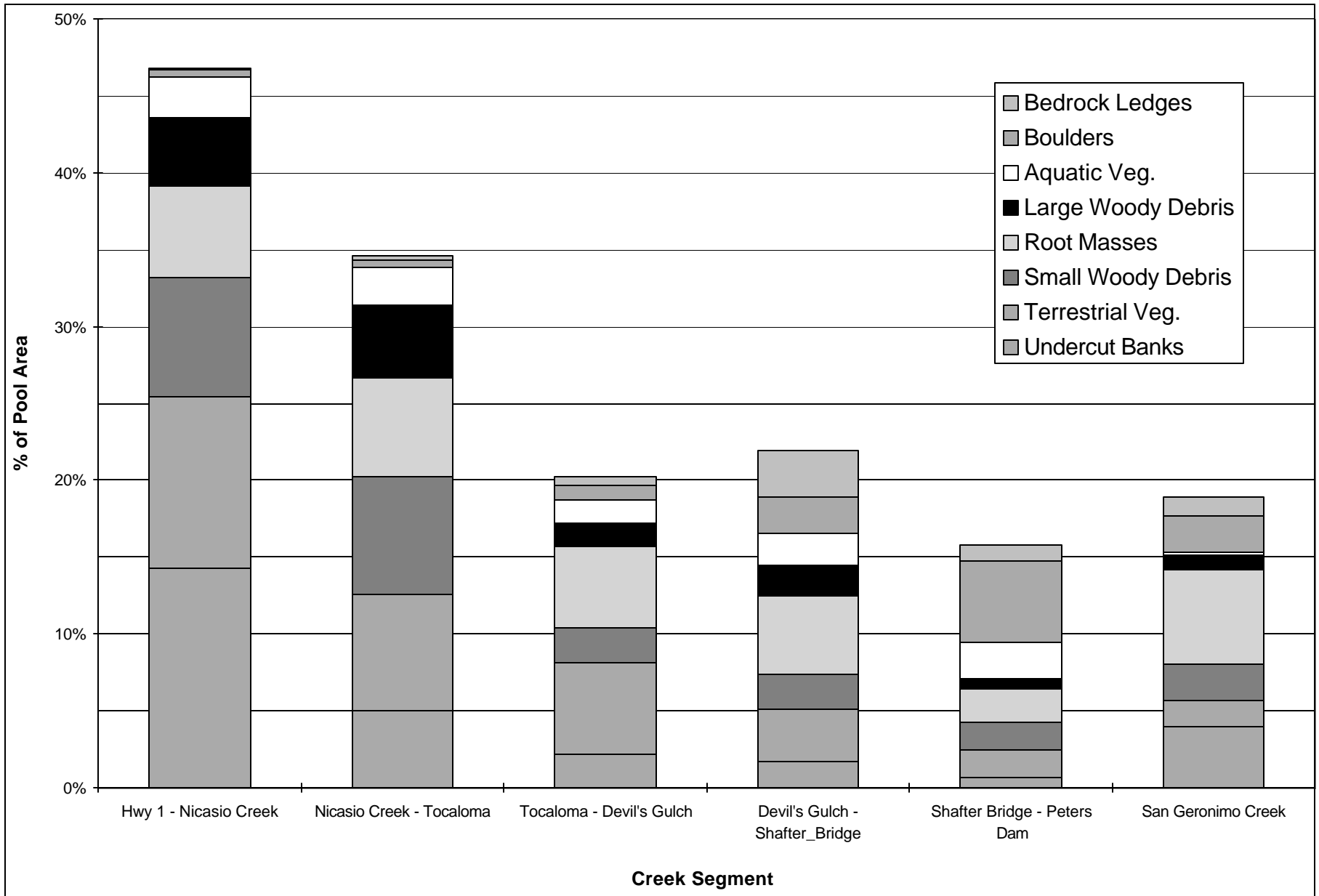
Figure 3. Available fish cover in Lagunitas Creek and San Geronimo Creek pools, 1998 and 1999.

Table 7. Physical Dimensions for Lagunitas Creek, 1997

	Tocaloma to Devil's Gulch	Devil's Gulch to Shafter Bridge	Shafter Bridge to Peters Dam
Creek Width (ft)	19.1	24.3	26.2
Average Pool Depth (ft)	1.2	1.1	1.1
Maximum Pool Depth (ft)	2.9	2.9	2.6
Residual Pool Depth (ft)	2.3	2.2	1.8

Table 8. Physical Dimensions for Lagunitas Creek, 1998-1999

	Highway 1 to Nicasio Creek	Nicasio Creek to Tocaloma	Tocaloma to Devil's Gulch	Devil's Gulch to Shafter Br.	Shafter Bridge to Peters Dam
Creek Width (ft)	25.6	21.2	25.6	31.0	21.5
Ave. Pool Depth (ft)	2.9	2.7	2.1	2.0	1.9
Max. Pool Depth (ft)	5.2	4.8	3.9	4.0	2.8
Res. Pool Depth (ft)	4.7	4.3	3.3	3.3	2.1

3.4 Substrates

We first collected substrate data in 1997 for Lagunitas Creek and again in 1998 and 1999 for Lagunitas and San Geronimo Creeks. Substrate data have not been collected for Devil's Gulch. Between 1997 and 1998, silt, sand and clay decreased in pools by an average of nearly 10%. The proportion of gravel in riffles above Shafter Bridge increased from 28% to 45% and overall the substrate in this segment increased in gravel by 12%. Cobbles above Shafter Bridge decreased from 38% of the substrate in 1997 to 21% in 1998. Other substrate types in the rest of the creek did not show substantial changes between 1997 and 1998.

In 1998, substrates differed significantly between upstream and downstream segments of Lagunitas Creek (Figure 4). Silt, clay and sand comprised nearly 40% of substrates below Tocaloma, while cobble and boulders increased in abundance upstream. Pools tended to have more silt, clay, sand and gravel substrates than did runs and riffles, particularly in the downstream creek segments. Gravel and cobble (spawning substrates) comprised a consistent 51-63% of the creek bed throughout Lagunitas Creek. In San Geronimo Creek, silt, clay and sand were the most common substrates in the upstream half of the creek (i.e. above Larsen Creek) but were somewhat less common downstream. Spawning substrates accounted for 40% of the creek bed in San Geronimo Creek.

3.5 Bank Vegetation

Data on bank vegetation were collected starting in 1997. The dominant vegetation on Lagunitas Creek in 1997 and 1998 was deciduous trees, mostly willow and alder species (Figure 5). Herbaceous cover, coniferous trees and shrubs were dominant to lesser degrees. Habitat units with predominantly bare banks
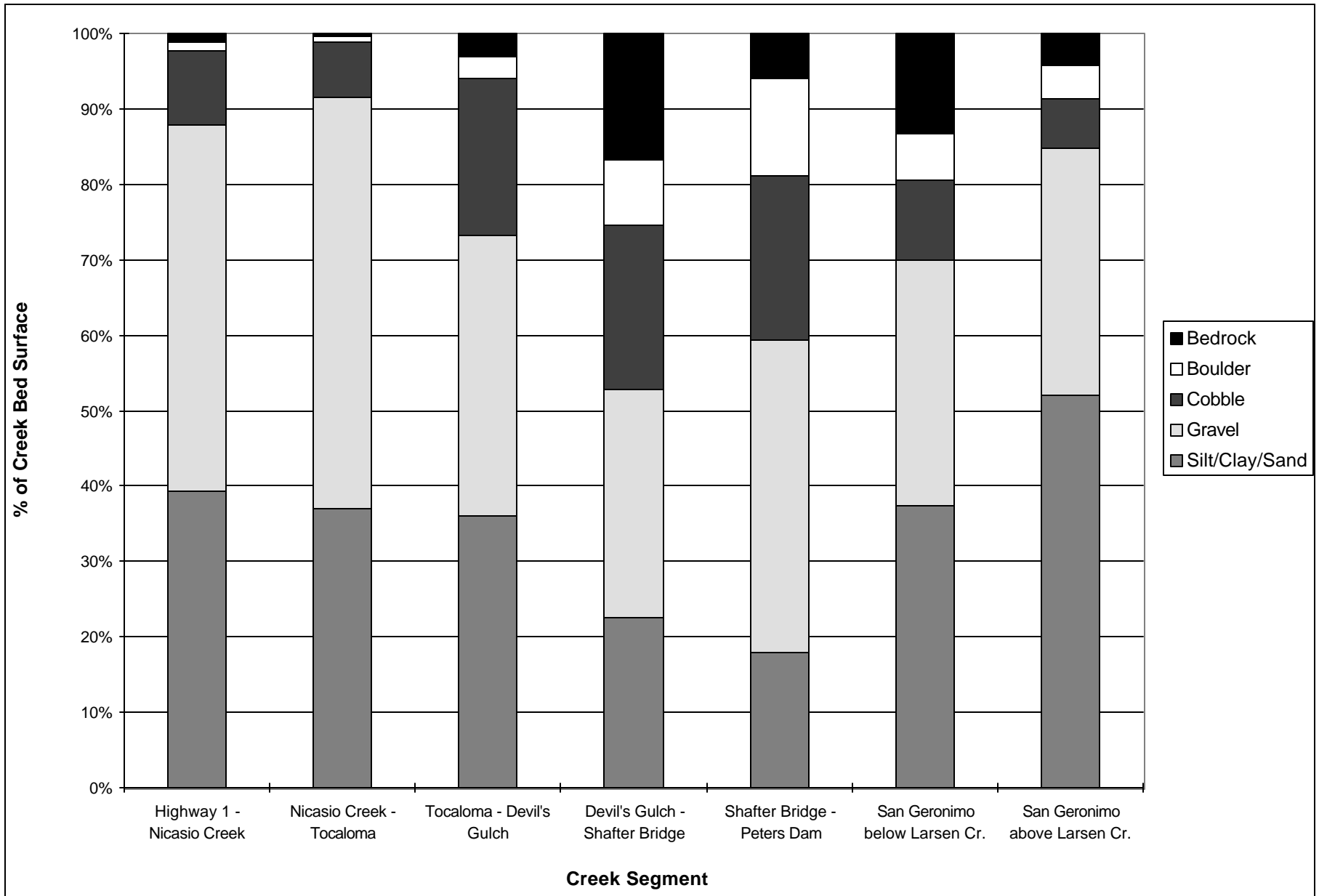
Figure 4. Lagunitas Creek and San Geronimo Creek Substrate, 1998 and 1999.
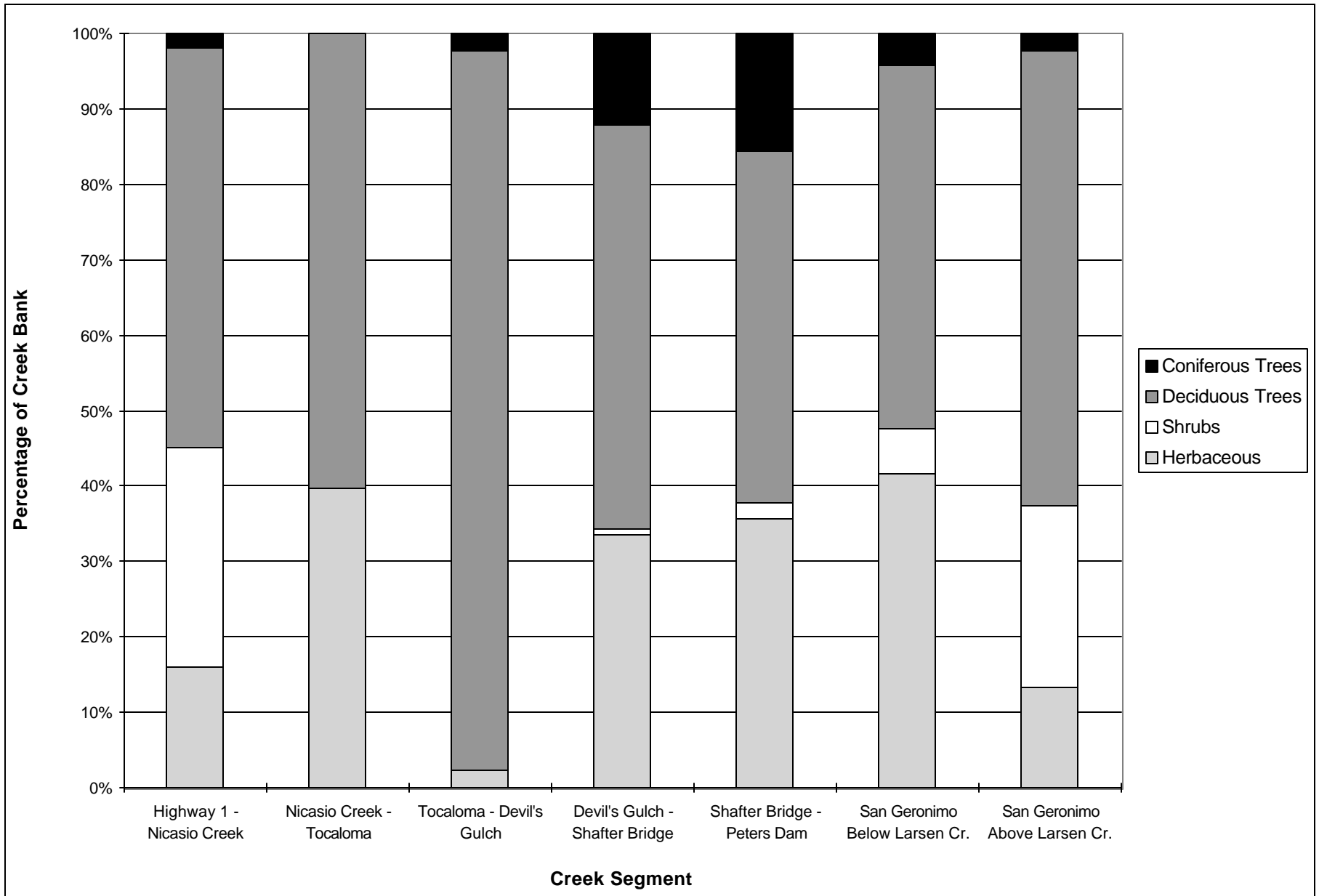
Figure 5. Dominant Bank Vegetation Along Lagunitas and San Geronimo Creeks, 1998-1999.

were almost nonexistent along the surveyed creeks. In 1997 herbaceous cover was dominant along more of Lagunitas Creek than in 1998, particularly between Tocaloma and Devil's Gulch and upstream of Shafter Bridge. Between 1997 and 1998 the amount of creek bank with deciduous trees as the dominant vegetation increased by 32% between Tocaloma and Devil's Gulch and by 23% upstream of Shafter Bridge.

Dominant bank vegetation differed between upstream and downstream halves of San Geronimo Creek (Figure 5). Herbaceous vegetation was dominant along more than 40% of the downstream half of the creek while only 13% of the upper half was dominated by herbaceous vegetation. Shrubs were far more common along the upstream half of the creek than downstream.

4.0 DISCUSSION

4.1 San Geronimo Creek, Devil's Gulch and the Five Segments of Lagunitas Creek

The downstream end of Lagunitas Creek starts as a tidal slough with deep pools and runs, slow flowing water, dense riparian vegetation and a broad floodplain. Tidal influence ends a short distance upstream of Highway 1. The creek becomes somewhat narrower and shallower as one moves upstream, with dense willow riparian cover making human passage difficult. This vegetation, along with abundant undercut banks and woody debris, provide excellent fish cover. Upstream of Tocaloma Bridge the creek becomes wider and more shallow, with more runs and fewer deep pools. Bank vegetation is nearly entirely willows and alders. Above Devil's Gulch the creek flows through a narrow valley in Samuel P. Taylor State Park. Redwoods become a significant part of the bank vegetation and silt, clay and sand substrates give way to increasing amounts of gravel, cobble, boulder and bedrock. Upstream of Shafter Bridge the creek is at it's most shallow, with abundant riffles and fewer pools.

San Geronimo Creek is shallower, narrower, warmer (based on informal observations), with less in-stream cover and with more silt and sand substrates than most of Lagunitas Creek. It's a surprise then that this is an excellent coho producing stream. The answer may lie in the fact that the creek is dominated by well-shaded pools, particularly in it's upper half, and has more riffle habitat than most of Lagunitas Creek. Alternatively, this creek may have become such an important coho stream after access to upstream sections of Lagunitas Creek was blocked by Peters Dam.

Devil's Gulch, another important coho producing stream, has the steepest gradient and the most riffle habitat of any of the creeks surveyed. Cover was not measured quantitatively, but is very complex based on informal observations. Spawning substrates have also not been quantified but are plentiful. Devil's Gulch is the least impacted by human activities of any of these creeks.

4.2 Analysis of the 1995 and 1998 Habitat Typing Data

The proportion of pools in both San Geronimo Creek and Devil's Gulch more than doubled between 1995 and 1998. Runs and riffles showed a correspondingly sharp decrease in abundance. These changes in habitat composition may be the result of El Niño flows scouring runs and riffles into pools or may be the result of when and how the surveys were conducted. The 1995 surveys of San Geronimo Creek and

Devil's Gulch were conducted in April when flows were almost certainly higher than in July and September, when the 1998 surveys were conducted. Higher flows during the 1995 surveys may have resulted in more water surface turbulence and the appearance of large areas of riffles. Habitat units may have been called runs under the high flows of April, 1995 and called pools during the low flows of July, 1998. In addition, higher water levels most likely resulted in the appearance of deeper pools in 1995, while the actual differences in depth may not have been significant. Changes in habitat composition and dimensions in these creeks should be assessed by future surveys during summer low flows.

Total cover available for fish in San Geronimo Creek appeared to increase between 1995 and 1998 (Table 5). The most likely explanation for the increase in cover is the more thorough accounting of habitat cover in 1998. The shelter value of undercut banks and terrestrial and aquatic vegetation was estimated in 1998 but not in 1995. When only comparing woody debris, root masses and boulders, the total cover did not significantly change between 1995 and 1998. Estimated woody debris cover declined in that period, but this decrease may not be significant.

4.3 Analysis of the 1997 and 1998 Habitat Typing Data

The 1997 and 1998 habitat typing data provide an opportunity to assess the effects of El Niño on creek habitat. Stream flows during the winter of 1997/1998 exceeded 5,000 cubic feet per second at the USGS gauge in Samuel P. Taylor State Park, and appear to have caused many physical changes to the segment of Lagunitas Creek upstream of Tocaloma Bridge (the only segment surveyed in both years). Fewer habitats were identified as pools and the proportion of the creek, by length, identified as pools decreased by 12%. The remaining pools, however, were considerably deeper. The creek in this section was, on average, 5 feet wider in 1998. Silt, clay and sand decreased in abundance, particularly in pools, and gravel increased in abundance, particularly in upstream riffles. Cover from large woody debris decreased from 14% of pool surface area to 2% in the segment between Tocaloma and Devil's Gulch. Finally, herbaceous vegetation decreased in dominance by as much as 32%, giving way to deciduous tree cover.

Many of these habitat changes are likely the direct result of high flows. High flows likely scoured many pools, transporting fine particles far downstream and depositing gravel in nearby riffles. For example, the gravel deposited in riffles upstream of Shafter Bridge may have been scoured from the plunge pool below Peters Dam. Run habitat may have increased as shallow pools flattened into runs. Unstable banks may have eroded, widening the creek. Much of the large woody debris identified in 1997 was probably washed downstream or forced out of the summer flow channel by the high flows. High flows were probably not the cause of the observed change in bank vegetation, however. Rather, the subjective nature of identifying the dominant vegetation likely resulted in the appearance of large vegetation changes.

5.0 CONCLUSIONS

The data, as a whole, show that while the Lagunitas Creek drainage has adequate salmonid habitat, including abundant riparian vegetation, certain characteristics of the habitat in many areas could be improved through habitat restoration. For example, silt, clay and sand cover much of the bottom of Lagunitas and San Geronimo Creeks and large woody debris and other types of cover are lacking upstream of Tocaloma

Bridge. These deficiencies are currently the focus of habitat restoration efforts throughout the Lagunitas Creek watershed. Habitat restoration projects include reducing sediment input, planting riparian vegetation, and adding large woody debris and spawning gravel to the creeks. Many of these projects will yield multiple benefits for salmonids, such as large woody debris providing cover while helping to scour deeper pools and riparian vegetation providing cover while stabilizing banks.

The composition of creek habitat is generally difficult to quantify accurately. Habitats may be misidentified or their dimensions measured inaccurately. Additional surveys using the same methodologies, conducted at the same time of year, surveyed by the same staff (ideally) and repeated multiple times will be necessary before robust trends in habitat changes can be assessed.

The habitat typing data collected to date are useful for assessing the quantity and quality of salmonid habitat in the Lagunitas Creek drainage. In the years to come these data will also provide a useful baseline for quantifying expected improvements in salmonid habitat resulting from habitat restoration projects. These improvements will hopefully yield the ultimate goal of improving the size of coho and steelhead populations in the Lagunitas Creek drainage.

6.0 REFERENCES

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APPENDIX A

1992 Lagunitas Creek habitat typing survey data
Nicasio Creek to Shafter Bridge

From Don Kelly and Associates, compiled by Entrix, Inc.
(Trihey & Associates, Inc. 1995)

Lagunitas Creek Habitat Mapping - 1992

SUMMARY FOR STREAM SEGMENTS:

Unit #'s	Total Length (ft)		Pool	Run	Riffle	Glide	Braid	Cascade	STREAM SEGMENT DESCRIPTIVE LOCATION
					CUMMULATIVE HABITAT TYPE LENGTHS (ft.)				
1 - 111	8,723.9		2,733.1	4,094.7	1,546.5	251.2	62.3	36.1	**Nicasio Creek to Tocaloma Bridge;**
		% of Total =	31.3%	46.9%	17.7%	2.9%	0.7%	0.4%	Described as Segment 1 in 1998 habitat report.
1 - 153	13,294.4		4,813.0	6,070.0	1,897.7	336.6	141.0	36.1	**Nicasio Creek to State Park Boundary.**
		% of Total =	36.2%	45.7%	14.3%	2.5%	1.1%	0.3%	Described as Segment 2 in 1992 survey.
154 - 550	26,611.7		6,686.3	10,410.0	3,242.3	5,610.2	554.6	108.3	**State Park Boundary to Shafter Bridge;**
		% of Total =	25.1%	39.1%	12.2%	21.1%	2.1%	0.4%	Described as Segment 3 in 1992 survey.
112 - 550	31,182.2		8,766.2	12,385.3	3,593.5	5,695.6	633.3	108.3	**Tocaloma Bridge to Shafter Bridge;**
		% of Total =	28.1%	39.7%	11.5%	18.3%	2.0%	0.3%	Overall habitat in 1992, Tocaloma-Shafter.
1 - 550	39,906.1		11,499.3	16,480.0	5,140.0	5,946.8	695.6	144.4	**Nicasio Creek to Shafter Bridge;**
		% of Total =	28.8%	41.3%	12.9%	14.9%	1.7%	0.4%	Overall habitat in 1992, Nicasio Cr.-Shafter.

1992 Habitat Typing Data

Unit #	Unit Length	Cumm. Length	Pool	Run	Riffle	Glide	Braid	Cascade
1	81.4	81.4		81.4				
2	137.8	219.2			137.8			
3	83.3	302.5			83.3			
4	11.8	314.3				11.8		
5	46.6	360.9		46.6				
6	16.4	377.3				16.4		
7	128.0	505.3	128.0					
8	36.1	541.4						36.1
9	32.8	574.2	32.8					
10	23.0	597.2		23.0				
11	45.9	643.1			45.9			
12	36.1	679.2				36.1		
13	55.8	735.0	55.8					
14	62.3	797.3	62.3					
15	65.6	862.9		65.6				
16	36.1	899.0			36.1			
17	45.9	944.9	45.9					
18	82.0	1,026.9		82.0				
19	52.5	1,079.4			52.5			
20	16.4	1,095.8				16.4		
21	68.9	1,164.7	68.9					
22	72.2	1,236.9		72.2				
23	62.3	1,299.2			62.3			
24	13.1	1,312.3				13.1		
25	88.6	1,400.9	88.6					
26	59.1	1,460.0		59.1				
27	29.5	1,489.5			29.5			
28	141.1	1,630.6	141.1					
29	45.9	1,676.5		45.9				
30	78.7	1,755.2	78.7					
31	19.7	1,774.9			19.7			
32	16.4	1,791.3				16.4		
33	36.1	1,827.4	36.1					
34	16.4	1,843.8		16.4				
35	65.6	1,909.4	65.6					
36	75.5	1,984.9			75.5			
37	26.2	2,011.1				26.2		
38	29.5	2,040.6	29.5					
39	82.0	2,122.6		82.0				
40	26.2	2,148.8			26.2			
41	72.2	2,221.0		72.2				
42	29.5	2,250.5			29.5			
43	91.9	2,342.4		91.9				
44	16.4	2,358.8				16.4		
45	95.1	2,453.9	95.1					
46	62.3	2,516.2	62.3					
47	82.0	2,598.2		82.0				
48	121.4	2,719.6			121.4			
49	16.4	2,736.0				16.4		
50	75.5	2,811.5	75.5					
51	236.2	3,047.7		236.2				
52	134.5	3,182.2	134.5					
53	82.0	3,264.2			82.0			
54	239.5	3,503.7		239.5				
55	39.4	3,543.1		39.4				
56	23.0	3,566.1			23.0			
57	39.4	3,605.5		39.4				
58	23.0	3,628.5				23.0		
59	88.6	3,717.1	88.6					
60	36.1	3,753.2		36.1				
61	45.9	3,799.1			45.9			
62	72.2	3,871.3		72.2				
63	29.5	3,900.8	29.5					
64	52.5	3,953.3			52.5			
65	52.5	4,005.8			52.5			
66	65.6	4,071.4		65.6				
67	32.8	4,104.2			32.8			
68	62.3	4,166.5						62.3
69	154.2	4,320.7		154.2				
70	26.2	4,346.9			26.2			
71	124.7	4,471.6		124.7				
72	351.1	4,822.7	351.1					
73	32.8	4,855.5		32.8				
74	16.4	4,871.9				16.4		
75	59.1	4,931.0	59.1					
76	108.3	5,039.3	108.3					
77	183.7	5,223.0		183.7				
78	13.1	5,236.1				13.1		
79	223.1	5,459.2		223.1				
80	52.5	5,511.7			52.5			
81	262.5	5,774.2		262.5				
82	91.9	5,866.1			91.9			
83	203.4	6,069.5		203.4				
84	19.7	6,089.2			19.7			
85	128.0	6,217.2	128.0					
86	114.8	6,332.0		114.8				
87	16.4	6,348.4			16.4			
88	49.2	6,397.6	49.2					
89	59.1	6,456.7		59.1				
90	32.8	6,489.5			32.8			
91	137.8	6,627.3		137.8				
92	49.2	6,676.5			49.2			
93	167.3	6,843.8		167.3				
94	298.6	7,142.4	298.6					
95	23.0	7,165.4			23.0			
96	154.2	7,319.6		154.2				
97	49.2	7,368.8	49.2					
98	36.1	7,404.9			36.1			
99	141.1	7,546.0		141.1				
100	23.0	7,569.0	23.0					
101	128.0	7,697.0		128.0				
102	36.1	7,733.1			36.1			
103	150.9	7,884.0		150.9				
104	85.3	7,969.3				85.3		
105	111.6	8,080.9	111.6					
106	160.8	8,241.7		160.8				
107	121.4	8,363.1	121.4					
108	49.2	8,412.3		49.2				
109	114.8	8,527.1	114.8					
110	45.9	8,573.0		45.9				
111	150.9	8,723.9				150.9		
112	410.1	9,134.0		410.1				
113	52.5	9,186.5				52.5		
114	157.5	9,344.0		157.5				
115	36.1	9,380.1			36.1			
116	311.7	9,691.8		311.7				
117	42.7	9,734.5				42.7		
118	19.7	9,754.2				19.7		
119	282.2	10,036.4	282.2					
120	141.1	10,177.5		141.1				
121	495.4	10,672.9	495.4					
122	150.9	10,823.8		150.9				
123	62.3	10,886.1	62.3					
124	649.6	11,535.7	649.6					
125	45.9	11,581.6		45.9				
126	49.2	11,630.8				49.2		
127	180.5	11,811.3		180.5				
128	16.4	11,827.7				16.4		
129	82.0	11,909.7		82.0				
130	26.2	11,935.9	26.2					
131	55.8	11,991.7		55.8				
132	65.6	12,057.3	65.6					
133	39.4	12,096.7				39.4		
134	36.1	12,132.8					36.1	
135	32.8	12,165.6	32.8					
136	59.1	12,224.7		59.1				
137	26.2	12,250.9	26.2					
138	52.5	12,303.4		52.5				
139	91.9	12,395.3				91.9		
140	45.9	12,441.2	45.9					
141	39.4	12,480.6		39.4				
142	23.0	12,503.6				23.0		
143	23.0	12,526.6				23.0		
144	200.1	12,726.7	200.1					
145	59.1	12,785.8		59.1				
146	154.2	12,940.0	154.2					
147	95.1	13,035.1		95.1				
148	26.2	13,061.3						26.2
149	6.6	13,067.9				6.6		
150	39.4	13,107.3	39.4					
151	42.7	13,150.0		42.7				
152	52.5	13,202.5						52.5
153	91.9	13,294.4		91.9				
154	75.5	13,369.9	75.5					
155	164.1	13,534.0		164.1				
156	82.0	13,616.0				82.0		
157	65.6	13,681.6		65.6				
158	19.7	13,701.3				19.7		
159	75.5	13,776.8	75.5					
160	82.0	13,858.8	82.0					
161	121.4	13,980.2		121.4				
162	62.3	14,042.5	62.3					
163	49.2	14,091.7		49.2				
164	16.4	14,108.1				16.4		
165	16.4	14,124.5		16.4				
166	16.4	14,140.9				16.4		
167	131.2	14,272.1	131.2					
168	78.7	14,350.8		78.7				
169	131.2	14,482.0		131.2				
170	29.5	14,511.5				29.5		
171	62.3	14,573.8		62.3				
172	62.3	14,636.1				62.3		
173	52.5	14,688.6		52.5				
174	65.6	14,754.2				65.6		
175	62.3	14,816.5					62.3	
176	147.6	14,964.1		147.6				
177	154.2	15,118.3	154.2					
178	39.4	15,157.7		39.4				
179	68.9	15,226.6				68.9		
180	26.2	15,252.8		26.2				
181	13.1	15,265.9					13.1	
182	213.3	15,479.2	213.3					
183	187.0	15,666.2		187.0				
184	55.8	15,722.0				55.8		
185	62.3	15,784.3	62.3					
186	29.5	15,813.8				29.5		
187	36.1	15,849.9					36.1	
188	196.9	16,046.8	196.9					
189	78.7	16,125.5		78.7				
190	45.9	16,171.4				45.9		
191	13.1	16,184.5					13.1	
192	239.5	16,424.0		239.5				
193	23.0	16,447.0	23.0					
194	45.9	16,492.9		45.9				
195	59.1	16,552.0				59.1		
196	82.0	16,634.0						82.0
197	32.8	16,666.8					32.8	
198	301.9	16,968.7		301.9				
199	32.8	17,001.5		32.8				
200	13.1	17,014.6					13.1	

1992 Habitat Typing Data

Unit #	Unit Length	Cumm. Length	Pool	Run	Riffle	Glide	Braid	Cascade
201	45.9	17,060.5	45.9					
202	98.4	17,158.9		98.4				
203	68.9	17,227.8			68.9			
204	32.8	17,260.6				32.8		
205	108.3	17,368.9		108.3				
206	13.1	17,382.0			13.1			
207	16.4	17,398.4				16.4		
208	32.8	17,431.2		32.8				
209	98.4	17,529.6	98.4					
210	88.6	17,618.2		88.6				
211	36.1	17,654.3				36.1		
212	68.9	17,723.2		68.9				
213	19.7	17,742.9				19.7		
214	52.5	17,795.4		52.5				
215	32.8	17,828.2		32.8				
216	32.8	17,861.0				32.8		
217	98.4	17,959.4		98.4				
218	42.7	18,002.1		42.7				
219	23.0	18,025.1			23.0			
220	32.8	18,057.9				32.8		
221	49.2	18,107.1	49.2					
222	39.4	18,146.5	39.4					
223	85.3	18,231.8		85.3				
224	42.7	18,274.5	42.7					
225	78.7	18,353.2		78.7				
226	32.8	18,386.0		32.8				
227	36.1	18,422.1			36.1			
228	19.7	18,441.8		19.7				
229	32.8	18,474.6		32.8				
230	19.7	18,494.3			19.7			
231	88.6	18,582.9		88.6				
232	9.8	18,592.7				9.8		
233	13.1	18,605.8			13.1			
234	203.4	18,809.2		203.4				
235	78.7	18,887.9	78.7					
236	259.2	19,147.1	259.2					
237	29.5	19,176.6		29.5				
238	39.4	19,216.0				39.4		
239	23.0	19,239.0			23.0			
240	52.5	19,291.5	52.5					
241	42.7	19,334.2		42.7				
242	32.8	19,367.0			32.8			
243	9.8	19,376.8				9.8		
244	26.2	19,403.0	26.2					
245	19.7	19,422.7	19.7					
246	45.9	19,468.6	45.9					
247	19.7	19,488.3	19.7					
248	23.0	19,511.3				23.0		
249	9.8	19,521.1				9.8		
250	82.0	19,603.1	82.0					
251	16.4	19,619.5	16.4					
252	36.1	19,655.6		36.1				
253	85.3	19,740.9		85.3				
254	91.9	19,832.8						91.9
255	9.8	19,842.6			9.8			
256	26.2	19,868.8				26.2		
257	85.3	19,954.1				85.3		
258	23.0	19,977.1			23.0			
259	29.5	20,006.6				29.5		
260	65.6	20,072.2	65.6					
261	105.0	20,177.2		105.0				
262	39.4	20,216.6			39.4			
263	32.8	20,249.4				32.8		
264	9.8	20,259.2		9.8				
265	59.1	20,318.3				59.1		
266	128.0	20,446.3		128.0				
267	39.4	20,485.7			39.4			
268	32.8	20,518.5		32.8				
269	108.3	20,626.8				108.3		
270	42.7	20,669.5		42.7				
271	13.1	20,682.6	13.1					
272	29.5	20,712.1			29.5			
273	29.5	20,741.6				29.5		
274	85.3	20,826.9	85.3					
275	59.1	20,886.0		59.1				
276	23.0	20,909.0			23.0			
277	23.0	20,932.0				23.0		
278	36.1	20,968.1	36.1					
279	42.7	21,010.8						42.7
280	36.1	21,046.9			36.1			
281	32.8	21,079.7				32.8		
282	19.7	21,099.4		19.7				
283	52.5	21,151.9			52.5			
284	9.8	21,161.7				9.8		
285	262.5	21,424.2	262.5					
286	68.9	21,493.1				68.9		
287	55.8	21,548.9		55.8				
288	19.7	21,568.6			19.7			
289	26.2	21,594.8				26.2		
290	82.0	21,676.8	82.0					
291	19.7	21,696.5		19.7				
292	23.0	21,719.5			23.0			
293	26.2	21,745.7				26.2		
294	72.2	21,817.9		72.2				
295	23.0	21,840.9				23.0		
296	52.5	21,893.4	52.5					
297	19.7	21,913.1			19.7			
298	36.1	21,949.2	36.1					
299	19.7	21,968.9						19.7
300	42.7	22,011.6		42.7				

Unit #	Unit Length	Cumm. Length	Pool	Run	Riffle	Glide	Braid	Cascade
301	29.5	22,041.1			29.5			
302	26.2	22,067.3		26.2				
303	78.7	22,146.0			78.7			
304	85.3	22,231.3		85.3				
305	23.0	22,254.3				23.0		
306	29.5	22,283.8				29.5		
307	124.7	22,408.5	124.7					
308	36.1	22,444.6		36.1				
309	45.9	22,490.5				45.9		
310	9.8	22,500.3				9.8		
311	42.7	22,543.0		42.7				
312	32.8	22,575.8				32.8		
313	170.6	22,746.4	170.6					
314	177.2	22,923.6				177.2		
315	52.5	22,976.1	52.5					
316	49.2	23,025.3	49.2					
317	32.8	23,058.1		32.8				
318	88.6	23,146.7	88.6					
319	39.4	23,186.1		39.4				
320	6.6	23,192.7	6.6					
321	23.0	23,215.7				23.0		
322	23.0	23,238.7				23.0		
323	98.4	23,337.1	98.4					
324	3.3	23,340.4					3.3	
325	108.3	23,448.7	108.3					
326	6.6	23,455.3				6.6		
327	82.0	23,537.3	82.0					
328	82.0	23,619.3		82.0				
329	19.7	23,639.0				19.7		
330	9.8	23,648.8				9.8		
331	39.4	23,688.2	39.4					
332	49.2	23,737.4				49.2		
333	157.5	23,894.9	157.5					
334	16.4	23,911.3		16.4				
335	26.2	23,937.5				26.2		
336	105.0	24,042.5		105.0				
337	26.2	24,068.7				26.2		
338	16.4	24,085.1				16.4		
339	68.9	24,154.0	68.9					
340	39.4	24,193.4		39.4				
341	29.5	24,222.9				29.5		
342	36.1	24,259.0		36.1				
343	62.3	24,321.3	62.3					
344	42.7	24,364.0		42.7				
345	42.7	24,406.7				42.7		
346	32.8	24,439.5	32.8					
347	121.4	24,560.9				121.4		
348	32.8	24,593.7		32.8				
349	45.9	24,639.6				45.9		
350	16.4	24,656.0		16.4				
351	16.4	24,672.4				16.4		
352	101.7	24,774.1		101.7				
353	26.2	24,800.3		26.2				
354	101.7	24,902.0		101.7				
355	68.9	24,970.9					68.9	
356	105.0	25,075.9				105.0		
357	26.2	25,102.1		26.2				
358	6.6	25,108.7				6.6		
359	49.2	25,157.9		49.2				
360	131.2	25,289.1	131.2					
361	32.8	25,321.9				32.8		
362	131.2	25,453.1	131.2					
363	78.7	25,531.8		78.7				
364	147.6	25,679.4				147.6		
365	85.3	25,764.7	85.3					
366	65.6	25,830.3			65.6			
367	134.5	25,964.8				134.5		
368	196.9	26,161.7	196.9					
369	196.9	26,358.6		196.9				
370	62.3	26,420.9				62.3		
371	26.2	26,447.1				26.2		
372	213.3	26,660.4	213.3					
373	153.6	26,814.0		153.6				
374	0.7	26,814.7				0.7		
375	65.6	26,880.3		65.6				
376	111.6	26,991.9				111.6		
377	42.7	27,034.6		42.7				
378	65.6	27,100.2				65.6		
379	49.2	27,149.4		49.2				
380	39.4	27,188.8				39.4		
381	98.4	27,287.2	98.4					
382	42.7	27,329.9		42.7				
383	6.6	27,336.5				6.6		
384	85.3	27,421.8				85.3		
385	108.3	27,530.1		108.3				
386	26.2	27,556.3				26.2		
387	42.7	27,599.0		42.7				
388	42.7	27,641.7				42.7		
389	26.2	27,667.9				26.2		
390	374.0	28,041.9		374.0				
391	72.2	28,114.1				72.2		
392	29.5	28,143.6				29.5		
393	19.7	28,163.3				19.7		
394	108.3	28,271.6		108.3				
395	160.8	28,432.4				160.8		
396	52.5	28,484.9		52.5				
397	6.6	28,491.5				6.6		
398	196.9	28,688.4				196.9		
399	82.0	28,770.4		82.0				
400	13.1	28,783.5		13.1				

1992 Habitat Typing Data

Unit #	Unit Length	Cumm. Length	Pool	Run	Riffle	Glide	Braid	Cascade
401	26.2	28,809.7		26.2				
402	52.5	28,862.2			52.5			
403	78.7	28,940.9				78.7		
404	49.2	28,990.1		49.2				
405	16.4	29,006.5	16.4					
406	55.8	29,062.3		55.8				
407	52.5	29,114.8				52.5		
408	128.0	29,242.8			128.0			
409	72.2	29,315.0		72.2				
410	32.8	29,347.8	32.8					
411	26.2	29,374.0			26.2			
412	147.6	29,521.6		147.6				
413	23.0	29,544.6				23.0		
414	23.0	29,567.6		23.0				
415	72.2	29,639.8	72.2					
416	75.5	29,715.3		75.5				
417	32.8	29,748.1		32.8				
418	49.2	29,797.3				49.2		
419	13.1	29,810.4				13.1		
420	42.7	29,853.1				42.7		
421	32.8	29,885.9			32.8			
422	52.5	29,938.4				52.5		
423	59.1	29,997.5		59.1				
424	23.0	30,020.5			23.0			
425	68.9	30,089.4		68.9				
426	141.1	30,230.5		141.1				
427	114.8	30,345.3		114.8				
428	131.2	30,476.5		131.2				
429	13.1	30,489.6		13.1				
430	9.8	30,499.4				9.8		
431	45.9	30,545.3		45.9				
432	45.9	30,591.2				45.9		
433	19.7	30,610.9		19.7				
434	131.2	30,742.1				131.2		
435	59.1	30,801.2				59.1		
436	72.2	30,873.4		72.2				
437	101.7	30,975.1		101.7				
438	42.7	31,017.8						42.7
439	75.5	31,093.3				75.5		
440	91.9	31,185.2		91.9				
441	59.1	31,244.3			59.1			
442	68.9	31,313.2				68.9		
443	49.2	31,362.4		49.2				
444	105.0	31,467.4		105.0				
445	49.2	31,516.6			49.2			
446	105.0	31,621.6					105.0	
447	88.6	31,710.2				88.6		
448	206.7	31,916.9				206.7		
449	262.5	32,179.4	262.5					
450	36.1	32,215.5		36.1				
451	68.9	32,284.4						68.9
452	39.4	32,323.8				39.4		
453	167.3	32,491.1	167.3					
454	173.9	32,665.0				173.9		
455	59.1	32,724.1		59.1				
456	32.8	32,756.9			32.8			
457	39.4	32,796.3				39.4		
458	32.8	32,829.1	32.8					
459	16.4	32,845.5		16.4				
460	32.8	32,878.3			32.8			
461	23.0	32,901.3				23.0		
462	167.3	33,068.6		167.3				
463	26.2	33,094.8			26.2			
464	29.5	33,124.3				29.5		
465	52.5	33,176.8		52.5				
466	9.8	33,186.6				9.8		
467	26.2	33,212.8			26.2			
468	65.6	33,278.4			65.6			
469	55.8	33,334.2		55.8				
470	88.6	33,422.8				88.6		
471	16.4	33,439.2			16.4			
472	121.4	33,560.6				121.4		
473	59.1	33,619.7		59.1				
474	23.0	33,642.7			23.0			
475	98.4	33,741.1				98.4		
476	19.7	33,760.8				19.7		
477	36.1	33,796.9		36.1				
478	72.2	33,869.1			72.2			
479	29.5	33,898.6				29.5		
480	134.5	34,033.1	134.5					
481	216.5	34,249.6		216.5				
482	39.4	34,289.0			39.4			
483	32.8	34,321.8				32.8		
484	39.4	34,361.2	39.4					
485	95.1	34,456.3	95.1					
486	32.8	34,489.1		32.8				
487	32.8	34,521.9			32.8			
488	72.2	34,594.1				72.2		
489	114.8	34,708.9	114.8					
490	111.6	34,820.5		111.6				
491	19.7	34,840.2			19.7			
492	118.1	34,958.3				118.1		
493	19.7	34,978.0		19.7				
494	19.7	34,997.7			19.7			
495	108.3	35,106.0				108.3		
496	88.6	35,194.6			88.6			
497	59.1	35,253.7		59.1				
498	91.9	35,345.6					91.9	
499	36.1	35,381.7			36.1			
500	265.8	35,647.5	265.8					
501	52.5	35,700.0		52.5				
502	111.6	35,811.6				111.6		
503	29.5	35,841.1			29.5			
504	29.5	35,870.6		29.5				
505	16.4	35,887.0						16.4
506	98.4	35,985.4		98.4				
507	49.2	36,034.6				49.2		
508	13.1	36,047.7				13.1		
509	285.4	36,333.1	285.4					
510	59.1	36,392.2				59.1		
511	121.4	36,513.6				121.4		
512	23.0	36,536.6				23.0		
513	19.7	36,556.3				19.7		
514	75.5	36,631.8	75.5					
515	144.4	36,776.2		144.4				
516	16.4	36,792.6				16.4		
517	36.1	36,828.7				36.1		
518	88.6	36,917.3		88.6				
519	23.0	36,940.3				23.0		
520	68.9	37,009.2		68.9				
521	32.8	37,042.0				32.8		
522	29.5	37,071.5				29.5		
523	190.3	37,261.8	190.3					
524	85.3	37,347.1		85.3				
525	85.3	37,432.4				85.3		
526	131.2	37,563.6	131.2					
527	147.6	37,711.2		147.6				
528	98.4	37,809.6				98.4		
529	88.6	37,898.2		88.6				
530	72.2	37,970.4				72.2		
531	98.4	38,068.8		98.4				
532	68.9	38,137.7				68.9		
533	111.6	38,249.3				111.6		
534	98.4	38,347.7	98.4					
535	288.7	38,636.4				288.7		
536	374.0	39,010.4		374.0				
537	29.5	39,039.9						29.5
538	111.6	39,151.5		111.6				
539	19.7	39,171.2				19.7		
540	16.4	39,187.6				16.4		
541	121.4	39,309.0		121.4				
542	32.8	39,341.8				32.8		
543	91.9	39,433.7				91.9		
544	78.7	39,512.4	78.7					
545	114.8	39,627.2		114.8				
546	52.5	39,679.7				52.5		
547	42.7	39,722.4	42.7					
548	52.5	39,774.9		52.5				
549	95.1	39,870.0		95.1				
550	36.1	39,906.1		36.1				
	39906.1		11499.3	16480.0	5140.0	5946.8	695.6	144.4

APPENDIX B

1995 San Geronimo Creek and Devil's Gulch habitat typing survey data

From Trihey & Associates, Inc. (1995)

1995 San Geronimo Creek Habitat Typing Data

Unit #	Station	Type	Length (ft)	Width (ft)	Max Depth	Pool Tail Crest	Residual Depth	Boulder Cover	Woody Debris	Root Mass Cover	Surface Area	Unit Cover	Cum. Pool	Cum. Riffle	Cum. Run
1	73	POOL	73	21	4.5	0.2	4.3	15%			1533	229.95	73	0	0
2	91	POOL	18	19.5	5.3	1	4.3	25%			351	87.75	91	0	0
3	108	POOL	17	17	11.3	0.5	10.8	15%			289	43.35	108	0	0
4	123	POOL	15	15	1.6	0.9	0.7				225	0	123	0	0
5	160	POOL	37	10	6	1	5	20%			370	74	160	0	0
6	173	POOL	13	9	3	0.5	2.5	5%			117	5.85	173	0	0
7	173	RIFFLE	0									0	173	0	0
8	198	POOL	25	10.5	1.4	1	0.4				262.5	0	198	0	0
9	248	RIFFLE	50	7							350	0	198	50	0
10	300	RUN	52	13							676	0	198	50	52
11	318	POOL	18	15	2	1	1		5%		270	13.5	216	50	52
12	342	RUN	24	13							312	0	216	50	76
13	342	RIFFLE	0									0	216	50	76
14	368	POOL	26	16.5	1.8	0.9	0.9	10%			429	42.9	242	50	76
15	405	RUN	37	22							814	0	242	50	113
16	405	POOL	0									0	242	50	113
17	440	RIFFLE	35	24							840	0	242	85	113
18	476	POOL	36	15.5	2.3	0.6	1.7				558	0	278	85	113
19	486	POOL	10	12	1.5	0.6	0.9				120	0	288	85	113
20	500	POOL	14	11	2.2	0.8	1.4	5%			154	7.7	302	85	113
21	535	POOL	35	12	2.3	1.1	1.2	25%			420	105	337	85	113
22	535	RUN	0									0	337	85	113
23	598	RIFFLE	63	11							693	0	337	148	113
24	623	POOL	25	11	2.1	0.6	1.5	5%			275	13.75	362	148	113
25	658	RIFFLE	35	15							525	0	362	183	113
26	742	RUN	84	25							2100	0	362	183	197
27	763	RIFFLE	21	20							420	0	362	204	197
28	806	POOL	43	14	2.1	0.2	1.9				602	0	405	204	197
29	828	RUN	22	9.5							209	0	405	204	219
30	860	RIFFLE	32	29							928	0	405	236	219
31	946	RUN	86	25							2150	0	405	236	305
32	1056	RUN	110	21							2310	0	405	236	415
33	1056	RIFFLE	0									0	405	236	415
34	1191	RIFFLE	135	25.5							3442.5	0	405	371	415
35	1191	RIFFLE	0									0	405	371	415
36	1279	POOL	88	30	2.2	1	1.2		5%		2640	132	493	371	415
37	1548	RIFFLE	269	20							5380	0	493	640	415
38	1646	POOL	98	17.5	2.6	1	1.6	10%			1715	171.5	591	640	415
39	1646	RUN	0									0	591	640	415
40	1694	POOL	48	15	2	1.2	0.8	15%			720	108	639	640	415
41	1694	RIFFLE	0									0	639	640	415
42	1742	POOL	48	25	2.2	0.7	1.5	10%	10%		1200	240	687	640	415
43	1811	RUN	69	23							1587	0	687	640	484
44	1845	POOL	34	18.5	3.5	0.9	2.6		25%	5%	629	188.7	721	640	484
45	1877	RIFFLE	32	16							512	0	721	672	484
46	1916	RUN	39	12.5							487.5	0	721	672	523
47	2019	POOL	103	14	2.5	0.6	1.9				1442	0	824	672	523
48	2019	RUN	0									0	824	672	523
49	2058	POOL	39	11	1.6	1.2	0.4				429	0	863	672	523
50	2085	RIFFLE	27	12							324	0	863	699	523
51	2106	RUN	21	13							273	0	863	699	544
52	2128	POOL	22	15	2	0.4	1.6			5%	330	16.5	885	699	544
53	2193	RIFFLE	65	14.5							942.5	0	885	764	544
54	2222	RUN	29	15.5							449.5	0	885	764	573
55	2238	RIFFLE	16	15.5							248	0	885	780	573
56	2238	RUN	0									0	885	780	573
57	2355	RIFFLE	117	14							1638	0	885	897	573
58	2509	POOL	154	18.5	2.1	0.5	1.6				2849	0	1039	897	573
59	2561	POOL	52	17	2.5	0.9	1.6				884	0	1091	897	573
60	2585	RUN	24	14							336	0	1091	897	597
61	2629	RIFFLE	44	14.5							638	0	1091	941	597
62	2647	RUN	18	14							252	0	1091	941	615
63	2662	RIFFLE	15	16							240	0	1091	956	615
64	2684	RUN	22	13							286	0	1091	956	637
65	2721	RIFFLE	37	19							703	0	1091	993	637
66	2744	RUN	23	15.5							356.5	0	1091	993	660
67	2767	RIFFLE	23	17							391	0	1091	1016	660
68	2835	RUN	68	15							1020	0	1091	1016	728
69	2868	RIFFLE	33	24.5							808.5	0	1091	1049	728
70	2975	RUN	107	17.2							1840.4	0	1091	1049	835
71	2975	RIFFLE	0									0	1091	1049	835
72	3063	RIFFLE	88	13.5							1188	0	1091	1137	835
73	3116	RUN	53	14							742	0	1091	1137	888
74	3155	RIFFLE	39	14							546	0	1091	1176	888
75	3189	POOL	34	27	2.3	0.6	1.7			15%	918	137.7	1125	1176	888

Unit #	Station	Type	Length (ft)	Width (ft)	Max Depth	Pool Tail Crest	Residual Depth	Boulder Cover	Woody Debris	Root Mass Cover	Surface Area	Unit Cover	Cum. Pool	Cum. Riffle	Cum. Run
76	3189	RUN	0									0	1125	1176	888
77	3258	POOL	69	30	2.8	0.8	2		65%	5%	2070	1449	1194	1176	888
78	3316	RUN	58	14.5							841	0	1194	1176	946
79	3354	RUN	38	11							418	0	1194	1176	984
80	3374	RIFFLE	20	10.5							210	0	1194	1196	984
81	3404	RUN	30	25							750	0	1194	1196	1014
82	3438	POOL	34	14	2.4	0.5	1.9			5%	476	23.8	1228	1196	1014
83	3438	RIFFLE	0									0	1228	1196	1014
84	3480	RUN	42	12.5							525	0	1228	1196	1056
85	3533	POOL	53	19	2.7	0.3	2.4				1007	0	1281	1196	1056
86	3588	RUN	55	15							825	0	1281	1196	1111
87	3607	POOL	19	13	2.6	0.3	2.3			5%	247	12.35	1300	1196	1111
88	3650	RIFFLE	43	19.5							838.5	0	1300	1239	1111
89	3773	RUN	123	18							2214	0	1300	1239	1234
90	3805	RIFFLE	32	14							448	0	1300	1271	1234
91	3871	POOL	66	14	3.4	0.2	3.2			5%	924	46.2	1366	1271	1234
92	3871	RUN	0									0	1366	1271	1234
93	3907	POOL	36	16.5	2.2	0.2	2			5%	594	29.7	1402	1271	1234
94	3956	RIFFLE	49	30							1470	0	1402	1320	1234
95	4033	RUN	77	26							2002	0	1402	1320	1311
96	4065	RIFFLE	32	12.5							400	0	1402	1352	1311
97	4126	POOL	61	19	4.8	0.6	4.2			5%	1159	57.95	1463	1352	1311
98	4162	POOL	36	11	1.6	0.5	1.1				396	0	1499	1352	1311
99	4184	RIFFLE	22	9.5							209	0	1499	1374	1311
100	4231	RUN	47	9							423	0	1499	1374	1358
101	4272	POOL	41	14	1.9	0.5	1.4			5%	574	28.7	1540	1374	1358
102	4272	RIFFLE	0									0	1540	1374	1358
103	4360	POOL	88	20	2.1	0.4	1.7			5%	1760	88	1628	1374	1358
104	4398	RIFFLE	38	18							684	0	1628	1412	1358
105	4489	POOL	91	22	2.3	0.45	1.85			5%	2002	100.1	1719	1412	1358
106	4593	RIFFLE	104	35							3640	0	1719	1516	1358
107	4653	RUN	60	31							1860	0	1719	1516	1418
108	4715	POOL	62	35	4.9	0.5	4.4	5%		5%	2170	217	1781	1516	1418
109	4780	RUN	65	30							1950	0	1781	1516	1483
110	4814	POOL	34	30	2.3	0.9	1.4				1020	0	1815	1516	1483
111	4861	RUN	47	14.5							681.5	0	1815	1516	1530
112	4905	RUN	44	20							880	0	1815	1516	1574
113	4974	POOL	69	16	2.2	0.6	1.6				1104	0	1884	1516	1574
114	4991	RIFFLE	17	10							170	0	1884	1533	1574
115	5018	RIFFLE	27	28							756	0	1884	1560	1574
116	5131	POOL	113	26	3.4	0.8	2.6				2938	0	1997	1560	1574
117	5181	RIFFLE	50	28							1400	0	1997	1610	1574
118	5222	RUN	41	18							738	0	1997	1610	1615
119	5248	RIFFLE	26	25							650	0	1997	1636	1615
120	5290	RUN	42	22							924	0	1997	1636	1657
121	5316	RIFFLE	26	9.5							247	0	1997	1662	1657
122	5402	POOL	86	30	4.4	1	3.4	5%			2580	129	2083	1662	1657
123	5471	RIFFLE	69	10							690	0	2083	1731	1657
124	5535	RUN	64	11							704	0	2083	1731	1721
125	5577	RIFFLE	42	11							462	0	2083	1773	1721
126	5603	POOL	26	17.5	2.2	0.6	1.6			5%	455	22.75	2109	1773	1721
127	5603	RIFFLE	0									0	2109	1773	1721
128	5661	POOL	58	15.5	3.3	0.2	3.1				899	0	2167	1773	1721
129	5733	RIFFLE	72	22.5							1620	0	2167	1845	1721
130	5827	RUN	94	19							1786	0	2167	1845	1815
131	5873	RIFFLE	46	7							322	0	2167	1891	1815
132	5979	POOL	106	26	4.3	0.6	3.7			10%	2756	275.6	2273	1891	1815
133	6036	RUN	57	17							969	0	2273	1891	1872
134	6140	RUN	104	16							1664	0	2273	1891	1976
135	6184	POOL	44	20	3.8	0.6	3.2				880	0	2317	1891	1976
136	6261	RUN	77	18							1386	0	2317	1891	2053
137	6273	RIFFLE	12	12							144	0	2317	1903	2053
138	6328	RUN	55	13							715	0	2317	1903	2108
139	6346	RIFFLE	18	13							234	0	2317	1921	2108
140	6546	RUN	200	13							2600	0	2317	1921	2308
141a	6591	RIFFLE	45	10							450	0	2317	1966	2308
141b	6621	POOL	30	9.5	1.2	0.6	0.6			5%	285	14.25	2347	1966	2308
142	6666	POOL	45	20	2.8	0.6	2.2		50%		900	450	2392	1966	2308
143	6740	POOL	74	16	3.7	0.6	3.1		10%		1184	118.4	2466	1966	2308
144	6761	RIFFLE	21	15							315	0	2466	1987	2308
145	6820	RUN	59	19							1121	0	2466	1987	2367
146	6843	POOL	23	9.5	2.5	0.4	2.1			5%	218.5	10.925	2489	1987	2367
147	6859	RUN	16	12							192	0	2489	1987	2383
148	6884	POOL	25	15.5	2.5	0.6	1.9			5%	387.5	19.375	2514	1987	2383
149	6912	RIFFLE	28	15.5							434	0	2514	2015	2383
150	6953	POOL	41	16	3.6	0.5	3.1		5%	5%	656	65.6	2555	2015	2383

1995 San Geronimo Creek Habitat Typing Data

Unit #	Station	Type	Length (ft)	Width (ft)	Max Depth	Pool Tail Crest	Residual Depth	Boulder Cover	Woody Debris	Root Mass Cover	Surface Area	Unit Cover	Cum. Pool	Cum. Riffle	Cum. Run
151	6976	RUN	23	18							414	0	2555	2015	2406
152	7002	RIFFLE	26	19							494	0	2555	2041	2406
153	7067	RUN	65	17							1105	0	2555	2041	2471
154	7094	POOL	27	12	2.8	0.6	2.2				324	0	2582	2041	2471
155	7108	RIFFLE	14	16							224	0	2582	2055	2471
156	7193	RUN	85	15.5							1317.5	0	2582	2055	2556
157	7225	RIFFLE	32	12							384	0	2582	2087	2556
158	7275	RUN	50	13							650	0	2582	2087	2606
159	7299	POOL	24	18	2.4	0.6	1.8				432	0	2606	2087	2606
160	7328	RIFFLE	29	15							435	0	2606	2116	2606
161	7328	RUN	0									0	2606	2116	2606
162	7372	POOL	44	15.5	3.6	0.8	2.8	5%			682	34.1	2650	2116	2606
163	7393	RUN	21	14							294	0	2650	2116	2627
164	7453	RIFFLE	60	13							780	0	2650	2176	2627
165	7469	RUN	16	14							224	0	2650	2176	2643
166	7504	POOL	35	15	3.5	0.5	3				525	0	2685	2176	2643
167	7504	RUN	0									0	2685	2176	2643
168	7504	RIFFLE	0									0	2685	2176	2643
169	7565	RUN	61	17							1037	0	2685	2176	2704
170	7565	RIFFLE	0									0	2685	2176	2704
171	7609	RUN	44	13.5							594	0	2685	2176	2748
172	7665	POOL	56	16	4	0.7	3.3			5%	896	44.8	2741	2176	2748
173	7707	RIFFLE	42	6.5							273	0	2741	2218	2748
174	7759	RUN	52	13.5							702	0	2741	2218	2800
175	7784	POOL	25	12	2.3	0.9	1.4			5%	300	15	2766	2218	2800
176	7808	RIFFLE	24	12.5							300	0	2766	2242	2800
177	7840	RUN	32	11							352	0	2766	2242	2832
178	7873	POOL	33	13	3.2	0.5	2.7				429	0	2799	2242	2832
179	7888	RIFFLE	15	10							150	0	2799	2257	2832
180	7928	RUN	40	13							520	0	2799	2257	2872
181	7928	RIFFLE	0									0	2799	2257	2872
182	7984	POOL	56	16.5	3.1	0.3	2.8			5%	924	46.2	2855	2257	2872
183	8000	RUN	16	9.5							152	0	2855	2257	2888
184	8021	RIFFLE	21	13							273	0	2855	2278	2888
185	8119	RUN	98	12							1176	0	2855	2278	2986
186	8136	RIFFLE	17	15							255	0	2855	2295	2986
187	8212	RUN	76	14.5							1102	0	2855	2295	3062
188	8253	RIFFLE	41	16.5							676.5	0	2855	2336	3062
189	8296	RUN	43	16.5							709.5	0	2855	2336	3105
190	8350	POOL	54	17	4.6	0.7	3.9			10%	918	91.8	2909	2336	3105
191	8430	RIFFLE	80	13.5							1080	0	2909	2416	3105
192	8506	POOL	76	13	3.1	0.8	2.3		5%		988	49.4	2985	2416	3105
193	8541	RUN	35	16.5							577.5	0	2985	2416	3140
194	8570	POOL	29	14	2.1	0.6	1.5				406	0	3014	2416	3140
195	8600	RIFFLE	30	14							420	0	3014	2446	3140
196	8708	RUN	108	18.5							1998	0	3014	2446	3248
197	8737	RIFFLE	29	20							580	0	3014	2475	3248
198a	8833	RUN	96	18.5							1776	0	3014	2475	3344
198b	8868	RIFFLE	35	21.5							752.5	0	3014	2510	3344
199	8942	RUN	74	23							1702	0	3014	2510	3418
200	8964	RIFFLE	22	16.5							363	0	3014	2532	3418
201	9022	RUN	58	17.5							1015	0	3014	2532	3476
202	9043	RIFFLE	21	13.5							283.5	0	3014	2553	3476
203	9066	POOL	23	15	2.1	0.5	1.6				345	0	3037	2553	3476
204	9091	RUN	25	10.5							262.5	0	3037	2553	3501
205	9151	RIFFLE	60	12							720	0	3037	2613	3501
206	9163	RIFFLE	12	16.5							198	0	3037	2625	3501
207	9211	POOL	48	16.5	2.6	0.4	2.2	5%			792	39.6	3085	2625	3501
208	9290	RUN	79	24							1896	0	3085	2625	3580
209	9358	RIFFLE	68	12.5							850	0	3085	2693	3580
210	9368	RUN	10	11							110	0	3085	2693	3590
211	9444	POOL	76	19	2.7	0.4	2.3	10%			1444	144.4	3161	2693	3590
212	9488	RIFFLE	44	12.5							550	0	3161	2737	3590
213	9563	RUN	75	15							1125	0	3161	2737	3665
214	9589	RIFFLE	26	15.5							403	0	3161	2763	3665
215	9718	RUN	129	20.5							2644.5	0	3161	2763	3794
216	9754	RIFFLE	36	10							360	0	3161	2799	3794
217	9810	RUN	56	23.5							1316	0	3161	2799	3850
218	9901	POOL	91	17.5	3	0.3	2.7		15%	5%	1592.5	318.5	3252	2799	3850
219	10003	RUN	102	16.5							1683	0	3252	2799	3952
220	10027	RIFFLE	24	14.5							348	0	3252	2823	3952
221	10086	RUN	59	17.5							1032.5	0	3252	2823	4011
222	10100	RIFFLE	14	10							140	0	3252	2837	4011
223	10131	RUN	31	20							620	0	3252	2837	4042
224	10182	POOL	51	24	3.6	0.4	3.2		5%	10%	1224	183.6	3303	2837	4042
225	10246	RIFFLE	64	20.5							1312	0	3303	2901	4042

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226	10376	RUN	130	24							3120	0	3303	2901	4172
227	10406	RIFFLE	30	6.5							195	0	3303	2931	4172
228	10591	RUN	185	14.5							2682.5	0	3303	2931	4357
229	10638	RIFFLE	47	12.5							587.5	0	3303	2978	4357
230	10687	RUN	49	15							735	0	3303	2978	4406
231	10707	RIFFLE	20	15							300	0	3303	2998	4406
232	10760	RUN	53	6.5							344.5	0	3303	2998	4459
233	10784	RIFFLE	24	9							216	0	3303	3022	4459
234	10849	RUN	65	21							1365	0	3303	3022	4524
235	10898	POOL	49	22	4.7	0.5	4.2		5%	15%	1078	215.6	3352	3022	4524
236	10920	RUN	22	10.5							231	0	3352	3022	4546
237	10920	RIFFLE	0									0	3352	3022	4546
238	10973	RUN	53	8							424	0	3352	3022	4599
239	10973	RIFFLE	0									0	3352	3022	4599
240	11002	RUN	29	11							319	0	3352	3022	4628
241	11049	POOL	47	13.5	2.9	0.5	2.4		35%		634.5	222.075	3399	3022	4628
242	11088	RIFFLE	39	7							273	0	3399	3061	4628
243	11113	RUN	25	16.5							412.5	0	3399	3061	4653
244	11139	POOL	26	30	7	0.2	6.8		10%	5%	780	117	3425	3061	4653
245	11139	RIFFLE	0									0	3425	3061	4653
246	11197	POOL	58	26	3.6	0.3	3.3		80%		1508	1206.4	3483	3061	4653
247	11234	RIFFLE	37	24							888	0	3483	3098	4653
248	11294	RUN	60	14							840	0	3483	3098	4713
249	11343	POOL	49	19.5	4.1	0.4	3.7	5%	5%	5%	955.5	143.325	3532	3098	4713
250	11343	RUN	0									0	3532	3098	4713
251	11470	POOL	127	21.5	3.8	0.4	3.4			10%	2730.5	273.05	3659	3098	4713
252	11479	RIFFLE	9	8							72	0	3659	3107	4713
253	11503	POOL	24	21.5	3.5	0.3	3.2				516	0	3683	3107	4713
254	11580	RUN	77	14							1078	0	3683	3107	4790
255	11599	RIFFLE	19	9							171	0	3683	3126	4790
256	11635	RUN	36	11							396	0	3683	3126	4826
257	11696	RIFFLE	61	14							854	0	3683	3187	4826
258	11696	RUN	0									0	3683	3187	4826
259	11733	RIFFLE	37	15.5							573.5	0	3683	3224	4826
260	11840	RUN	107	13							1391	0	3683	3224	4933
261	11864	POOL	24	21	2.4	0.5	1.9	10%			504	50.4	3707	3224	4933
262	11920	RIFFLE	56	9							504	0	3707	3280	4933
263	11992	POOL	72	16.5	2.8	0.5	2.3		5%	5%	1188	118.8	3779	3280	4933
264	12017	RUN	25	5.5							137.5	0	3779	3280	4958
265	12045	RIFFLE	28	6.5							182	0	3779	3308	4958
266	12177	RUN	132	12.5							1650	0	3779	3308	5090
267	12216	RIFFLE	39	12							468	0	3779	3347	5090
268	12259	POOL	43	12	2.8	0.5	2.3				516	0	3822	3347	5090
269	12285	RUN	26	8							208	0	3822	3347	5116
270	12338	RIFFLE	53	14							742	0	3822	3400	5116
271	12360	RUN	22	19							418	0	3822	3400	5138
272	12417	POOL	57	19.5	2.3	0.4	1.9	5%	10%	5%	1111.5	222.3	3879	3400	5138
273	12455	RIFFLE	38	8.5							323	0	3879	3438	5138
274	12498	RUN	43	20							860	0	3879	3438	5181
275	12592	POOL	94	14	4.2	0.4	3.8	10%		5%	1316	197.4	3973	3438	5181
276	12607	RUN	15	13							195	0	3973	3438	5196
277	12684	RIFFLE	77	10							770	0	3973	3515	5196
278	12813	RUN	129	16							2064	0	3973	3515	5325
279	12843	POOL	30	17	2.3	0.4	1.9			10%	510	51	4003	3515	5325
280	12843	RIFFLE	0									0	4003	3515	5325
281	12888	RUN	45	11							495	0	4003	3515	5370
282	12911	POOL	23	11	2.4	0.5	1.9			5%	253	12.65	4026	3515	5370
283	12930	RIFFLE	19	10							190	0	4026	3534	5370
284	12954	RUN	24	22.5							540	0	4026	3534	5394
285	12954	RIFFLE	0									0	4026	3534	5394
286	13010	POOL	56	25	3.8	0.6	3.2				1400	0	4082	3534	5394
287	13027	POOL	17	7.5	1.5	0.8	0.7	5%			127.5	6.375	4099	3534	5394
288	13046	POOL	19	8	2	0.5	1.5	5%			152	7.6	4118	3534	5394
289	13069	RIFFLE	23	4							92	0	4118	3557	5394
290	13115	POOL	46	11	2.2	0.8	1.4				506	0	4164	3557	5394
291	13136	RIFFLE	21	10							210	0	4164	3578	5394
292	13154	POOL	18	8	1.8	0.4	1.4				144	0	4182	3578	5394
293	13174	RIFFLE	20	9.5							190	0	4182	3598	5394
294	13250	POOL	76	11	4.6	0.6	4			10%	836	83.6	4258	3598	5394
295	13276	RIFFLE	26	11.5							299	0	4258	3624	5394
296	13300	POOL	24	11	2	0.2	1.8			10%	264	26.4	4282	3624	5394
297	13360	RIFFLE	60	12							720	0	4282	3684	5394
298	13378	RUN	18	6							108	0	4282	3684	5412
299	13389	POOL	11	6	2.1	0.4	1.7			40%	66	26.4	4293	3684	5412
300	13415	RIFFLE	26	4							104	0	4293	3710	5412

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301	13421	POOL	6	12	4	0.4	3.6	5%	5%	5%	72	10.8	4299	3710	5412
302	13478	POOL	57	10	3.5	0.6	2.9	10%			570	57	4356	3710	5412
303	13510	POOL	32	15	3.5	0.6	2.9	5%			480	24	4388	3710	5412
304	13527	RIFFLE	17	9							153	0	4388	3727	5412
305	13554	RUN	27	12							324	0	4388	3727	5439
306	13554	RIFFLE	0									0	4388	3727	5439
307	13573	RIFFLE	19	13							247	0	4388	3746	5439
308	13573	RUN	0									0	4388	3746	5439
309	13633	POOL	60	13	3.1	0.6	2.5	5%	5%	10%	780	156	4448	3746	5439
310	13644	RIFFLE	11	5							55	0	4448	3757	5439
311	13644	RUN	0									0	4448	3757	5439
312	13741	POOL	97	14	3.3	0.5	2.8	5%		5%	1358	135.8	4545	3757	5439
313	13753	RIFFLE	12	12							144	0	4545	3769	5439
314	13769	RUN	16	11							176	0	4545	3769	5455
315	13793	POOL	24	13	1.9	0.3	1.6				312	0	4569	3769	5455
316	13811	RUN	18	14							252	0	4569	3769	5473
317	13852	POOL	41	12	1.8	0.3	1.5				492	0	4610	3769	5473
318	13895	RIFFLE	43	10							430	0	4610	3812	5473
319	13920	POOL	25	9.5	1.9	0.4	1.5			5%	237.5	11.875	4635	3812	5473
320	13920	RIFFLE	0									0	4635	3812	5473
321	13944	RUN	24	15.5							372	0	4635	3812	5497
322	14004	POOL	60	18	3.9	0.3	3.6	5%	10%	10%	1080	270	4695	3812	5497
323	14021	RUN	17	12							204	0	4695	3812	5514
324	14041	RIFFLE	20	14							280	0	4695	3832	5514
325	14078	RUN	37	11							407	0	4695	3832	5551
326	14143	POOL	65	14	3.8	0.4	3.4	25%			910	227.5	4760	3832	5551
327	14143	RUN	0									0	4760	3832	5551
328	14183	POOL	40	14	2.6	0.4	2.2			15%	560	84	4800	3832	5551
329	14183	RIFFLE	0									0	4800	3832	5551
330	14224	POOL	41	13	3.4	0.5	2.9			5%	533	26.65	4841	3832	5551
331	14224	RUN	0									0	4841	3832	5551
332	14254	POOL	30	12	2.6	0.5	2.1		60%		360	216	4871	3832	5551
333	14299	RIFFLE	45	14.5							652.5	0	4871	3877	5551
334	14323	RUN	24	11							264	0	4871	3877	5575
335	14344	POOL	21	13	.	0.2				5%	273	13.65	4892	3877	5575
336	14360	RIFFLE	16	8							128	0	4892	3893	5575
337	14399	RUN	39	13							507	0	4892	3893	5614
338	14450	RIFFLE	51	11.5							586.5	0	4892	3944	5614
339	14450	RUN	0									0	4892	3944	5614
340	14509	POOL	59	11	2.4	0.5	1.9			5%	649	32.45	4951	3944	5614
341	14533	POOL	24	11	2	0.5	1.5			5%	264	13.2	4975	3944	5614
342	14560	RUN	27	9.5							256.5	0	4975	3944	5641
343	14587	RIFFLE	27	7.5							202.5	0	4975	3971	5641
344	14645	POOL	58	13	1.7	0.5	1.2				754	0	5033	3971	5641
345	14657	RIFFLE	12	11							132	0	5033	3983	5641
346	14721	POOL	64	8	2.7	0.4	2.3	10%		5%	512	76.8	5097	3983	5641
347	14782	RIFFLE	61	6.5							396.5	0	5097	4044	5641
348	14874	POOL	92	13	4.7	0.4	4.3				1196	0	5189	4044	5641
349	14891	RIFFLE	17	4							68	0	5189	4061	5641
350	14936	RUN	45	10.5							472.5	0	5189	4061	5686
351	14978	RIFFLE	42	5							210	0	5189	4103	5686
352	14994	POOL	16	10	2.3	0.2	2.1		40%		160	64	5205	4103	5686
353	14994	RIFFLE	0									0	5205	4103	5686
354	15038	POOL	44	9.5	3	0.2	2.8		5%	5%	418	41.8	5249	4103	5686
355	15065	RIFFLE	27	11.5							310.5	0	5249	4130	5686
356	15083	RUN	18	11.5							207	0	5249	4130	5704
357	15104	RIFFLE	21	11.5							241.5	0	5249	4151	5704
358	15155	POOL	51	14.5	3.2	0.3	2.9			5%	739.5	36.975	5300	4151	5704
359	15310	RUN	155	13.5							2092.5	0	5300	4151	5859
360	15345	RIFFLE	35	8.5							297.5	0	5300	4186	5859
361	15395	RUN	50	11.5							575	0	5300	4186	5909
362	15421	RUN	26	10.5							273	0	5300	4186	5935
363	15474	RIFFLE	53	11							583	0	5300	4239	5935
364	15508	POOL	34	13	3.4	0.8	2.6				442	0	5334	4239	5935
365	15539	RUN	31	12							372	0	5334	4239	5966
366	15539	RIFFLE	0									0	5334	4239	5966
367	15573	RUN	34	9.5							323	0	5334	4239	6000
368	15590	RIFFLE	17	12							204	0	5334	4256	6000
369	15641	POOL	51	20	3.7	0.4	3.3	20%			1020	204	5385	4256	6000
370	15693	RIFFLE	52	4						5%	208	10.4	5385	4308	6000
371	15782	RUN	89	22.5							2002.5	0	5385	4308	6089
372	15847	POOL	65	16	4.7	0.3	4.4				1040	0	5450	4308	6089
373	15862	RUN	15	19							285	0	5450	4308	6104
374	15908	POOL	46	15	3	0.3	2.7			15%	690	103.5	5496	4308	6104
375	15944	RUN	36	11							396	0	5496	4308	6140

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376	15995	POOL	51	16	3.1	0.3	2.8		5%		816	40.8	5547	4308	6140
377	16077	RUN	82	13							1066	0	5547	4308	6222
378	16167	RUN	90	11.5							1035	0	5547	4308	6312
379	16226	RUN	59	11.5							678.5	0	5547	4308	6371
380	16261	RUN	35	11.5							402.5	0	5547	4308	6406
381	16283	RUN	22	11.5							253	0	5547	4308	6428
382	16347	RIFFLE	64	13.5							864	0	5547	4372	6428
383	16409	POOL	62	17.5	4.7	0.3	4.4		5%	5%	1085	108.5	5609	4372	6428
384	16446	RIFFLE	37	9							333	0	5609	4409	6428
385	16461	RUN	15	12							180	0	5609	4409	6443
386	16491	POOL	30	11	2.7	0.3	2.4			5%	330	16.5	5639	4409	6443
387	16507	RIFFLE	16	9.5							152	0	5639	4425	6443
388	16526	POOL	19	15.5	2.8	0.5	2.3		5%		294.5	14.725	5658	4425	6443
389	16526	RUN	0									0	5658	4425	6443
390	16548	POOL	22	16.5	3	0.5	2.5		80%		363	290.4	5680	4425	6443
391	16565	RUN	17	8.5							144.5	0	5680	4425	6460
392	16591	RIFFLE	26	8.5							221	0	5680	4451	6460
393	16621	RUN	30	10							300	0	5680	4451	6490
394	16647	POOL	26	12	2.7	0.5	2.2				312	0	5706	4451	6490
395	16666	RUN	19	5.5							104.5	0	5706	4451	6509
396	16677	RIFFLE	11	6.5							71.5	0	5706	4462	6509
397	16705	POOL	28	12.5	2.7	0.3	2.4				350	0	5734	4462	6509
398	16713	RIFFLE	8	8							64	0	5734	4470	6509
399	16753	POOL	40	12	3	0.3	2.7		10%	10%	480	96	5774	4470	6509
400	16767	RUN	14	14							196	0	5774	4470	6523
401	16792	POOL	25	12	2.2	0.3	1.9			20%	300	60	5799	4470	6523
402	16861	RUN	69	10							690	0	5799	4470	6592
403	16896	RIFFLE	35	10							350	0	5799	4505	6592
404	16912	RUN	16	10							160	0	5799	4505	6608
405	16934	POOL	22	16	3	0.4	2.6		15%	15%	352	105.6	5821	4505	6608
406	16969	RUN	35	9							315	0	5821	4505	6643
407	17011	RIFFLE	42	9							378	0	5821	4547	6643
408	17045	RUN	34	10							340	0	5821	4547	6677
409	17100	RIFFLE	55	5							275	0	5821	4602	6677
410	17140	POOL	40	18	4.2	0.3	3.9			30%	720	216	5861	4602	6677
411	17140	RIFFLE	0									0	5861	4602	6677
412	17193	POOL	53	18	2.7	0.2	2.5				954	0	5914	4602	6677
413	17193	RUN	0									0	5914	4602	6677
414	17231	POOL	38	16	2.9	0.2	2.7		95%		608	577.6	5952	4602	6677
415	17244	RUN	13	14							182	0	5952	4602	6690
416	17285	POOL	41	17	3.2	0.2	3			5%	697	34.85	5993	4602	6690
417	17285	RUN	0									0	5993	4602	6690
418	17295	POOL	10	14	3.1	0.2	2.9		60%		140	84	6003	4602	6690
419	17306	RUN	11	12.5							137.5	0	6003	4602	6701
420	17314	RIFFLE	8	4							32	0	6003	4610	6701
421	17375	RUN	61	9.5							579.5	0	6003	4610	6762
422	17384	RIFFLE	9	5.5							49.5	0	6003	4619	6762
423	17395	POOL	11	13.5	3.2	0.2	3			15%	148.5	22.275	6014	4619	6762
424	17456	RUN	61	10.5							640.5	0	6014	4619	6823
425	17469	RIFFLE	13	6.5							84.5	0	6014	4632	6823
426	17490	RUN	21	7							147	0	6014	4632	6844
427	17517	POOL	27	20.5	3.7	0.2	3.5				553.5	0	6041	4632	6844
428	17564	RIFFLE	47	7.5							352.5	0	6041	4679	6844
429	17596	POOL	32	20.5	2.3	0.5	1.8				656	0	6073	4679	6844
430	17623	RUN	27	8.5							229.5	0	6073	4679	6871
431	17641	RIFFLE	18	8							144	0	6073	4697	6871
432	17718	RUN	77	20							1540	0	6073	4697	6948
433	17742	RIFFLE	24	14							336	0	6073	4721	6948
434	17772	RUN	30	13							390	0	6073	4721	6978
435A	17784	RIFFLE	12	11							132	0	6073	4733	6978
435B	17852	POOL	68	13	3.2	0.3	2.9			5%	884	44.2	6141	4733	6978
436	17894	RIFFLE	42	5.5							231	0	6141	4775	6978
437	17894	RUN	0									0	6141	4775	6978
438	17926	RIFFLE	32	12							384	0	6141	4807	6978
439	18000	POOL	74	14	3.5	0.5	3				1036	0	6215	4807	6978
440	18000	RIFFLE	0	12								0	6215	4807	6978
441	18061	POOL	61	13	3.2	0.1	3.1			10%	793	79.3	6276	4807	6978
442	18061	RUN	0									0	6276	4807	6978
443	18110	RUN	49	10							490	0	6276	4807	7027
444	18159	POOL	49	13	2.8	0.1	2.7		5%	5%	637	63.7	6325	4807	7027
445	18186	RUN	27	6							162	0	6325	4807	7054
446	18204	RIFFLE	18	8							144	0	6325	4825	7054
447	18229	POOL	25	13	2.5	0.3	2.2			5%	325	16.25	6350	4825	7054
448	18272	POOL	43	12.5	3.1	0.2	2.9			5%	537.5	26.875	6393	4825	7054
449	18308	RUN	36	12.5							450	0	6393	4825	7090
450	18308	RIFFLE	0									0	6393	4825	7090

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Unit #	Station	Type	Length (ft)	Width (ft)	Max Depth	Pool Tail Crest	Residual Depth	Boulder Cover	Woody Debris	Root Mass Cover	Surface Area	Unit Cover	Cum. Pool	Cum. Riffle	Cum. Run
451	18371	RUN	63	10.5							661.5	0	6393	4825	7153
452	18371	RIFFLE	0									0	6393	4825	7153
453	18403	POOL	32	14	2.9	0.3	2.6			5%	448	22.4	6425	4825	7153
454	18414	RIFFLE	11	11							121	0	6425	4836	7153
455	18443	RUN	29	11.5							333.5	0	6425	4836	7182
456	18455	RIFFLE	12	13							156	0	6425	4848	7182
457	18503	RUN	48	7.5							360	0	6425	4848	7230
458	18521	RIFFLE	18	12							216	0	6425	4866	7230
459	18554	POOL	33	13.5	2.8	0.3	2.5				445.5	0	6458	4866	7230
460	18628	RIFFLE	74	10.5							777	0	6458	4940	7230
461	18676	POOL	48	18	5.2	0.4	4.8			5%	864	43.2	6506	4940	7230
462	18703	POOL	27	16	2.6	0.4	2.2				432	0	6533	4940	7230
463	18765	RIFFLE	62	11							682	0	6533	5002	7230
464	18776	RUN	11	8							88	0	6533	5002	7241
465	18776	RIFFLE	0									0	6533	5002	7241
466	18799	RUN	23	8							184	0	6533	5002	7264
467	18835	POOL	36	28	4.5	0.3	4.2				1008	0	6569	5002	7264
468	18868	RIFFLE	33	8							264	0	6569	5035	7264
469	18886	RUN	18	11.5							207	0	6569	5035	7282
470	18941	POOL	55	12.5	3	0.3	2.7			10%	687.5	68.75	6624	5035	7282
471	18982	RIFFLE	41	12.5							512.5	0	6624	5076	7282
472	19016	POOL	34	13	3.2	0.5	2.7	20%			442	88.4	6658	5076	7282
473	19055	RUN	39	10							390	0	6658	5076	7321
474	19088	RIFFLE	33	7.5							247.5	0	6658	5109	7321
475	19110	RUN	22	12.5							275	0	6658	5109	7343
476	19132	POOL	22	13.5	3.1	0.4	2.7		50%		297	148.5	6680	5109	7343
477	19143	RUN	11	7.5							82.5	0	6680	5109	7354
478	19176	POOL	33	14	3.5	0.6	2.9		5%	15%	462	92.4	6713	5109	7354
479	19176	RUN	0									0	6713	5109	7354
480	19208	POOL	32	16	3	0.6	2.4			5%	512	25.6	6745	5109	7354
481	19208	RUN	0									0	6745	5109	7354
482	19233	POOL	25	16	3	0.6	2.4			5%	400	20	6770	5109	7354
483	19265	RIFFLE	32	10.5							336	0	6770	5141	7354
484	19284	RUN	19	20							380	0	6770	5141	7373
485	19337	RUN	53	10.5							556.5	0	6770	5141	7426
486	19362	POOL	25	11	2.1	0.6	1.5			5%	275	13.75	6795	5141	7426
487	19362	RIFFLE	0									0	6795	5141	7426
488	19362	RUN	0									0	6795	5141	7426
489	19362	RIFFLE	0									0	6795	5141	7426
490	19423	RUN	61	13.5							823.5	0	6795	5141	7487
491	19438	POOL	15	12	2.9	0.4	2.5			5%	180	9	6810	5141	7487
492	19460	RUN	22	13							286	0	6810	5141	7509
493	19483	RIFFLE	23	11							253	0	6810	5164	7509
494	19513	POOL	30	14	4.9	0.4	4.5			35%	420	147	6840	5164	7509
495	19535	RIFFLE	22	17							374	0	6840	5186	7509
496	19578	RUN	43	13							559	0	6840	5186	7552
497	19593	RIFFLE	15	13.5							202.5	0	6840	5201	7552
498	19623	RUN	30	15.5							465	0	6840	5201	7582
499	19623	RIFFLE	0									0	6840	5201	7582
500	19674	RUN	51	14							714	0	6840	5201	7633
501	19685	RIFFLE	11	6							66	0	6840	5212	7633
502	19718	POOL	33	11.5	4.5	0.4	4.1			15%	379.5	56.925	6873	5212	7633
503	19718	RUN	0									0	6873	5212	7633
504	19796	POOL	78	15	3.9	0.4	3.5		20%		1170	234	6951	5212	7633
505	19818	RIFFLE	22	11							242	0	6951	5234	7633
506	19872	RUN	54	9.5							513	0	6951	5234	7687
507	19910	POOL	38	10	3.3	0.6	2.7			25%	380	95	6989	5234	7687
508	19933	RIFFLE	23	11							253	0	6989	5257	7687
509	20005	RUN	72	10.5							756	0	6989	5257	7759
510	20013	RIFFLE	8	8							64	0	6989	5265	7759
511	20051	RUN	38	11.5							437	0	6989	5265	7797
512	20071	RIFFLE	20	12.5							250	0	6989	5285	7797
513	20123	RUN	52	13							676	0	6989	5285	7849
514	20134	RIFFLE	11	11							121	0	6989	5296	7849
515	20168	RUN	34	9.5							323	0	6989	5296	7883
516	20181	RIFFLE	13	8.5							110.5	0	6989	5309	7883
517	20202	RUN	21	11							231	0	6989	5309	7904
518	20232	RIFFLE	30	10							300	0	6989	5339	7904
519	20270	RUN	38	7							266	0	6989	5339	7942
520	20287	RIFFLE	17	9							153	0	6989	5356	7942
521	20303	POOL	16	9	2.5	0.6	1.9			5%	144	7.2	7005	5356	7942
522	20368	RIFFLE	65	9							585	0	7005	5421	7942
523	20405	RUN	37	7.5							277.5	0	7005	5421	7979
524	20417	RIFFLE	12	7							84	0	7005	5433	7979
525	20417	RUN	0									0	7005	5433	7979

Unit #	Station	Type	Length (ft)	Width (ft)	Max Depth	Pool Tail Crest	Residual Depth	Boulder Cover	Woody Debris	Root Mass Cover	Surface Area	Unit Cover	Cum. Pool	Cum. Riffle	Cum. Run
526	20454	RIFFLE	37	10							370	0	7005	5470	7979
527	20493	POOL	39	11	2.2	0.3	1.9				429	0	7044	5470	7979
528	20516	RUN	23	11							253	0	7044	5470	8002
529	20531	POOL	15	5.5	.		0.3			10%	82.5	8.25	7059	5470	8002
530	20550	RIFFLE	19	10							190	0	7059	5489	8002
531	20572	POOL	22	16	3.5	0.4	3.1				352	0	7081	5489	8002
532	20704	RIFFLE	132	4							528	0	7081	5621	8002
533	20716	POOL	12	7	3	0.3	2.7				84	0	7093	5621	8002
534	20734	RIFFLE	18	5.5							99	0	7093	5639	8002
535	20761	RUN	27	8							216	0	7093	5639	8029
536	20813	RIFFLE	52	11							572	0	7093	5691	8029
537	20834	RUN	21	10							210	0	7093	5691	8050
538	20886	RIFFLE	52	5.5							286	0	7093	5743	8050
539	20902	RUN	16	6							96	0	7093	5743	8066
540	20928	POOL	26	7.5	2.5	0.3	2.2	10%			195	19.5	7119	5743	8066
541	21017	RIFFLE	89	8							712	0	7119	5832	8066
542	21034	RUN	17	8							136	0	7119	5832	8083
543A	21055	RIFFLE	21	7							147	0	7119	5853	8083
543B	21157	RUN	102	8							816	0	7119	5853	8185
544	21198	POOL	41	10	3.7	0.4	3.3				410	0	7160	5853	8185
545	21217	RIFFLE	19	5.5							104.5	0	7160	5872	8185
546	21236	RUN	19	6.5							123.5	0	7160	5872	8204
547	21265	RIFFLE	29	7							203	0	7160	5901	8204
548	21318	POOL	53	10	2.9	0.5	2.4	5%			530	26.5	7213	5901	8204
549	21329	RIFFLE	11	4							44	0	7213	5912	8204
550	21386	POOL	57	9	3	0.2	2.8			10%	513	51.3	7270	5912	8204
551	21443	RUN	57	11							627	0	7270	5912	8261
552	21443	RIFFLE	0									0	7270	5912	8261
553	21478	RUN	35	11							385	0	7270	5912	8296
554	21495	POOL	17	7	2.6	0.6	2		10%	10%	119	23.8	7287	5912	8296
555	21495	RUN	0									0	7287	5912	8296
556	21514	POOL	19	10	4.3	0.6	3.7		15%		190	28.5	7306	5912	8296
557	21530	RIFFLE	16	6							96	0	7306	5928	8296
558	21572	RUN	42	6							252	0	7306	5928	8338
559	21636	RIFFLE	64	6							384	0	7306	5992	8338
560	21672	RUN	36	6.5							234	0	7306	5992	8374
561	21698	RIFFLE	26									0	7306	6018	8374
562	21753	RUN	55									0	7306	6018	8429
563	21753	RIFFLE	0									0	7306	6018	8429
564	21788	POOL	35	10	2	0.2	1.8			5%	350	17.5	7341	6018	8429
565	21842	RUN	54	8							432	0	7341	6018	8483
566	21878	RIFFLE	36	6							216	0	7341	6054	8483
567	21934	RUN	56	8							448	0	7341	6054	8539
568	21955	RIFFLE	21									0	7341	6075	8539
569	21978	RUN	23	8							184	0	7341	6075	8562
570	22004	POOL	26	9	2.6	0.2	2.4			5%	234	11.7	7367	6075	8562
571	22025	RIFFLE	21	5.5							115.5	0	7367	6096	8562
572	22042	RUN	17	10							170	0	7367	6096	8579
573	22055	POOL	13	10	2.5	0.5	2			10%	130	13	7380	6096	8579
574	22073	POOL	18	10	2.8	0.5	2.3				180	0	7398	6096	8579
575	22091	RIFFLE	18	9							162	0	7398	6114	8579
576	22106	POOL	15	15	1.4	0.4	1	5%	5%		225	22.5	7413	6114	8579
													0.33534	0.27658	0.38808
erages			38.11	13.55	3.03	0.49	2.54				627.86	23.68			
edians			32	13	2.8	0.5	2.4	8%	8%	5%	429	0			

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Unit #	Station	Type	Length (ft)	Width (ft)	Max Depth	Pool Tail Crest	Boulder Cover	Woody Debris	Root Mass	Surface Area	Unit Cover	Cum Pool	Cum Riffl	Cum Run
1	40	POOL	40	6	1.8	0.7	15%			240	36	40	0	0
2	40	RIFFLE	0							0	0	40	0	0
3	67	POOL	27	7	1.9	0.8	5%			189	9.45	67	0	0
4	67	RIFFLE	0							0	0	67	0	0
5	105	RUN	38	8						304	0	67	0	38
6	123	RIFFLE	18							0	0	67	18	38
7	143	RUN	20	8						160	0	67	18	58
8	150	RIFFLE	7	4						28	0	67	25	58
9	168	RUN	18	7						126	0	67	25	76
10	193	POOL	25	9	1.8	0.4	15%			225	33.75	92	25	76
11	325	RIFFLE	132	12						1584	0	92	157	76
12	397	RIFFLE	72	12						864	0	92	229	76
13	397	POOL	0							0	0	92	229	76
14	457	RUN	60							0	0	92	229	136
15	457	RIFFLE	0							0	0	92	229	136
16	476	RUN	19							0	0	92	229	155
17	520	POOL	44	12	1.6	0.3				528	0	136	229	155
18	564	POOL	44	4	1.9	0.3	5%			176	8.8	180	229	155
19	613	RIFFLE	49	7						343	0	180	278	155
20	653	RUN	40	12						480	0	180	278	195
21	677	RIFFLE	24	14.5						348	0	180	302	195
22	719	RUN	42	15						630	0	180	302	237
23	746	POOL	27	14	1.7	0.3		10%		378	37.8	207	302	237
24	768	RUN	22	8.5						187	0	207	302	259
25	784	POOL	16	7.5	2.2	0.4	5%			120	6	223	302	259
26	784	RIFFLE	0							0	0	223	302	259
27	831	RUN	47	6						282	0	223	302	306
28	843	RIFFLE	12	5						60	0	223	314	306
29	881	POOL	38	11	2.2	0.2			5%	418	20.9	261	314	306
30	981	RIFFLE	100	5.5						550	0	261	414	306
31	1020	POOL	39	12	2.9	0.3			5%	468	23.4	300	414	306
32	1111	RUN	91	10.5						955.5	0	300	414	397
33	1111	RIFFLE	0							0	0	300	414	397
34	1111	RIFFLE	0							0	0	300	414	397
35	1246	RUN	135	13.5						1822.5	0	300	414	532
36	1288	POOL	42	11	2.1	0.5			5%	462	23.1	342	414	532
37	1305	RIFFLE	17	5						85	0	342	431	532
38	1326	POOL	21	11	1.1	0.5			5%	231	11.55	363	431	532
39	1433	RIFFLE	107	15						1605	0	363	538	532
40	1470	RUN	37	16						592	0	363	538	569
41	1510	POOL	40	12.5	1.7	0.3				500	0	403	538	569
42	1542	RIFFLE	32	13.5						432	0	403	570	569
43	1592	RIFFLE	50	15						750	0	403	620	569
44	1592	RUN	0							0	0	403	620	569
45	1614	POOL	22	8	1.1	0.4				176	0	425	620	569
46	1614	RUN	0							0	0	425	620	569
47	1642	POOL	28	12	2.9	0.4	5%		10%	336	50.4	453	620	569
48	1655	RUN	13	9						117	0	453	620	582
49	1702	RIFFLE	47	12.5						587.5	0	453	667	582
50	1702	RUN	0							0	0	453	667	582
51	1715	POOL	13	5	3.3	0.4		5%		65	3.25	466	667	582
52	1726	RIFFLE	11	9.5						104.5	0	466	678	582
53	1737	POOL	11	9.5	1.5	0.5				104.5	0	477	678	582
54	1770	RIFFLE	33	9						297	0	477	711	582
55	1797	RUN	27	6.5						175.5	0	477	711	609
56	1817	RUN	20	5						100	0	477	711	629
57	1830	POOL	13	5.5	1.6	0.4		5%		71.5	3.575	490	711	629
58	1844	RIFFLE	14	9						126	0	490	725	629
59	1879	POOL	35	9	2.3	0.5			15%	315	47.25	525	725	629
60	1891	RIFFLE	12	5						60	0	525	737	629

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Unit #	Station	Type	Length (ft)	Width (ft)	Max Depth	Pool Tail Crest	Boulder Cover	Woody Debris	Root Mass	Surface Area	Unit Cover	Cum Pool	Cum Riffl	Cum Run
61	1917	RUN	26	8.5						221	0	525	737	655
62	1917	RIFFLE	0							0	0	525	737	655
63	1943	RUN	26	7						182	0	525	737	681
64	1963	POOL	20	15	1.8	0.4		60%		300	180	545	737	681
65	1981	RIFFLE	18	10						180	0	545	755	681
66	2033	POOL	52	10	2	0.5		5%		520	26	597	755	681
67	2074	RIFFLE	41	10.5						430.5	0	597	796	681
68	2086	RUN	12	11						132	0	597	796	693
69	2115	POOL	29	9.5	2.5	0.4			5%	275.5	13.78	626	796	693
70	2138	RIFFLE	23	12						276	0	626	819	693
71	2176	POOL	38	12	1.3	0.3		15%		456	68.4	664	819	693
72	2203	RIFFLE	27	4						108	0	664	846	693
73	2225	POOL	22	14	2	0.4		5%	5%	308	30.8	686	846	693
74	2267	POOL	42	15	1.5	0.3		10%		630	63	728	846	693
75	2293	RIFFLE	26	13.5						351	0	728	872	693
76	2337	RUN	44	13						572	0	728	872	737
77	2437	RIFFLE	100	13.5						1350	0	728	972	737
78	2454	POOL	17	15.5	2.1	0.5		15%		263.5	39.53	745	972	737
79	2508	POOL	54	11.5	1.8	0.5				621	0	799	972	737
80	2596	RIFFLE	88	11.5						1012	0	799	1060	737
81	2630	RUN	34	10.5						357	0	799	1060	771
82	2673	POOL	43	13	3	0.3			10%	559	55.9	842	1060	771
83	2749	RIFFLE	76	14						1064	0	842	1136	771
84	2815	RUN	66	13						858	0	842	1136	837
85	2854	RIFFLE	39	16.5						643.5	0	842	1175	837
86	2944	RUN	90	16						1440	0	842	1175	927
87	2980	POOL	36	20	2.3	0.4			5%	720	36	878	1175	927
88	3038	RUN	58	12.5						725	0	878	1175	985
89	3205	RIFFLE	167	14						2338	0	878	1342	985
90	3236	POOL	31	20	2.3	0.4	5%		5%	620	62	909	1342	985
91	3270	POOL	34	10	1.7	0.1			5%	340	17	943	1342	985
92	3291	RIFFLE	21	11						231	0	943	1363	985
93	3316	RUN	25	13						325	0	943	1363	1010
94	3352	POOL	36	12	1.3	0.3		15%	10%	432	108	979	1363	1010
95	3406	RIFFLE	54	13						702	0	979	1417	1010
96	3420	RUN	14	9						126	0	979	1417	1024
97	3452	POOL	32	11	1.6	0.3			5%	352	17.6	1011	1417	1024
98	3485	RIFFLE	33	11.5						379.5	0	1011	1450	1024
99	3500	POOL	15	8	1.5	0.4				120	0	1026	1450	1024
100	3526	RIFFLE	26	12						312	0	1026	1476	1024
101	3557	RUN	31	12.5						387.5	0	1026	1476	1055
102	3582	POOL	25	9	1.3	0.4			5%	225	11.25	1051	1476	1055
103	3601	RIFFLE	19	10						190	0	1051	1495	1055
104	3669	RUN	68	14						952	0	1051	1495	1123
105	3725	RIFFLE	56	12						672	0	1051	1551	1123
106	3725	RUN	0							0	0	1051	1551	1123
107	3796	POOL	71	10.5	2.8	0.4		10%		745.5	74.55	1122	1551	1123
108	3804	RIFFLE	8	7						56	0	1122	1559	1123
109	3804	RUN	0							0	0	1122	1559	1123
110	3834	RIFFLE	30	13						390	0	1122	1589	1123
111	3848	POOL	14	8	1.7	0.6	5%			112	5.6	1136	1589	1123
112	3865	RIFFLE	17	10						170	0	1136	1606	1123
113	3900	RUN	35	12						420	0	1136	1606	1158
114	3956	RIFFLE	56	11						616	0	1136	1662	1158
115	3970	RUN	14	10						140	0	1136	1662	1172
116	4059	RIFFLE	89	8.5						756.5	0	1136	1751	1172
117	4070	POOL	11	8	1.4	0.5		80%		88	70.4	1147	1751	1172
118	4085	RIFFLE	15	6.5						97.5	0	1147	1766	1172
119	4129	RUN	44	8.5						374	0	1147	1766	1216
120	4160	POOL	31	8.5	2.2	0.4			40%	263.5	105.4	1178	1766	1216

1995 Devil's Gulch Habitat Typing Data

Unit #	Station	Type	Length (ft)	Width (ft)	Max Depth	Pool Tail Crest	Boulder Cover	Woody Debris	Root Mass	Surface Area	Unit Cover	Cum Pool	Cum Riffl	Cum Run
121	4182	RUN	22	5.5						121	0	1178	1766	1238
122	4182	POOL	0							0	0	1178	1766	1238
123	4224	RIFFLE	42	10.5						441	0	1178	1808	1238
124	4241	RUN	17	15						255	0	1178	1808	1255
125	4268	POOL	27	15	2.2	0.4		10%		405	40.5	1205	1808	1255
126	4298	RIFFLE	30	8						240	0	1205	1838	1255
127	4298	RUN	0							0	0	1205	1838	1255
128	4339	POOL	41	13.5	3.5	0.4			35%	553.5	193.7	1246	1838	1255
129	4381	RIFFLE	42	16.5						693	0	1246	1880	1255
130	4381	RUN	0							0	0	1246	1880	1255
131	4390	RUN	9	10						90	0	1246	1880	1264
132	4435	RIFFLE	45	6						270	0	1246	1925	1264
133	4454	POOL	19	11	2.2	0.4				209	0	1265	1925	1264
134	4470	RIFFLE	16	6						96	0	1265	1941	1264
135	4498	POOL	28	8.5	2.4	0.4			5%	238	11.9	1293	1941	1264
136	4531	RIFFLE	33	12.5						412.5	0	1293	1974	1264
137	4610	RUN	79	14						1106	0	1293	1974	1343
138	4626	RIFFLE	16	7						112	0	1293	1990	1343
139	4655	POOL	29	10.5	1.4	0.4		10%		304.5	30.45	1322	1990	1343
140	4687	RIFFLE	32	9						288	0	1322	2022	1343
141	4720	RUN	33	9.5						313.5	0	1322	2022	1376
142	4748	RUN	28	10.5						294	0	1322	2022	1404
143	4833	RIFFLE	85	10						850	0	1322	2107	1404
144	4856	RUN	23	8.5						195.5	0	1322	2107	1427
145	4882	RIFFLE	26	8						208	0	1322	2133	1427
146	4899	RUN	17	9						153	0	1322	2133	1444
147	4925	POOL	26	13.5	2.6	0.5			25%	351	87.75	1348	2133	1444
148	4925	RIFFLE	0							0	0	1348	2133	1444
149	4982	POOL	57	10	1.7	0.5			20%	570	114	1405	2133	1444
150	4993	RIFFLE	11	11						121	0	1405	2144	1444
151	5045	RUN	52	11						572	0	1405	2144	1496
152	5146	RIFFLE	101	12						1212	0	1405	2245	1496
153	5146	RUN	0							0	0	1405	2245	1496
154	5171	POOL	25	10	1.2	0.4		5%		250	12.5	1430	2245	1496
155	5194	RIFFLE	23	3.5						80.5	0	1430	2268	1496
156	5238	POOL	44	9	2.7	0.3		5%	30%	396	138.6	1474	2268	1496
157	5281	RIFFLE	43	11.5						494.5	0	1474	2311	1496
158	5298	RUN	17	11.5						195.5	0	1474	2311	1513
159	5328	POOL	30	10.5	1.4	0.3		10%		315	31.5	1504	2311	1513
160	5339	RIFFLE	11	11						121	0	1504	2322	1513
161	5354	RUN	15	10						150	0	1504	2322	1528
162	5391	POOL	37	8.5	1.6	0.6		10%		314.5	31.45	1541	2322	1528
163	5447	RIFFLE	56	13						728	0	1541	2378	1528
164	5465	RUN	18	15						270	0	1541	2378	1546
165	5504	POOL	39	11	3.2	0.4		5%	15%	429	85.8	1580	2378	1546
166	5528	RIFFLE	24	7.5						180	0	1580	2402	1546
167	5538	POOL	10	9.5	1.4	0.6		10%		95	9.5	1590	2402	1546
168	5612	RIFFLE	74	12.5						925	0	1590	2476	1546
169	5683	RUN	71	11.5						816.5	0	1590	2476	1617
170	5716	RIFFLE	33	8						264	0	1590	2509	1617
171	5759	POOL	43	9	2	0.5				387	0	1633	2509	1617
172	5810	RIFFLE	51	7.5						382.5	0	1633	2560	1617
173	5846	RUN	36	8						288	0	1633	2560	1653
174	5966	RIFFLE	120	10.5						1260	0	1633	2680	1653
175	6003	RUN	37	14.5						536.5	0	1633	2680	1690
176	6039	POOL	36	8.5	1.8	0.4			10%	306	30.6	1669	2680	1690
177	6126	RIFFLE	87	8.5						739.5	0	1669	2767	1690
178	6178	RUN	52	6						312	0	1669	2767	1742
179	6241	RIFFLE	63	12.5						787.5	0	1669	2830	1742
180	6267	POOL	26	11	2.5	0.4		85%	50%	286	386.1	1695	2830	1742

Unit #	Station	Type	Length (ft)	Width (ft)	Max Depth	Pool Tail Crest	Boulder Cover	Woody Debris	Root Mass	Surface Area	Unit Cover	Cum Pool	Cum Riffl	Cum Run
181	6307	RIFFLE	40	8.5						340	0	1695	2870	1742
182	6320	RUN	13	5						65	0	1695	2870	1755
183	6399	RIFFLE	79	9						711	0	1695	2949	1755
184	6455	RUN	56	8.5						476	0	1695	2949	1811
185	6467	RIFFLE	12	7.5						90	0	1695	2961	1811
186	6467	RUN	0							0	0	1695	2961	1811
187	6487	POOL	20	9	1.4	0.3	5%			180	9	1715	2961	1811
188	6487	RIFFLE	0							0	0	1715	2961	1811
189	6509	POOL	22	8.5	1.4	0.5	5%			187	9.35	1737	2961	1811
190	6509	RIFFLE	0							0	0	1737	2961	1811
191	6526	POOL	17	6	1.2	0.5				102	0	1754	2961	1811
192	6552	RIFFLE	26	8.5						221	0	1754	2987	1811
193	6552	RUN	0							0	0	1754	2987	1811
194	6577	POOL	25	6.5	1.4	0.5				162.5	0	1779	2987	1811
195	6668	RIFFLE	91	10.5						955.5	0	1779	3078	1811
196	6716	RUN	48	9.5						456	0	1779	3078	1859
197	6726	POOL	10	6.5	1.2	0.6	5%			65	3.25	1789	3078	1859
198	6726	RIFFLE	0							0	0	1789	3078	1859
199	6768	POOL	42	9	1.5	0.6		5%		378	18.9	1831	3078	1859
200	6789	RIFFLE	21	8						168	0	1831	3099	1859
201	6823	RUN	34	8.5						289	0	1831	3099	1893
202	6858	RIFFLE	35	12.5						437.5	0	1831	3134	1893
203	6894	POOL	36	12.5	3	0.3	5%		5%	450	45	1867	3134	1893
204	6971	RIFFLE	77	7.5						577.5	0	1867	3211	1893
205	7013	RUN	42	7.5						315	0	1867	3211	1935
206	7025	POOL	12	6	1.4	0.4				72	0	1879	3211	1935
207	7041	RIFFLE	16	7.5						120	0	1879	3227	1935
208	7051	POOL	10	6	1.4	0.5				60	0	1889	3227	1935
209	7114	RIFFLE	63	7.5						472.5	0	1889	3290	1935
210	7114	RUN	0							0	0	1889	3290	1935
211	7147	POOL	33	13	2	0.3		20%		429	85.8	1922	3290	1935
212	7191	RUN	44	8.5						374	0	1922	3290	1979
213	7208	POOL	17	7	1.4	0.3	5%			119	5.95	1939	3290	1979
214	7327	RUN	119	8						952	0	1939	3290	2098
215	7347	RIFFLE	20	7						140	0	1939	3310	2098
216	7360	RUN	13	8.5						110.5	0	1939	3310	2111
217	7367	POOL	7	6	1.3	0.3				42	0	1946	3310	2111
218	7367	RUN	0							0	0	1946	3310	2111
219	7401	POOL	34	6.5	1	0.4	10%			221	22.1	1980	3310	2111
												27%	45%	29%

APPENDIX C

1997 Lagunitas Creek habitat typing survey data
Tocaloma Bridge to Peters Dam

1997 Lagunitas Creek Habitat Typing Data

Bank Composition Type: 1) Bedrock 2)Boulder 3) Cobble, Gravel, Sand, Silt, Clay

Vegetation Types: 5) Herbs 6) Shrubs 7) Deciduous Trees 8) Coniferous Trees 9) No Vegetation

Shelter Value: 0) No shelter 1) Simple shelter 2) Moderate shelter 3) Complex shelter 4) Highly complex shelter

Shelter Rating: 0) 0% 1) 1%-5% 2) 6%-15% 3) 16%-25% 4) 26%-50% 5) 51%-75% 6) 76%-100%

Habitat Unit Number	Habitat Unit Type	Mean Length	Mean Width	Mean Depth	Max Depth	Depth of Pool Tail Crest	Surface Area (ft2)	Cumn Length	Thalweg Length	Cumn pool length	Cumn riffle length	Cumn run length	Shelter Value	% Unit Cover	Under-cut bank	swd (d<12")	lwd (d>12")	root mass
1	Pool	465	30	4	6	0.5	13950	465	465	465	0	0	2	35	2	1	1	1
2	Riffle	72	18	0.5	0.5	N/A	1296	537	537	465	72	0	1	15	1	1	0	1
3	Run	81	26	0.8	1.5	N/A	2106	618	618	465	72	81	3	3	1	2	0	1
4	Pool	79	15	1.5	2.4	0.3	1185	697	697	544	72	81	0	30	3	2	0	1
5	Run	63	12	0.8	1.1	N/A	756	760	760	544	72	144	0	10	0	1	0	3
6	Pool	105	17	1.4	2.4	0.3	1785	865	865	649	72	144	0	35	0	3	2	4
7a	Pool	47	15	1	2.5	N/A	705	912	912	696	72	144	0	80	0	2	0	3
7b	Pool	49	3	0.2	0.6	0.1	147	961	912	745	72	144	0	30	0	4	0	0
7c	Pool	33	12	2.1	3.5	2.5	396	994	912	778	72	144	0	45	0	2	0	0
8a	Pool	45	15	1	2	0.5	675	1039	957	823	72	144	1	40	1	5	2	1
8b	Pool	60	10	-	-	N/A	600	1099	957	883	72	144	0	80	0	6	6	1
9	Pool	167	20	1.7	3.3	0.3	3340	1266	1124	1050	72	144	0	40	0	3	2	2
10	Pool	51	11	1	1.4	N/A	561	1317	1175	1101	72	144		40	0	1	4	3
11a	Pool	175	19	1.6	2.6	0.3	3325	1492	1350	1276	72	144	3	60	1	4	0	4
11b	Pool	12.5	7.5	1	1.9	N/A	93.75	1504.5	1350	1288.5	72	144	2	30	0	5	0	0
12a	Run	132	20	1.8	3.4	N/A	2640	1636.5	1482	1288.5	72	276	3	40	4	1	3	1
12b	Pool	41	5	1.2	2	N/A	205	1677.5	1482	1329.5	72	276	3	100	0	4	5	0
13	Pool	104	18	1.8	2.9	0.5	1872	1781.5	1586	1433.5	72	276	2	30	3	1	0	0
14a	Run	67	10	0.9	1.8	N/A	670	1848.5	1653	1433.5	72	343	2	35	0	1	2	1
14b	Pool	54	10.5	1	2.3	0.1	567	1902.5	1653	1487.5	72	343	1	15	0	1	0	6
15	Pool	348	30	2	3.6	0.4	10440	2250.5	2001	1835.5	72	343	2	25	1	1	1	2
16	Pool	81	35	2	4.2	0.4	2835	2331.5	2082	1916.5	72	343	3	35	1	2	0	2
17a	Run	217	13	0.8	2.4	N/A	2821	2548.5	2299	1916.5	72	560	3	35	1	2	2	2
17b	Pool	108	7	0.2	0.8	0.4	756	2656.5	2299	2024.5	72	560	2	25	0	3	1	0
18a	Pool	61	17	1	2.3	0.8	1037	2717.5	2360	2085.5	72	560	2	40	0	1	1	0
18b	Pool	54	9	0.8	1.3	N/A	486	2771.5	2360	2139.5	72	560	1	15	0	1	0	5
19	Riffle	20	12	0.3	1	N/A	240	2791.5	2380	2139.5	92	560	1	10	0	0	0	0
20	Pool	224	32	1.4	2.9	0.4	7168	3015.5	2604	2363.5	92	560	3	35	1	4	2	3
21	Riffle	113	21.5	0.4	1.2	N/A	2429.5	3128.5	2717	2363.5	205	560	1	20	0	1	1	0
22	Pool	506	35	1.3	3	0.4	17710	3634.5	3223	2869.5	205	560	3	50	1	3	2	2
23	Pool	210	27	2	3.9	1	5670	3844.5	3433	3079.5	205	560	3	70	1	3	3	2
24a	Run	40	12	1.4	2.4	N/A	480	3884.5	3473	3079.5	205	600	3	50	0	2	0	3
24b	Run	42.5	4	0.4	2.2	N/A	170	3927	3473	3079.5	205	642.5	2	20	0	5	1	1
25	Run	150	16	1.1	1.9	N/A	2400	4077	3623	3079.5	205	792.5	2	35	0	4	0	1
26a	Run	232	21	0.9	1.7	0.3	4872	4309	3855	3079.5	205	1024.5	2	20	0	2	1	2
26b	Pool	27	5	0.8	1	N/A	135	4336	3855	3106.5	205	1024.5	1	15	0	5	0	4
27a	Riffle	63	11	0.5	1.2	N/A	693	4399	3918	3106.5	268	1024.5	0	2	4	1	0	0
27b	Pool	38	4	0.3	0.8	0.8	152	4437	3918	3144.5	268	1024.5	2	30	2	2	0	2
28	Pool	287	32	1.5	3.1	0.3	9184	4724	4205	3431.5	268	1024.5	3	50	4	2	2	1
29a	Riffle	54	29	0.6	2.5	N/A	1566	4778	4259	3431.5	322	1024.5	2	20	1	3	1	1
29b	Pool	44	8	1.8	3	0.5	352	4822	4259	3475.5	322	1024.5	3	60	3	6	1	0
29c	Pool	32	5	0.2	0.4	0.4	160	4854	4259	3507.5	322	1024.5	1	30	0	5	1	0
30	Run	84	25	1	1.8	N/A	2100	4938	4343	3507.5	322	1108.5	3	50	0	3	1	1
31	Pool	86	20	2.5	4.2	1.5	1720	5024	4429	3593.5	322	1108.5	2	30	2	1	1	1
32	Riffle	23	15	0.5	1	N/A	345	5047	4452	3593.5	345	1108.5	2	25	1	1	3	0
33a	Pool	181	25	2	6.5	0.8	4525	5228	4633	3774.5	345	1108.5	3	30	3	2	2	1
33b	Pool	140	20	2	4.2	1.6	2800	5368	4633	3914.5	345	1108.5	3	25	1	3	1	1
34	Pool	269	45	2.5	5	0.6	12105	5637	4902	4183.5	345	1108.5	3	25	2	3	2	2
35a	Pool	359	25	2	6	0.4	8975	5996	5261	4542.5	345	1108.5	3	60	1	3	2	2
35b	Pool	60	9	1	2.9	2.5	540	6056	5261	4602.5	345	1108.5	2	15	1	1	1	0
35c	Pool	74	5	0.6	1.2	0.6	370	6130	5261	4676.5	345	1108.5	3	55	0	2	1	0
36a	Run	120	16	1	1.9	N/A	1920	6250	5381	4676.5	345	1228.5	2	15	1	1	2	1
36b	Pool	66	4	0.1	0.3	N/A	264	6316	5381	4742.5	345	1228.5	1	20	0	1	0	0
36c	Pool	16	3	0.4	0.8	0.5	48	6332	5381	4758.5	345	1228.5	2	35	0	3	0	1
37a	Pool	176	20	1.5	5	0.6	3520	6508	5557	4934.5	345	1228.5	3	40	1	3	2	0
37b	Pool	15	2	0.4	0.8	0.4	30	6523	5557	4949.5	345	1228.5	1	30	0	1	0	4
38a	Run	158	14	1	2	N/A	2212	6681	5715	4949.5	345	1386.5	3	40	1	3	1	2
38b	Pool	16	2.5	0.25	0.5	N/A	40	6697	5715	4965.5	345	1386.5	2	65	0	2	0	1
39	Riffle	44	25	0.4	0.6	N/A	1100	6741	5759	4965.5	389	1386.5	1	40	0	2	0	1
40a	Pool	303	18	1.7	3.9	0.3	5454	7044	6062	5268.5	389	1386.5	2	20	1	1	0	2
40b	Pool	38	2	0.2	0.2	N/A	76	7082	6062	5306.5	389	1386.5	0	5	0	6	0	0
41	Run	102	8	0.9	1.7	N/A	816	7184	6164	5306.5	389	1488.5	2	30	0	2	0	1
42	Pool	233	23	1.7	3.5	0.5	5359	7417	6397	5539.5	389	1488.5	2	40	0	3	1	1
43	Pool	295	30	1.4	3.2	0.4	8850	7712	6692	5834.5	389	1488.5	3	40	0	3	2	3
44	Riffle	31	15	0.4	0.8	N/A	465	7743	6723	5834.5	420	1488.5	0	10	0	5	1	0

Bank Composition Type: 1) Bedrock 2)Boulder 3) Cobble, Gravel, Sand, Silt, Clay
Vegetation Types: 5) Herbs 6) Shrubs 7) Deciduous Trees 8) Coniferous Trees 9) No Vegetation
Shelter Value: 0) No shelter 1) Simple shelter 2) Moderate shelter 3) Complex shelter 4) Highly complex shelter
Shelter Rating: 0) 0% 1) 1%-5% 2) 6%-15% 3) 16%-25% 4) 26%-50% 5) 51%-75% 6) 76%-100%

Habitat Unit Number	Terr. veg.	aquatic veg.	boulders (d>10")	bedrock ledges	Surface Area of Cover	Silt/ Clay/ Sand	Gravel	Small Cobble	Boulder	Bed-rock	Exposed Substr	Habitat Embed-dednes	Bank Compo-sition	Bank Dominant Veg.	Bank Veg. %	Comments
1	2	1	1	0	4882.5	95	4	0	1	0	1	1	3	7	98	Tocaloma Bridge
2	2	0	0	0	453.6	30	45	25	0	0	5	-	3	7	70	
3	6	0	0	0	63.18	35	65	1	0	0	10	-	3	7	80	
4	5	1	0	0	355.5	80	20	0	0	0	2	0	3	7	85	
5	5	0	0	0	226.8	15	65	20	0	0	5	-	3	5,7	80	
6	4	0	2	0	624.75	50	40	5	5	0	10	1	3	7	85	
7a	6	1	0	0	564	30	70	0	0	0	0	N/A	3	7	60	
7b	5	1	0	0	117.6	75	25	2	0	0	5	0	3	5,7	70	Side channel pool
7c	6	1	0	0	178.2	85	10	5	0	0	2	0	3	5,7	70	Backwater pool
8a	5	0	0	0	270	35	60	5	0	0	0	0	3	7	70	
8b	2	1	0	0	240	100	0	0	0	0	0	N/A	3	7	70	
9	5	0	0	0	1336	80	20	0	0	0	0	0	3	7	75	
10	3	1	0	0	224.4	55	35	10	0	0	5	N/A	3	5,7	95	
11a	5	1	0	1	1995	85	10	3	0	2	3	1	3	7	95	
11b	4	1	0	0	28.125	100	0	0	0	0	0	N/A	3	5,7	80	
12a	3	1	0	0	1056	40	50	10	0	0	5	N/A	3	6,7	65	
12b	1	6	0	0	205	30	50	20	0	0	5	N/A	3	5	30	
13	5	1	1	0	561.6	65	30	5	1	0	0	1	3	7	70	
14a	5	1	0	0	234.5	60	35	5	0	0	2	N/A	3	6,7	60	
14b	1	1	0	0	85.05	60	40	2	0	0	5	0	3	5,7	20	
15	6	1	1	0	2610	65	25	5	5	0	1	0	3,2	7	100	
16	6	1	0	0	992.25	80	15	5	0	0	1	0	3	6,7	90	
17a	5	1	0	0	987.35	40	50	10	0	0	10	N/A	3	5,7	70	
17b	3	4	0	1	189	40	30	1	0	30	40	1	3	7	50	
18a	6	0	0	0	414.8	50	45	5	0	0	0	2	3	7	55	
18b	2	1	0	0	72.9	60	35	5	0	0	0	N/A	3	6,7	50	
19	6	1	0	0	24	10	80	10	0	0	2	N/A	3	5,7	70	
20	6	1	0	0	2508.8	70	25	5	0	0	0	2	3	5,7	95	
21	6	1	0	0	485.9	5	60	35	0	0	3	N/A	3	5,7	95	
22	4	2	0	0	8855	30	50	20	0	0	5	1	3	5,7	85	
23	6	1	0	0	3969	35	40	25	0	0	5	2	3	5,7	95	
24a	6	2	1	0	240	35	40	25	1	0	0	N/A	3	5,7	80	
24b	2	3	1	0	34	20	30	50	1	0	0	N/A	3	5,7	60	
25	6	1	0	0	840	40	30	30	0	0	2	1	3	5,7	70	
26a	6	1	0	0	974.4	25	55	20	0	0	1	1	3	7	90	
26b	2	0	0	0	20.25	100	0	0	0	0	0	N/A	3	6	50	
27a	4	0	0	0	13.86	10	55	35	0	0	10	N/A	3	6	10	
27b	5	0	0	0	45.6	80	20	0	0	0	35	0	3	6	40	
28	5	3	2	0	4592	80	12	8	2	0	3	1	3	7	95	
29a	5	1	3	0	313.2	15	40	35	10	0	10	N/A	2,3	7	45	
29b	3	1	0	0	211.2	55	30	15	0	0	2	0	3	5,7	60	
29c	5	1	0	1	48	86	2	2	0	10	10	1	1,3	5,7	45	
30	6	1	0	0	1050	30	35	35	0	0	5	N/A	3	6,7	50	
31	5	1	1	2	516	27	27	27	2	15	3	3	1,3	6,7	70	
32	3	2	0	0	86.25	20	40	40	0	0	4	N/A	3	7	70	
33a	3	1	3	1	1357.5	50	20	10	15	5	3	2	3	7	65	
33b	3	1	0	0	700	50	35	15	0	0	10	2	3	6,7	50	
34	4	2	1	0	3026.25	80	10	10	3	0	2	3	3	6,7	90	
35a	5	1	0	0	5385	92	5	3	0	0	8	2	3	7	95	
35b	5	1	1	0	81	94	1	3	2	0	1	4	3	6	80	
35c	6	1	0	0	203.5	80	18	2	0	0	3	4	3	6,7	80	
36a	3	1	1	0	288	20	44	35	1	0	1		3	7	60	
36b	6	1	0	0	52.8	15	75	10	0	0	45		3	7	49	
36c	4	1	0	0	16.8	80	15	5	0	0	35	1	3	7	50	
37a	6	1	0	0	1408	50	40	10	0	0	1	2	3	7	90	
37b	2	1	0	0	9	100	0	0	0	0	10	4	3	6	30	
38a	5	1	0	0	884.8	30	60	10	0	0	2		3	6,7	65	
38b	3	3	0	0	26	10	45	45	0	0	5		3	6	50	
39	6	0	0	0	440	15	45	40	0	0	35		3	7	45	
40a	3	2	0	0	1090.8	35	40	25	0	0	10	2	3	6,7	55	
40b	1	0	0	0	3.8	75	25	2	0	0	20	N/A	3	7	50	
41	6	1	0	0	244.8	30	30	40	0	0	5	N/A	3	7	55	
42	5	2	1	0	2143.6	45	45	10	1	0	12	3	3	5,7	80	
43	5	1	1	0	3540	38	46	15	1	0	2	2	3	7	90	
44	5	1	0	0	46.5	10	30	60	0	0	5	N/A	3	6	70	

Bank Composition Type: 1) Bedrock 2)Boulder 3) Cobble, Gravel, Sand, Silt, Clay

Vegetation Types: 5) Herbs 6) Shrubs 7) Deciduous Trees 8) Coniferous Trees 9) No Vegetation

Shelter Value: 0) No shelter 1) Simple shelter 2) Moderate shelter 3) Complex shelter 4) Highly complex shelter

Shelter Rating: 0) 0% 1) 1%-5% 2) 6%-15% 3) 16%-25% 4) 26%-50% 5) 51%-75% 6) 76%-100%

Habitat Unit Number	Habitat Unit Type	Mean Length	Mean Width	Mean Depth	Max Depth	Depth of Pool Tail Crest	Surface Area (ft)2	Cumn Length	Thalweg Length	Cumn pool length	Cumn riffle length	Cumn run length	Shelter Value	% Unit Cover	Under-cut bank	swd (d<12")	lwd (d>12")	root mass
45	Pool	185	29	2.5	5	0.4	5365	7928	6908	6019.5	420	1488.5	3	40	0	3	2	3
46	Riffle	39	30	0.4	1	N/A	1170	7967	6947	6019.5	459	1488.5	1	10	1	4	1	1
47a	Pool	127	30	1.4	3.5	0.5	3810	8094	7074	6146.5	459	1488.5	3	30	1	3	1	3
47b	Pool	10	4	0.3	0.4	N/A	40	8104	7074	6156.5	459	1488.5	1	10	0	0	0	0
48	Pool	289	32	1.7	3.5	0.4	9248	8393	7363	6445.5	459	1488.5	3	60	1	3	3	2
49	Run	75	13	1	2	N/A	975	8468	7438	6445.5	459	1563.5	2	10	1	1	0	1
50	Riffle	84	25	0.6	1.2	N/A	2100	8552	7522	6445.5	543	1563.5	2	20	1	3	0	2
51	Pool	221	20	2	3.8	0.5	4420	8773	7743	6666.5	543	1563.5	3	40	1	3	2	3
52a	Pool	155	25	2.8	6	0.8	3875	8928	7898	6821.5	543	1563.5	2	15	5	1	1	1
52b	Pool	21	5	0.5	1.1	0.5	105	8949	7898	6842.5	543	1563.5	1	10	6	0	0	1
53	Pool	257	35	2	5	0.4	8995	9206	8155	7099.5	543	1563.5	3	20	1	3	3	3
54	Riffle	81	6.5	0.9	1.2	N/A	526.5	9287	8236	7099.5	624	1563.5	1	10	0	1	1	6
55a	Run	139	19	1	1.9	N/A	2641	9426	8375	7099.5	624	1702.5	2	40	2	1	0	0
55b	Run	70	5	0.2	0.4	N/A	350	9496	8375	7099.5	624	1772.5	1	5	0	1	0	1
56	Pool	106	27	1	2.2	0.3	2862	9602	8481	7205.5	624	1772.5	2	25	1	2	1	1
57	Run	79	30	0.5	1.3	N/A	2370	9681	8560	7205.5	624	1851.5	2	15	1	2	1	0
58	Pool	328	25	1	3	0.3	8200	10009	8888	7533.5	624	1851.5	3	35	1	3	1	2
59	Riffle	150	19	0.5	1.7	N/A	2850	10159	9038	7533.5	774	1851.5	2	30	1	1	0	1
60	Run	93	15	1	2.4	N/A	1395	10252	9131	7533.5	774	1944.5	1	5	3	3	3	1
60a	Pool	200	21	1	2.4	0.5	4200	10452	9331	7733.5	774	1944.5	2	25	1	2	2	1
60b	Pool	40	6	0.9	1.2	1.1	240	10492	9331	7773.5	774	1944.5	2	15	1	1	0	2
61a	Run	272	19	0.8	1.2	N/A	5168	10764	9603	7773.5	774	2216.5	1	5	0	2	1	1
61b	Run	186	5	0.3	0.9	N/A	930	10950	9603	7773.5	774	2402.5	1	10	0	1	0	0
62	Cascade	2	16			N/A	32	10952	9605	7773.5	774	2402.5	0	0	0	0	0	0
63	Pool	54	12	1	1.7	1.2	648	11006	9659	7827.5	774	2402.5	2	23	2	1	0	1
64	Riffle	91	16	0.7	1.3	N/A	1456	11097	9750	7827.5	865	2402.5	2	25	0	1	0	1
65a	Pool	338	20	2.5	5.5	0.7	6760	11435	10088	8165.5	865	2402.5	3	40	1	2	2	3
65b	Pool	69	15	1.7	3.3	0.3	1035	11504	10088	8234.5	865	2402.5	3	30	0	1	6	1
65c	Pool	17	5	0.5	1	N/A	85	11521	10088	8251.5	865	2402.5	2	45	0	6	1	0
66	Pool	108	26	1.5	4.5	0.5	2808	11629	10196	8359.5	865	2402.5	2	20	0	1	2	1
67	Run	94	8	0.5	1.9	N/A	752	11723	10290	8359.5	865	2496.5	1	10	0	1	3	1
67b	Riffle	101	23	0.2	0.9	N/A	2323	11824	10290	8359.5	966	2496.5	0	2	0	1	0	0
67c	Run	110	20	0.8	1.9	N/A	2200	11934	10290	8359.5	966	2606.5	1	15	0	2	1	1
68	Cascade	1	15	N/A	N/A	N/A	15	11935	10291	8359.5	966	2606.5	1	0	0	0	0	0
69	Run	40	11	0.8	1.5	N/A	440	11975	10331	8359.5	966	2646.5	1	10	0	2	2	2
70a	Pool	556	37	1.7	4.5	0.3	20572	12531	10887	8915.5	966	2646.5	3	40	0	3	2	2
70b	Pool	545	17	2	3.5	3.5	9265	13076	10887	9460.5	966	2646.5	3	40	1	3	3	2
71	Run	41	15	1	2	N/A	615	13117	10928	9460.5	966	2687.5	1	5	0	4	0	4
72	Pool	125	18	2	3.5	0.5	2250	13242	11053	9585.5	966	2687.5	3	20	0	3	4	5
73	Riffle	30	30	0.3	0.8	N/A	900	13272	11083	9585.5	996	2687.5	0	1	0	1	0	1
74	Pool	139	21	1.4	4	0.6	2919	13411	11222	9724.5	996	2687.5	2	25	1	3	1	4
75	Run	60	50	1.1	2.1	N/A	3000	13471	11282	9724.5	996	2747.5	1	10	0	2	1	2
76a	Riffle	47	15	0.5	1	N/A	705	13518	11329	9724.5	1043	2747.5	1	5	2	4	0	0
76b	Pool	87	13	0.8	1.9	0.4	1131	13605	11329	9811.5	1043	2747.5	2	30	0	1	1	1
77	Run	210	50	1.2	2.5	N/A	10500	13815	11539	9811.5	1043	2957.5	3	20	0	3	3	1
78	Pool	378	50	3	8	0.8	18900	14193	11917	10189.5	1043	2957.5	3	20	1	3	2	3
79	Pool	400	3.3	2.5	3.5	0.4	1320	14593	12317	10589.5	1043	2957.5	3	40	0	3	3	3
80a	Run	121	23	1.4	3.2	N/A	2783	14714	12438	10589.5	1043	3078.5	3	30	1	2	1	3
80b	Run	153	12	0.9	1.7	N/A	1836	14867	12438	10589.5	1043	3231.5	1	5	0	1	0	4
81	Cascade	101	36	1.5	2	N/A	3636	14968	12539	10589.5	1043	3231.5	2	20	2	3	0	2
82	Pool	90	89	3	4.1	1	8010	15058	12629	10679.5	1043	3231.5	2	30	0	2	0	3
83a	Run	73	44	1.3	2.9	N/A	3212	15131	12702	10679.5	1043	3304.5	2	15	1	1	0	4
83b	Pool	60	6	1	2.5	0.5	360	15191	12702	10739.5	1043	3304.5	3	40	0	1	0	5
84a	Pool	424	30	2	4	0.7	12720	15615	13126	11163.5	1043	3304.5	3	20	1	2	1	3
84b	Pool	30	17	1.4	1.8	1.8	510	15645	13126	11193.5	1043	3304.5	1	2	0	1	1	5
85	Riffle	50	15	0.6	1.2	N/A	750	15695	13176	11193.5	1093	3304.5	1	10	1	2	1	1
86	Pool	129	31	2	4.3	0.4	3999	15824	13305	11322.5	1093	3304.5	2	20	1	2	1	4
87	Cascade	34	22	0.4	1.3	N/A	748	15858	13339	11322.5	1093	3304.5	1	5	0	3	0	1
88	Pool	97	23	7	3	0.8	2231	15955	13436	11419.5	1093	3304.5	3	45	0	3	1	3
89	Pool	289	33	1	2.9	0.5	9537	16244	13725	11708.5	1093	3304.5	2	10	2	2	1	2
90	Riffle	45	23	0.8	1	N/A	1035	16289	13770	11708.5	1138	3304.5	1	3	0	4	0	1
91	Pool	121	15	1.3	2.5	1	1815	16410	13891	11829.5	1138	3304.5	2	30	1	3	0	2
92	Run	153	15	1.2	2.2	N/A	2295	16563	14044	11829.5	1138	3457.5	2	15	0	3	0	2
93	Riffle	51	30	0.3	0.8	N/A	1530	16614	14095	11829.5	1189	3457.5	1	5	0	2	1	0
94	Pool	163	26	1.5	3	0.8	4238	16777	14258	11992.5	1189	3457.5	2	10	3	3	1	3
95a	Cascade	199	30	0.8	4	N/A	5970	16976	14457	11992.5	1189	3457.5	1	5	0	3	3	3
95b	Cascade	206	3	0.3	1.2	N/A	618	17182	14457	11992.5	1189	3457.5	2	30	0	3	1	3
96	Pool	241	29	2	5	1.5	6989	17423	14698	12233.5	1189	3457.5	3	40	0	3	3	3
97	Riffle	64	35	0.4	1.5	N/A	2240	17487	14762	12233.5	1253	3457.5	1	5	0	2	0	2

Bank Composition Type: 1) Bedrock 2)Boulder 3) Cobble, Gravel, Sand, Silt, Clay
Vegetation Types: 5) Herbs 6) Shrubs 7) Deciduous Trees 8) Coniferous Trees 9) No Vegetation
Shelter Value: 0) No shelter 1) Simple shelter 2) Moderate shelter 3) Complex shelter 4) Highly complex shelter
Shelter Rating: 0) 0% 1) 1%-5% 2) 6%-15% 3) 16%-25% 4) 26%-50% 5) 51%-75% 6) 76%-100%

Habitat Unit Number	Terr. veg.	aquatic veg.	boulders (d>10")	bedrock ledges	Surface Area of Cover	Silt/ Clay/ Sand	Gravel	Small Cobble	Boulder	Bed-rock	Exposed Substr	Habitat Embed-dedness	Bank Compo-sition	Bank Dominant Veg.	Bank Veg. %	Comments
45	3	1	0	1	2146	45	40	15	0	2	2	1	1,3	7	98	
46	5	1	1	2	117	5	20	60	1	4	20	N/A	1,3	5,7	90	
47a	4	1	1	2	1143	50	30	10	1	9	2	1	1,3	5,7	95	
47b	1	6	0	0	4	100	0	0	0	0	5	N/A	3	5	60	
48	5	1	0	0	5548.8	40	50	10	0	0	2	1	3	7	96	
49	6	1	0	0	97.5	20	40	40	0	0	3	N/A	3	5,7	50	
50	3	1	0	0	420	20	40	40	0	0	20	N/A	3	7	85	
51	4	1	0	0	1768	20	35	45	0	0	1	1	3	7	85	
52a	2	2	0	5	581.25	35	20	15	0	30	3	2	1,3	7	75	Transect stakes, blue flags
52b	1	1	1	0	10.5	30	69	1	1	0	5	4	3	5	50	
53	3	2	1	1	1799	59	20	15	1	5	1	2	1,3	7	9	
54	2	0	1	0	52.65	35	60	5	1	0	10	N/A	3	6,7	60	
55a	6	0	0	0	1056.4	45	50	5	0	0	5	N/A	3	7	70	
55b	6	1	0	0	17.5	30	65	5	0	0	40	N/A	3	7	50	
56	5	1	1	1	715.5	60	38	0	1	1	4	4	3	6,7	100	
57	5	1	0	0	355.5	30	60	10	0	0	25	N/A	3	6	99	
58	4	2	0	1	2870	55	39	5	0	1	3	4	3	7	85	
59	6	1	0	0	855	10	45	45	0	0	4	N/A	3	7	75	
60	2	2	0	0	69.75	40	45	15	0	0	2	N/A	3	5	50	
60a	4	2	1	3	1050	20	40	20	1	20	45	2	1,3	7	95	
60b	2	6	1	0	36	40	60	0	1	0	1	4	3	5	60	
61a	4	1	4	0	258.4	20	50	15	10	0	3	N/A	1,2,3	5	40	
61b	6	0	0	1	93	27	40	30	0	3	15	N/A	1,3	7	75	
62	0	0	0	0	0	10	15	40	35	0	10	N/A	2,3	7	20	Man-made cascade
63	1	5	2	0	149.04	15	50	32	3	0	1	2	2,3	5,7	85	
64	3	3	0	0	364	20	45	35	0	0	26	N/A	3	5,7	75	
65a	2	1	1	2	2704	35	30	32	1	2	2	1	1,3	7	60	
65b	1	1	0	0	310.5	20	70	10	0	0	10	1	3	7	30	
65c	0	1	0	0	38.25	100	0	0	0	0	0	N/A	3	5	80	
66	1	2	6	0	561.6	65	10	5	20	0	10	3	2,3	7	30	
67	2	1	5	0	75.2	55	20	15	10	0	3	N/A	2,3	7	40	
67b	6	1	0	0	46.46	10	30	60	0	0	50	N/A	3	7	40	
67c	6	2	0	0	330	20	60	20	0	0	5	N/A	3	7	80	
68	0	0	0	0	0	1	5	5	90	0	50	N/A	2,3	5	25	
69	4	1	2	0	44	15	60	15	10	0	3	N/A	2,3	5	50	
70a	3	3	1	0	8228.8	59	30	10	1	0	1	2	3	7	95	
70b	3	3	2	2	3706	30	30	15	5	20	15	3	1,3	7	85	
71	0	1	0	2	30.75	35	20	40	0	5	3	N/A	3	7	40	
72	2	1	0	2	450	20	25	40	0	15	2	2	3	6	40	
73	0	1	0	0	9	5	35	60	0	0	25	N/A	3	6	80	
74	5	5	1	0	729.75	29	20	45	1	5	1	2	3	7	35	
75	5	1	0	0	300	30	45	25	0	0	10	N/A	3	7	45	
76a	0	1	4	0	35.25	10	70	10	5	0	4	N/A	3	7	45	
76b	6	0	0	0	339.3	25	40	35	0	0	3	1	3	7	40	
77	3	1	0	0	2100	55	30	15	0	0	38	N/A	3	7	60	
78	4	3	0	3	3780	40	40	10	0	10	2	1	1,3	7	85	WD 42
79	3	2	2	3	528	30	20	10	5	35	5	1	1,3	7	80	
80a	3	2	2	2	834.9	55	20	10	5	10	3	N/A	1,3	7	75	
80b	1	4	2	4	91.8	5	10	20	5	60	50	N/A	1,3	5	95	
81	1	2	1	4	727.2	5	10	5	5	75	45	N/A	1,3	7	85	
82	3	2	3	3	2403	30	10	10	20	30	60	N/A	1	7	90	
83a	3	1	1	4	481.8	10	30	30	5	25	20	N/A	3	7	90	
83b	3	1	1	2	144	25	50	10	2	13	3	3	1,3	7	70	
84a	4	2	1	2	2544	40	25	15	5	15	3	3	3	7	90	
84b	1	1	1	1	10.2	70	5	20	2	3	5	4	1,3	5	65	
85	4	1	1	0	75	55	40	4	1	0	2	N/A	3	5	40	
86	3	1	2	3	799.8	25	10	15	10	40	5	4	1,3	7	80	Large sand bar in midddle
87	4	1	0	4	37.4	5	0	0	0	95	25	N/A	1,3	7	70	
88	4	0	2	3	1003.95	30	20	20	5	25	3	3	1,3	7	98	
89	2	3	1	2	953.7	40	40	10	2	8	2	1	1,3	5,7	80	Devil's Gulch (?)
90	4	1	2	1	31.05	5	5	20	30	40	20	N/A	1,3	7	70	Side CS/RU entering
91	3	1	2	4	544.5	10	10	20	10	50	5	1	1,3	7	80	
92	3	2	1	2	344.25	20	35	20	5	20	8	N/A	1,3	7	80	
93	4	1	1	1	76.5	10	68	20	1	1	33	N/A	1,3	7	95	Deadmans Gulch (?)
94	1	0	1	1	423.8	35	30	20	10	5	15	2	1,3	7	70	
95a	2	2	1	4	298.5	1	2	2	5	90	45	N/A	1	7	70	
95b	3	3	2	1	185.4	1	2	2	5	90	50	N/A	1,3	7	60	
96	3	2	2	1	2795.6	10	30	20	10	30	13	2	1,3	5	87	SPT Gauging Station
97	2	2	2	0	112	10	70	7	8	5	40	N/A	1,2,3	5	97	

1997 Lagunitas Creek Habitat Typing Data

Bank Composition Type: 1) Bedrock 2)Boulder 3) Cobble, Gravel, Sand, Silt, Clay

Vegetation Types: 5) Herbs 6) Shrubs 7) Deciduous Trees 8) Coniferous Trees 9) No Vegetation

Shelter Value: 0) No shelter 1) Simple shelter 2) Moderate shelter 3) Complex shelter 4) Highly complex shelter

Shelter Rating: 0) 0% 1) 1%-5% 2) 6%-15% 3) 16%-25% 4) 26%-50% 5) 51%-75% 6) 76%-100%

Habitat Unit Number	Habitat Unit Type	Mean Length	Mean Width	Mean Depth	Max Depth	Depth of Pool Tail Crest	Surface Area (ft)2	Cumn Length	Thalweg Length	Cumn pool length	Cumn riffle length	Cumn run length	Shelter Value	% Unit Cover	Under-cut bank	swd (d<12")	lwd (d>12")	root mass
98	Pool	188	40	2.3	3	0.03	7520	17675	14950	12421.5	1253	3457.5	2	15	0	2	1	4
99	Run	195	34	0.8	1.6	N/A	6630	17870	15145	12421.5	1253	3652.5	1	5	1	1	1	5
100	Run	245	34	1.2	2.5	N/A	8330	18115	15390	12421.5	1253	3897.5	1	5	0	1	2	3
101	Pool	246	22	1.5	2.5	0.3	5412	18361	15636	12667.5	1253	3897.5	3	15	1	1	2	3
102	Riffle	87	16	0.4	1.1	N/A	1392	18448	15723	12667.5	1340	3897.5	2	10	0	1	1	5
103	Pool	453	44	2	4.5	0.9	19932	18901	16176	13120.5	1340	3897.5	3	30	0	3	1	3
104	Riffle	155	22	0.8	1.2	N/A	3410	19056	16331	13120.5	1495	3897.5	1	5	0	2	0	3
105	Pool	426	44	0.9	3	0.5	18744	19482	16757	13546.5	1495	3897.5	1	5	0	3	0	5
106a	Run	155	21	1.7	2.5	N/A	3255	19637	16912	13546.5	1495	4052.5	1	2	1	2	2	4
106b	Run	75	26	2.5	4.3	0.2	1950	19712	16912	13621.5	1495	4052.5	2	35	1	2	1	0
107a	Pool	419	35	1.4	3.3	0.6	14665	20131	17331	14040.5	1495	4052.5	2	20	0	2	1	5
107b	Pool	24	3	0.4	0.8	0.2	72	20155	17331	14064.5	1495	4052.5	1	15	0	0	0	0
107c	Pool	34	5	0.8	1.2	0.2	170	20189	17331	14098.5	1495	4052.5	0	1	0	0	0	0
108	Riffle	87	34	0.4	0.8	N/A	2958	20276	17418	14098.5	1582	4052.5	0	1	0	0	0	0
109	Pool	267	37	1	2.7	1.6	9879	20543	17685	14365.5	1582	4052.5	1	10	0	1	0	3
110	Run	434	37	0.9	2.5	N/A	16058	20977	18119	14365.5	1582	4486.5	1	5	1	1	2	4
111	Riffle	68	42	0.3	0.8	N/A	2856	21045	18187	14365.5	1650	4486.5	1	5	0	1	0	4
112	Pool	396	33	2	5.2	0.5	13068	21441	18583	14761.5	1650	4486.5	2	10	1	2	1	4
113	Run	120	27	1.2	2.1	N/A	3240	21561	18703	14761.5	1650	4606.5	0	2	0	1	1	3
114	Cascade	35	32	1	1.5	N/A	1120	21596	18738	14761.5	1650	4606.5	1	15	0	1	1	4
115	Run	165	22	1.8	2.5	N/A	3630	21761	18903	14761.5	1650	4771.5	1	17	0	2	0	4
116	Pool	175	25	1.8	3	0.5	4375	21936	19078	14936.5	1650	4771.5	2	20	1	3	1	3
117	Riffle	170	35	0.4	1.6	N/A	5950	22106	19248	14936.5	1820	4771.5	2	25	0	2	1	2
118	Run	132	38	1.2	1.8	N/A	5016	22238	19380	14936.5	1820	4903.5	2	15	4	1	1	2
119a	Pool	236	27	1.2	2.2	1	6372	22474	19616	15172.5	1820	4903.5	3	30	2	3	2	1
119b	Pool	55	6	0.6	1	0.3	330	22529	19616	15227.5	1820	4903.5	1	5	0	3	0	0
119c	Pool	55	7	1	2	0.1	385	22584	19616	15282.5	1820	4903.5	3	35	0	6	1	3
119d	Pool	34	6	0.8	1.2	0.3	204	22618	19616	15316.5	1820	4903.5	2	30	1	4	0	4
120a	Pool	47	54	2	6	1	2538	22665	19663	15363.5	1820	4903.5	3	20	4	1	0	1
120b	Pool	24	10	0.5	0.9	0.2	240	22689	19663	15387.5	1820	4903.5	0	2	0	2	0	5
121a	Run	39	18	1	2	N/A	702	22728	19702	15387.5	1820	4942.5	2	15	2	1	0	3
121b	Riffle	24	33	0.1	0.3	N/A	792	22752	19702	15387.5	1844	4942.5	0	5	1	1	0	2
122a	Run	137	37	1	2	N/A	5069	22889	19839	15387.5	1844	5079.5	1	10	0	1	0	1
122b	Pool	55	12	17	2	1.5	660	22944	19839	15442.5	1844	5079.5	2	30	1	0	0	1
123	Pool	322	35	1.4	2.9	0.8	11270	23266	20161	15764.5	1844	5079.5	2	15	1	1	0	3
124	Run	33	12	1.3	2	N/A	396	23299	20194	15764.5	1844	5112.5	0	2	0	1	0	0
125	Pool	283	35	1.4	2.5	1.5	9905	23582	20477	16047.5	1844	5112.5	1	5	3	1	0	3
126	Riffle	79	25	1.3	1.8	N/A	1975	23661	20556	16047.5	1923	5112.5	2	45	0	1	0	0
127	Run	95	32	1	2.2	N/A	3040	23756	20651	16047.5	1923	5207.5	1	15	0	1	0	1
128	Run	142	14	1	2	N/A	1988	23898	20793	16047.5	1923	5349.5	2	35	0	1	0	2
129a	Run	188	16	1	2	N/A	3008	24086	20981	16047.5	1923	5537.5	3	35	2	1	0	3
129b	Run	152	21	0.8	0.8	N/A	3192	24238	20981	16047.5	1923	5689.5	3	40	0	1	0	2
130	Riffle	55	33	0.8	1.5	N/A	1815	24293	21036	16047.5	1978	5689.5	3	30	0	1	0	0
131	Pool	512	37	2.7	6	0.8	18944	24805	21548	16559.5	1978	5689.5	2	20	3	1	1	2
132a	Run	80	14	0.9	2.5	N/A	1120	24885	21628	16559.5	1978	5769.5	2	15	3	2	0	1
133b	Riffle	87	8	0.4	0.7	N/A	696	24972	21628	16559.5	2065	5769.5	1	15	0	1	0	0
133	Pool	450	40	1.7	4	0.4	18000	25422	22078	17009.5	2065	5769.5	2	15	3	2	1	2
134a	Pool	97	35	3	8	1.9	3395	25519	22175	17106.5	2065	5769.5	1	10	1	2	0	2
134b	Pool	28	10	0.8	2.2	0.8	280	25547	22175	17134.5	2065	5769.5	2	10	3	1	0	1
135a	Riffle	37	17	0.6	0.9	N/A	629	25584	22212	17134.5	2102	5769.5	2	8	0	2	0	0
135b	Run	46	15	1	3	N/A	690	25630	22212	17134.5	2102	5815.5	2	15	3	3	0	1
136	Run	140	16	1	3	N/A	2240	25770	22352	17134.5	2102	5955.5	3	30	2	2	1	3
137	Riffle	15	12	0.5	1	N/A	180	25785	22367	17134.5	2117	5955.5	0	0	0	0	0	0
138	Pool	154	35	1.5	4	0.5	5390	25939	22521	17288.5	2117	5955.5	3	20	1	4	1	2
139	Run	175	14	0.8	1.2	N/A	2450	26114	22696	17288.5	2117	6130.5	1	5	3	1	1	3
140	Pool	656	35	1.1	3.6	0.4	22960	26770	23352	17944.5	2117	6130.5	2	10	3	3	2	2
141a	Pool	277	30	1.4	2.8	0.8	8310	27047	23629	18221.5	2117	6130.5	3	15	2	2	2	2
141b	Pool	45	20	0.2	0.4	0.1	900	27092	23629	18266.5	2117	6130.5	1	4	1	1	0	1
142	Riffle	42	15	0.8	1.7	N/A	630	27134	23671	18266.5	2159	6130.5	2	15	0	1	1	0
143	Pool	162	31	1	3.2	0.9	5022	27296	23833	18428.5	2159	6130.5	3	30	2	1	0	1
144	Riffle	77	18	0.7	1.8	N/A	1386	27373	23910	18428.5	2236	6130.5	2	40	1	5	1	1
145	Pool	273	37	1.5	4.2	0.9	10101	27646	24183	18701.5	2236	6130.5	2	20	3	3	1	1
146	Riffle	38	20	0.5	1	N/A	760	27684	24221	18701.5	2274	6130.5	0	2	5	1	0	0
147	Run	114	25	0.4	1.4	N/A	2850	27798	24335	18701.5	2274	6244.5	1	8	5	1	0	1
148	Run	174	36	0.4	1.8	N/A	6264	27972	24509	18701.5	2274	6418.5	2	8	4	1	0	1
149	Riffle	88	25	0.4	1	N/A	2200	28060	24597	18701.5	2362	6418.5	0	2	1	1	0	3
150	Run	171	15	1.2	2.3	N/A	2565	28231	24768	18701.5	2362	6589.5	2	15	1	1	0	5
151	Pool	304	33	1.2	3.5	0.8	10032	28535	25072	19005.5	2362	6589.5	3	25	2	2	1	1
152	Run	131	26	1.4	2.5	N/A	3406	28666	25203	19005.5	2362	6720.5	2	15	2	1	0	4
153a	Riffle	47	25	0.8	1	N/A	1175	28713	25250	19005.5	2409	6720.5	1	10	0	1	0	2
153b	Run	36	10	0.5	0.5	N/A	360	28749	25250	19005.5	2409	6756.5	3	50	0	1	0	0

Bank Composition Type: 1) Bedrock 2)Boulder 3) Cobble, Gravel, Sand, Silt, Clay

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Shelter Value: 0) No shelter 1) Simple shelter 2) Moderate shelter 3) Complex shelter 4) Highly complex shelter

Shelter Rating: 0) 0% 1) 1%-5% 2) 6%-15% 3) 16%-25% 4) 26%-50% 5) 51%-75% 6) 76%-100%

Habitat Unit Number	Terr. veg.	aquatic veg.	boulders (d>10")	bedrock ledges	Surface Area of Cover	Silt/ Clay/ Sand	Gravel	Small Cobble	Boulder	Bed-rock	Exposed Substr	Habitat Embed-dedness	Bank Compo-sition	Bank Domina nt Veg.	Bank Veg. %	Comments
98	3	1	2	0	1128	20	60	10	5	5	5	2	2,3	5	95	
99	0	1	2	0	331.5	20	51	27	2	0	40	N/A	3	5,7	85	
100	1	3	2	0	416.5	30	40	25	5	0	10	N/A	3	5	98	Woody Debris Site
101	1	5	1	0	811.8	20	35	25	5	15	5	3	3	5	85	
102	1	1	0	0	139.2	10	45	45	0	0	3	N/A	3	5	50	
103	5	2	3	1	5979.6	25	25	20	10	20	7	1	1,3	7	80	
104	1	2	2	1	170.5	10	45	30	5	10	30	N/A	3	5	90	
105	1	1	1	1	937.2	20	40	30	2	8	5	2	1,3	7	50	
106a	0	4	1	1	65.1	43	30	20	5	2	1	N/A	3	7	70	WD 35
106b	1	1	5	2	682.5	20	15	15	30	20	20	3	1,2,3	5	70	WD 35
107a	1	1	2	1	2933	15	30	35	5	15	5	2	1,3	5	70	
107b	0	1	4	4	10.8	10	5	15	25	50	15	3	1	5	2	
107c	0	1	0	6	1.7	27	3	15	5	50	10	1	1	7	10	
108	0	6	0	0	29.58	9	36	50	1	5	15		1,3	7	60	
109	1	1	5	1	987.9	15	50	15	5	15	5	1	1,3	7	40	WD 34
110	1	1	1	0	802.9	10	30	50	5	5	5		1,3	7	70	WD 33
111	1	1	0	1	142.8	8	35	50	3	4	15		1,3	7	60	
112	1	1	2	1	1306.8	15	40	20	10	15	3	1	1	7	60	Old WD 33
113	1	1	1	0	64.8	40	30	10	10	10	15		1,3	7	50	
114	1	1	4	1	168	0	10	10	30	50	30		1	7	40	
115	2	1	2	0	617.1	15	15	40	15	15	30		1,3	7	50	
116	2	1	2	1	875	25	35	20	10	10	3	3	1,3	7	70	WD 32
117	3	2	0	0	1487.5	23	40	30	5	2	15	N/A	1,3	7	80	
118	1	2	0	0	752.4	25	45	25	4	1	5	N/A	3	7	90	
119a	3	1	1	0	1911.6	25	40	30	5	0	2	1	1,3	7	85	WD 31
119b	5	1	0	0	16.5	15	30	30	5	20	2	2	3	7	80	
119c	1	1	0	0	134.75	60	30	30	5	20	2	2	3	7	70	
119d	0	1	1	0	61.2	11	29	40	20	0	5	1	3	5	20	
120a	1	1	1	5	507.6	15	5	25	5	50	33	1	1,3	7	60	WD 30
120b	1	1	1	0	4.8	75	10	10	5	0	10	3	3	7	40	
121a	1	2	2	0	105.3	0	25	25	25	25	3	N/A	1,3	5	50	
121b	2	2	1	0	39.6	10	20	60	10	0	65	N/A	3	5	80	
122a	1	3	1	1	506.9	10	30	40	10	10	10	N/A	1,3	5	60	WD 29
122b	1	1	3	3	198	15	15	40	15	15	2	3	1,3	7	40	WD 29
123	2	2	2	2	1690.5	20	20	20	20	20	2	2	1,3	7	80	
124	1	5	1	1	7.92	5	5	10	10	70	5	N/A	1	5,7	40	
125	2	2	2	2	495.25	30	30	10	10	20	5	3	3	8	75	WD 28
126	1	6	1	0	888.75	0	10	20	20	50	15	N/A	1,3	7	35	
127	1	3	3	0	456	15	15	10	20	30	10	N/A	1,3	7,8	50	
128	2	4	2	1	695.8	10	20	10	20	30	5	N/A	1,3	7	95	
129a	3	3	1	0	1052.8	35	20	20	15	10	5	N/A	3	7	90	
129b	1	5	2	0	1276.8	10	10	20	20	40	15	N/A	2,3	5	80	
130	1	6	0	2	544.5	0	10	10	0	80	15	N/A	1	7	80	WD 27
131	2	1	0	2	3788.8	25	35	15	5	20	1	3	1,3	7	70	WD 27
132a	1	2	0	1	168	25	20	40	5	10	5	N/A	1,3	8	40	WD 27
133b	2	5	1	0	104.4	20	50	20	5	5	5	N/A	1,3	5	60	
133	3	2	2	1	2700	15	30	35	10	10	3	1	1,3	7	60	WD 26
134a	1	1	3	4	1800	10	10	10	20	50	10	3	1,3	5	30	
134b	4	1	0	0	62.9	85	10	5	0	0	2	4	3	5	50	
135a	0	6	1	0	50.32	5	33	60	2	0	10	N/A	3	7	20	
135b	1	2	0	0	94.35	38	37	20	3	2	3	N/A	3	7	60	
136	3	2	0	0	54	30	40	30	0	0	2	N/A	3	7	95	WD 25
137	0	0	0	0	0	0	80	20	0	0	1	N/A	3	9	0	Under Irving Bridge
138	1	1	1	0	36	7	60	30	1	2	25	2	3	7	70	WD 24
139	2	1	0	0	1148	15	50	30	2	3	5	N/A	3	7	50	
140	1	3	1	0	2296	20	60	20	1	0	15	1	3	7	85	WD 23+24
141a	3	2	1	2	3444	22	35	20	3	20	3	1	1,3	7	98	WD 22
141b	0	6	0	0	0	10	50	40	0	0	50	2	1,3	5	35	
142	0	6	1	0	94.5	15	45	40	1	0	5	N/A	3	5	60	WD 21
143	5	1	1	2	1506.6	58	15	15	2	10	0	1	3	7	60	WD 20
144	3	1	0	0	554.4	20	40	40	0	0	15	N/A	3	7	80	WD 20
145	3	2	1	2	2020.2	35	25	15	5	20	2	1	1,3	7	90	WD 19
146	0	0	0	0	15.2	30	30	40	1	0	5	N/A	1,3	5	40	WD 19
147	0	1	1	0	228	25	40	30	3	2	2	N/A	3	5	70	
148	1	2	1	0	501.12	45	30	20	3	2	5	N/A	3	5	65	Transect site WD 18
149	0	1	3	0	44	15	40	42	3	0	20	N/A	3	5	40	WD 18
150	2	2	1	0	384.75	20	40	30	5	5	5	N/A	3	7	85	
151	2	3	1	2	2508	25	20	10	5	40	2	2	1,3	7	90	
152	2	2	2	0	510.9	20	30	20	10	20	5	N/A	1,2,3	7	90	WD 17
153a	2	5	0	1	117.5	0	30	30	0	40	20	N/A	1,3	7	90	
153b	3	6	0	0	180	8	2	20	0	70	60	N/A	1,3	5,7	60	

Bank Composition Type: 1) Bedrock 2)Boulder 3) Cobble, Gravel, Sand, Silt, Clay

Vegetation Types: 5) Herbs 6) Shrubs 7) Deciduous Trees 8) Coniferous Trees 9) No Vegetation

Shelter Value: 0) No shelter 1) Simple shelter 2) Moderate shelter 3) Complex shelter 4) Highly complex shelter

Shelter Rating: 0) 0% 1) 1%-5% 2) 6%-15% 3) 16%-25% 4) 26%-50% 5) 51%-75% 6) 76%-100%

Habitat Unit Number	Habitat Unit Type	Mean Length	Mean Width	Mean Depth	Max Depth	Depth of Pool Tail Crest	Surface Area (ft2)	Cumn Length	Thalweg Length	Cumn pool length	Cumn riffle length	Cumn run length	Shelter Value	% Unit Cover	Under-cut bank	swd (d<12")	lwd (d>12")	root mass
154a	Run	177	21	0.9	2.5	N/A	3717	28926	25427	19005.5	2409	6933.5	2	25	1	2	1	3
154b	Pool	16	5	0.5	1	0.2	80	28942	25427	19021.5	2409	6933.5	2	30	1	1	0	4
154c	Pool	53	17	1	1.1	N/A	901	28995	25427	19074.5	2409	6933.5	1	5	4	1	1	2
155a	Pool	328	23	1.8	4.9	0.6	7544	29323	25755	19402.5	2409	6933.5	2	15	1	2	1	3
155b	Pool	46	11	0.2	0.4	0.3	506	29369	25755	19448.5	2409	6933.5	0	1	6	0	0	0
156	Riffle	31	50	0.2	1	N/A	1550	29400	25786	19448.5	2440	6933.5	0	2	3	1	0	4
157a	Run	153	18	1	1.8	N/A	2754	29553	25939	19448.5	2440	7086.5	1	15	3	2	0	3
157b	Run	134	18	0.6	0.8	N/A	2412	29687	25939	19448.5	2440	7220.5	1	8	3	1	2	1
158	Pool	365	23	1.7	3.4	0.9	8395	30052	26304	19813.5	2440	7220.5	2	20	3	2	3	3
159	Riffle	36	36	0.4	0.4	N/A	1296	30088	26340	19813.5	2476	7220.5	1	2	4	1	1	1
160a	Run	92	23	0.9	1.9	N/A	2116	30180	26432	19813.5	2476	7312.5	1	8	3	1	0	2
160b	Run	80	5	0.4	0.9	N/A	400	30260	26432	19813.5	2476	7392.5	3	45	0	1	2	0
161a	Pool	249	41	1.8	3.2	0.5	10209	30509	26681	20062.5	2476	7392.5	3	20	2	3	0	3
161b	Pool	14	4	0.5	1.5	N/A	56	30523	26681	20076.5	2476	7392.5	3	50	3	1	3	1
161c	Pool	10	3	0.2	0.5	N/A	30	30533	26681	20086.5	2476	7392.5	2	25	1	5	0	2
162	Run	344	27	1.1	1.8	N/A	9288	30877	27025	20086.5	2476	7736.5	2	15	2	2	1	2
163	Pool	276	27	1.5	3.4	0.5	7452	31153	27301	20362.5	2476	7736.5	3	18	3	2	2	1
164a	Riffle	61	38	0.4	1	N/A	2318	31214	27362	20362.5	2537	7736.5	2	10	0	1	1	0
164b	Pool	15	6	0.4	0.8	0.5	90	31229	27362	20377.5	2537	7736.5	2	20	0	0	5	1
165	Run	182	32	0.9	1.2	N/A	5824	31411	27544	20377.5	2537	7918.5	2	18	2	1	2	1
166	Pool	373	35	1.3	3.2	0.4	13055	31784	27917	20750.5	2537	7918.5	2	20	2	3	1	2
167	Run	98	45	0.4	1	N/A	4410	31882	28015	20750.5	2537	8016.5	1	8	3	1	0	1
168	Run	412	27	1.1	2.5	N/A	11124	32294	28427	20750.5	2537	8428.5	2	18	2	2	2	1
169	Riffle	52	30	0.6	1.1	N/A	1560	32346	28479	20750.5	2589	8428.5	2	20	0	1	0	1
170	Run	128	28	1	2.1	N/A	3584	32474	28607	20750.5	2589	8556.5	2	15	2	1	0	2
171	Pool	235	38	1	2.8	0.9	8930	32709	28842	20985.5	2589	8556.5	2	10	1	1	0	1
172	Riffle	21	25	0.4	1	N/A	525	32730	28863	20985.5	2610	8556.5	1	3	1	1	0	1
173	Pool	222	25	1.5	3.5	0.8	5550	32952	29085	21207.5	2610	8556.5	2	15	2	4	2	2
174	Cascade	8	15	0.7	1	N/A	120	32960	29093	21207.5	2610	8556.5	0	1	0	0	0	5
175	Run	71	18	0.8	1	N/A	1278	33031	29164	21207.5	2610	8627.5	1	5	1	2	0	4
176a	Pool	119	22	1.9	3.5	1	2618	33150	29283	21326.5	2610	8627.5	3	30	2	2	1	4
176b	Pool	23	9	0.4	0.6	0.5	207	33173	29283	21349.5	2610	8627.5	1	5	0	3	0	0
176c	Pool	81	8	0.5	1.8	N/A	648	33254	29283	21349.5	2610	8708.5	1	5	0	0	0	0
177	Run	67	12	1	1.8	N/A	804	33321	29350	21349.5	2610	8775.5	1	10	0	1	0	0
178	Run	116	23	1.1	2.3	N/A	2668	33437	29466	21349.5	2610	8891.5	2	18	0	1	0	3
179	Riffle	66	33	0.4	1	N/A	2178	33503	29532	21349.5	2676	8891.5	0	2	1	3	0	3
180	Run	140	33	0.8	1.5	N/A	4620	33643	29672	21349.5	2676	9031.5	1	8	0	1	0	4
181	Pool	168	24	0.9	2.5	0.9	4032	33811	29840	21517.5	2676	9031.5	2	12	0	1	1	5
182a	Riffle	101	37	0.4	1.4	N/A	3737	33912	29941	21517.5	2777	9031.5	2	20	0	2	0	1
182b	Pool	19	7	0.3	0.6	0.5	133	33931	29941	21536.5	2777	9031.5	3	30	0	1	0	1
183	Pool	326	29	1.4	3.2	0.7	9454	34257	30267	21862.5	2777	9031.5	2	15	1	2	2	2
184	Riffle	36	18	1	1.4	N/A	648	34293	30303	21862.5	2813	9031.5	3	20	0	1	0	0
185	Pool	185	22	2	5	0.8	4070	34478	30488	22047.5	2813	9031.5	2	10	0	2	2	2
186	Riffle	69	24	0.5	1.5	N/A	1656	34547	30557	22047.5	2882	9031.5	1	15	0	1	0	1
187	Pool	159	27	1.1	2.9	0.9	4293	34706	30716	22206.5	2882	9031.5	2	15	2	1	1	1
188	Riffle	154	34	1.6	2.5	N/A	5236	34860	30870	22206.5	3036	9031.5	3	40	0	1	0	0
189	Run	38	16	0.9	2	N/A	608	34898	30908	22206.5	3036	9069.5	1	10	0	3	0	0
190	Riffle	35	20	0.8	0.9	N/A	700	34933	30943	22206.5	3071	9069.5	0	0	0	0	0	0
191	Pool	49	24	1	2.8	1	1176	34982	30992	22255.5	3071	9069.5	1	5	6	1	0	2
192	Plunge	3	24	1	2.8	N/A	72	34985	30995	22255.5	3071	9069.5	0	0	0	0	0	0
193	Pool	29	34	1	1.2	0.6	986	35014	31024	22284.5	3071	9069.5	0	2	0	5	0	3
194	Riffle	45	27	0.6	1	N/A	1215	35059	31069	22284.5	3116	9069.5	0	0	0	0	0	0
195	Run	74	21	1	2	N/A	1554	35133	31143	22284.5	3116	9143.5	1	3	0	0	6	2
196a	Pool	75	20	1.2	3.2	0.5	1500	35208	31218	22359.5	3116	9143.5	3	15	0	2	6	4
196b	Run	100	18	0.6	0.9	N/A	1800	35308	31218	22359.5	3116	9243.5	2	25	0	2	2	1
197	Run	51	43	1	1.5	N/A	2193	35359	31269	22359.5	3116	9294.5	2	11	0	2	2	2
198	Plunge	349	107	4	10+	1	37343	35708	31618	22359.5	3116	9294.5	1	25	0	2	1	1
199	Riffle	56	10	1.3	1	N/A	560	35764	31674	22359.5	3172	9294.5	2	30	1	1	0	0
200	Run	25	9	1	1	N/A	225	35789	31699	22359.5	3172	9319.5	2	40	1	0	0	0
201	Riffle	25	9	1.5	1	N/A	225	35814	31724	22359.5	3197	9319.5	2	15	1	1	0	0
202	Pool	33	14	1.5	2	1	462	35847	31757	22392.5	3197	9319.5	1	10	0	1	0	1

Bank Composition Type: 1) Bedrock 2)Boulder 3) Cobble, Gravel, Sand, Silt, Clay

Vegetation Types: 5) Herbs 6) Shrubs 7) Deciduous Trees 8) Coniferous Trees 9) No Vegetation

Shelter Value: 0) No shelter 1) Simple shelter 2) Moderate shelter 3) Complex shelter 4) Highly complex shelter

Shelter Rating: 0) 0% 1) 1%-5% 2) 6%-15% 3) 16%-25% 4) 26%-50% 5) 51%-75% 6) 76%-100%

Habitat Unit Number	Terr. veg.	aquatic veg.	boulders (d>10")	bedrock ledges	Surface Area of Cover	Silt/ Clay/ Sand	Gravel	Small Cobble	Boulder	Bed-rock	Exposed Substr	Habitat Embed-dedness	Bank Compo-sition	Bank Dominant Veg.	Bank Veg. %	Comments
154a	2	3	0	1	929.25	10	30	30	5	25	20	N/A	1,3	7	70	WD 16
154b	1	2	0	0	24	2	8	20	0	70	10	4	3	7	70	
154c	1	1	1	0	45.05	30	35	30	3	2	10	1	3	7	30	
155a	2	2	1	3	1131.6	23	20	15	2	50	1	2	1,3	5	60	
155b	0	1	0	0	5.06	40	30	30	0	0	25	3	3	7	35	
156	1	2	0	0	31	10	60	30	0	0	15	N/A	3	5	80	
157a	1	2	0	0	413.1	40	25	15	0	25	2	N/A	3	5	70	
157b	1	3	0	0	192.96	30	30	40	0	0	60	N/A	3	7	80	
158	1	2	1	2	1679	30	30	20	5	15	5	1	3	7	95	
159	3	2	0	0	25.92	25	60	15	0	0	10	N/A	3	5	95	
160a	1	4	1	0	169.28	18	50	30	2	0	5	N/A	3	5	60	
160b	1	5	0	0	180	50	45	5	0	0	35	N/A	3	5	50	
161a	4	2	1	1	2041.8	50	20	20	2	8	1	1	3	7	80	
161b	1	3	0	0	28	100	0	0	0	0	0	4	3	5	98	
161c	0	4	0	0	7.5	100	0	0	0	0	0	4	3	5	80	
162	1	2	2	0	1393.2	20	40	30	5	5	8	N/A	3	5,7	85	
163	1	3	2	0	1341.36	35	40	15	5	5	4	1	3	7	90	WD 13
164a	3	4	0	0	231.8	10	40	50	0	0	15	N/A	3	7	60	WD 13
164b	3	1	0	0	18	30	30	40	0	0	1	3	3	5	60	WD 13
165	1	3	1	0	1048.32	25	40	35	1	0	15	N/A	3	5	99	WD 13
166	4	3	1	0	2611	24	50	20	5	1	5	3	3	7	99	WD 12
167	1	5	0	0	352.8	30	30	40	0	0	20	N/A	3	5	70	WD 12 + transect site
168	3	3	1	0	2002.32	20	30	30	15	5	5	N/A	1,3	7	80	WD 11+10
169	2	5	1	0	312	10	30	40	5	15	10	N/A	1,3	5	60	WD 10
170	2	3	2	1	537.6	30	20	20	20	20	5	N/A	1,2,3	5	50	
171	2	2	4	2	893	20	20	30	20	10	10	2	2,3	5	50	Bottom of WD 9
172	1	3	3	0	15.75	30	30	30	10	0	5	N/A	2,3	5	80	Top of WD 9, LG-12
173	1	3	2	1	832.5	35	5	10	10	40	3	2	3	5	60	LG-12
174	0	1	4	0	1.2	0	15	70	15	0	15	N/A	3	5	65	Top of LG-12
175	1	3	1	0	63.9	40	20	25	15	0	1	N/A	3	7	90	WD 8
176a	4	2	1	0	785.4	60	25	5	7	3	1	3	2,3	7	30	
176b	0	1	5	0	10.35	40	10	25	25	0	30	3	2,3	7	20	
176c	1	1	6	0	32.4	37	38	5	20	0	5	N/A	2,3	7	20	
177	2	2	4	0	80.4	20	20	40	20	0	5	N/A	2,3	7	20	
178	2	3	2	0	480.24	20	30	35	5	10	6	N/A	1,2,3	5	70	WD 7
179	3	0	0	0	43.56	20	35	45	0	0	5	N/A	3	5	80	
180	1	3	1	0	369.6	20	40	40	1	0	20	N/A	3	5	90	
181	2	2	1	1	483.84	20	30	40	5	5	3	1	2,3	7	50	Bottom of WD 6
182a	2	6	0	0	747.4	30	30	35	5	0	20	N/A	1,2,3	5,7	80	Top of WD 6
182b	1	0.5	0	0	39.9	35	15	50	0	0	50	1	3	5	40	
183	2	3	3	1	1418.1	20	20	20	20	20	3	1	1,2,3	5	70	WD 5
184	0	6	0	0	129.6	10	20	30	20	20	15	N/A	1,2,3	7	85	WD 4+5
185	1	3	4	1	407	20	15	20	15	30	3	3	1,2,3	5	65	WD 3+4
186	0	5	2	1	248.4	10	25	50	12	3	5	N/A	1,2,3	5	90	
187	3	3	1	1	643.95	30	40	15	5	10	15	1	1,2,3	5	85	WD 2
188	0	0	6	2	2094.4	20	10	15	40	15	30	N/A	1,2	8	75	
189	0	3	4	0	60.8	20	15	40	20	5	5	N/A	1,2,3	5	90	
190	0	0	0	0	0	25	15	50	7	3	10	N/A	1,2,3	5	75	
191	0	2	1	0	58.8	15	40	35	7	3	2	1	1,2	5	80	
192	0	0	0	0	0								1	5	50	WD 1
193	0	1	0	0	19.72	30	30	40	0	0	0	2	1	5	60	WD 1
194	0	0	0	0	0	10	30	60	2	3	15	N/A	1,3	5	70	WD 1
195	0	0	1	0	46.62	5	25	70	1	0	10	N/A	2,3	5	40	
196a	1	1	0	0	225	35	15	40	5	5	0	1	1,3	5	75	
196b	0	5	1	0	450	5	25	70	5	0	45	N/A	3,2	5	75	
197	1	3	2	0	241.23	20	30	50	5	0	20	N/A	2,3	7	85	
198	1	2	3	4	9335.75	10	4	1	5	80	0	1	1	7	40	Peters Dam Plunge
199	0	4	3	0	168	10	35	40	15	0	10	N/A	2	7	60	
200	1	5	3	0	90	0	50	40	10	0	8	N/A	2	7	40	
201	0	5	3	0	33.75	0	55	35	10	0	10	N/A	2	5,8	65	
202	0	2	6	0	46.2	10	60	20	10	0	5	N/A	2	5	80	

APPENDIX D

1998-1999 Lagunitas Creek habitat typing survey data
Highway 1 to Peters Dam

1998-1999 Lagunitas Creek Habitat Typing Data

Bank Composition Type: 1) Bedrock 2)Boulder 3) Cobble, Gravel, Sand, Silt, Clay

Vegetation Types: 5) Herbs 6) Shrubs 7) Deciduous Trees 8) Coniferous Trees 9) No Vegetation

Shelter Value: 0) No shelter 1) Simple shelter 2) Moderate shelter 3) Complex shelter 4) Highly complex shelter

Shelter Rating: 0) 0% 1) 1%-5% 2) 6%-15% 3) 16%-25% 4) 26%-50% 5) 51%-75% 6) 76%-100%

Habitat Unit Numb	Habitat Unit Type	Mean Length (ft)	Mean Width (ft)	Mean Depth	Max Depth	Depth of Pool Tail Crest	Surface Area (ft)2	Cumn Length	Cumn pool length	Cumn riffle length	Cumn run length	Shelter Value	# of lg woody debris	% Unit Cov	Under-cut bank	swd (d<12")	lwd (d>12")	root mass
1	Pool	547	76	4	6.6	N/A	41572	547	547	0	0	3	0	15	1	3	0	2
2	Riffle	471	69	1	2	N/A	32499	1018	547	471	0	3	10	30	1	3	3	1
3	Pool	366	30	1.8	3.8	N/A	10980	1384	913	471	0	3	2	60	2	3	2	2
4	Riffle	50	22	0.4	0.6	N/A	1100	1434	913	521	0	0	0	0	0	0	0	0
5	Pool	314	38	2.2	8.4	0.4	11932	1748	1227	521	0	1	0	2	6	0	0	0
6	Pool	365	70	2.5	5	0.4	25550	2113	1592	521	0	3	3	30	2	4	3	1
7	Pool	1227	65	2	3.8	0.8	79755	3340	2819	521	0	2	2	25	2	1	2	1
8	Pool	1098	51	4.8	8.5	N/A	55998	4438	3917	521	0	4	10	40	1	3	3	3
9	Riffle	56	15	0.7	1	N/A	840	4494	3917	577	0	1	0	5	0	0	0	0
10	Pool	1460	30	6	7	0.3	43800	5954	5377	577	0	4	2	50	1	3	3	1
11	Pool	394	26	6	9.5	0.4	10244	6348	5771	577	0	4	16	60	1	3	3	1
12	Riffle	34	10	0.7	1	N/A	340	6382	5771	611	0	3	0	55	1	4	0	0
13	Pool	55	36	2	3.4	0.8	1980	6437	5826	611	0	3	1	40	2	3	2	1
14	Riffle	187	13	0.5	1.7	N/A	2431	6624	5826	798	0	4	0	80	2	1	0	2
15	Run	177	28	2.1	3.6	N/A	4956	6801	5826	798	177	3	0	40	0	2	0	2
16	Riffle	71	12	0.5	0.5	N/A	852	6872	5826	869	177	2	0	40	2	4	0	2
17	Pool	1058	35	3.3	6.6	0.6	37030	7930	6884	869	177	4	14	60	1	4	3	1
18	Pool	320	28	3	5.5	1.5	8960	8250	7204	869	177	4	5	40	3	3	2	1
19	Riffle	31	10	0.8	1.5	N/A	310	8281	7204	900	177	4	0	80	5	3	0	2
20	Pool	76	38	4	7.5	0.4	2888	8357	7280	900	177	4	3	30	2	3	2	2
21	Riffle	113	15	0.8	1.2	N/A	1695	8470	7280	1013	177	4	1	70	0	4	3	2
22	Pool	735	34	4	6.5	0.3	24990	9205	8015	1013	177	3	3	50	2	3	2	2
23	Pool	237	18	3.5	6	0.5	4266	9442	8252	1013	177	4	6	60	2	4	2	2
24	Pool	60	22	1	2	0.3	1320	9502	8312	1013	177	2	2	15	3	2	3	3
25	Riffle	51	20	0.5	1	1.5	1020	9553	8312	1064	177	2	1	30	3	3	1	2
26	Pool	89	10	0.9	1.8	0.4	890	9642	8401	1064	177	2	0	10	3	2	3	3
27	Pool	81	24	2	3.5	0.2	1944	9723	8482	1064	177	3	2	35	2	3	1	2
28	Pool	121	19	1.7	2.2	0.4	2299	9844	8603	1064	177	2	0	18	3	4	0	1
29	Pool	786	37	1.6	4.5	0.2	29082	10630	9389	1064	177	2	6	20	3	3	2	3
30	Run	40	7	1.2	3.5	N/A	280	10670	9389	1064	217	2	0	7	4	0	0	4
31	Pool	602	38	1	3.8	0.4	22876	11272	9991	1064	217	3	5	25	3	3	2	4
32	Plunge	177	27	5	7.4	0.1	4779	11449	9991	1064	217	4	0	50	3	2	0	0
33	Cascad	53	18	1	1.5	N/A	954	11502	9991	1064	217	3	0	60	0	0	0	0
34	Pool	493	36	3.2	4.3	0.6	17748	11995	10484	1064	217	3	7	35	3	3	2	4
35	Riffle	16	17	1	2.5	N/A	272	12011	10484	1080	217	2	0	10	3	1	0	5
36	Run	99	20	0.75	2	N/A	1980	12110	10484	1080	316	3	1	30	1	3	1	1
37	Riffle	48	15	0.3	1.2	N/A	720	12158	10484	1128	316	4	0	98	2	3	0	1
38	Pool	1179	50	3.5	6.7	1	58950	13337	11663	1128	316	3	14	40	2	3	3	3
39	Run	43	15	0.8	1.1	N/A	645	13380	11663	1128	359	4	1	100	1	4	1	2
40	Pool	137	24	3	5.5	0.5	3288	13517	11800	1128	359	4	2	75	2	3	1	3
41	Run	68	14	0.8	2.3	N/A	952	13585	11800	1128	427	2	0	30	3	4	0	3
42	Pool	158	34	1.5	4	0.5	5372	13743	11958	1128	427	3	3	30	1	4	2	2
43	Pool	184	40	2.6	5	0.4	7360	13927	12142	1128	427	4	4	80	1	3	1	1
44	Run	84	20	1.2	2.5	N/A	1680	14011	12142	1128	511	0	0	15	0	4	0	2
45	Pool	84	20	0.5	1	N/A	1680	14095	12226	1128	511	3	1	25	3	2	1	4
46	Riffle	115	20	0.5	1	N/A	2300	14210	12226	1243	511	1	0	10	3	2	1	4
47	Pool	40	15	1.25	2.2	0.4	600	14250	12266	1243	511	2	1	10	1	4	2	2
48	Pool	133	25	2.1	1	0.6	3325	14383	12399	1243	511	2	0	15	3	3	0	3
49	Run	118	10	1	2.2	N/A	1180	14501	12399	1243	629	2	1	30	3	4	1	3
50	Pool	117	30	3.5	5	0.5	3510	14618	12516	1243	629	4	2	60	0	3	2	3
51	Riffle	58	18	0.5	1	N/A	1044	14676	12516	1301	629	2	0	15	0	3	0	1
52	Run	122	15	0.8	1.6	N/A	1830	14798	12516	1301	751	2	0	5	1	3	0	1
53	Pool	1225	40	7	12.2	0.5	49000	16023	13741	1301	751	4	14	70	7	2	3	3
54	Pool	434	42	2.6	10.2	0.4	18228	16457	14175	1301	751	3	11	50	2	3	2	2
55	Pool	240	47	3	5.1	0.5	11280	16697	14415	1301	751	3	3	40	3	3	2	3
56	Run	38	12	0.7	1.3	N/A	456	16735	14415	1301	789	1	0	10	3	4	0	2
57	Pool	76	16	1.2	2.8	0.3	1216	16811	14491	1301	789	4	2	60	3	3	2	2
58	Riffle	26	9	0.5	0.8	N/A	234	16837	14491	1327	789	3	0	25	1	5	0	3
59	Riffle	33	11	0.7	1.3	N/A	363	16870	14491	1360	789	3	0	25	0	5	0	2
60	Pool	36	10	0.8	2.3	0.5	360	16906	14527	1360	789	2	0	25	3	2	0	2
61	Riffle	20	6	0.3	0.5	N/A	120	16926	14527	1380	789	1	0	8	0	4	0	3
62	Pool	100	15	2.1	3.6	0.3	1500	17026	14627	1380	789	2	0	15	3	1	0	2

1998-1999 Lagunitas Creek Habitat Typing Data

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Vegetation Types: 5) Herbs 6) Shrubs 7) Deciduous Trees 8) Coniferous Trees 9) No Vegetation

Shelter Value: 0) No shelter 1) Simple shelter 2) Moderate shelter 3) Complex shelter 4) Highly complex shelter

Shelter Rating: 0) 0% 1) 1%-5% 2) 6%-15% 3) 16%-25% 4) 26%-50% 5) 51%-75% 6) 76%-100%

Habitat Unit Numb	Terr. veg.	aquatic veg.	boulders (d>10")	bedrock ledges	Surface Area of Cover	Silt/ Clay/	Gravel	Small Cobble	Boulder	Bed-rock	Exposed Substrat	Habitat Embed-dedness	Bank Compo-o-	Bank Dominant Veg.	Bank Veg. %	Comments
1	4	0	2	0	6235.8	100	0	0	0	0	0	100	3	7,6	100	Highway 1 Bridge
2	4	2	0	0	9749.7	70	30	0	0	0	80	N/A	3	7,6	70	
3	4	2	0	0	6588	40	60	0	0	0	0	100	3	7	70	
4	0	0	0	0	0	30	70	1	0	0	0	N/A	3	0	0	
5	0	0	0	0	238.64	60	40	0	0	0	0	N/A	3	5	5	
6	3	3	0	0	7665	40	55	5	0	0	0	10	3	5,6	60	
7	5	2	0	0	19938.75	50	50	0	0	0	0	0	3	6,7	100	
8	4	1	0	0	22399.2	60	38	5	0	0	0	100	3	7	100	
9	6	0	0	0	42	35	60	5	0	0	0	N/A	3	7	40	
10	5	1	1	1	21900	25	70	5	1	1	0	100	3	7	100	
11	5	1	1	1	6146.4	25	70	5	1	1	5	100	3	7	100	
12	4	0	0	0	187	15	80	5	0	0	0	N/A	3	7	80	
13	5	0	0	0	792	35	60	5	0	0	0	100	3	7	80	
14	6	0	0	0	1944.8	15	85	0	0	0	0	N/A	3	7	90	
15	6	0	0	0	1982.4	40	60	0	0	0	0	N/A	3	7	90	
16	4	2	0	0	340.8	20	70	10	0	0	0	N/A	3	7	85	
17	4	0	1	0	22218	20	60	5	5	1	0	100	3	7	100	
18	4	0	0	0	3584	65	35	1	0	0	0	50	3	7,6	100	
19	4	0	0	0	248	60	30	10	0	0	0	N/A	3	7,6	100	
20	4	1	0	0	866.4	40	50	10	0	0	100	40	3	7,6	80	
21	3	1	0	0	1186.5	30	40	30	0	0	40	N/A	3	6	100	
22	4	0	2	2	12495	40	35	10	10	5	5	90	1,3	6	90	
23	4	1	1	0	2559.6	35	50	10	4	1	2	60	1	6	100	
24	3	1	0	0	198	55	45	0	0	0	5	100	3	6,7	70	
25	4	0	0	0	306	40	60	0	0	0	5	N/A	3	6,7	95	
26	4	0	0	0	89	35	65	0	0	0	0	100	3	6,7	60	
27	4	1	1	0	680.4	45	50	5	1	0	0	100	3	6,7	100	
28	4	2	0	0	413.82	40	60	1	0	0	0	50	3	6,7	50	
29	3	1	1	0	5816.4	45	40	5	1	0	2	100	3	6,7	100	
30	2	2	0	0	19.6	25	65	10	0	0	0	N/A	3	5,6	70	
31	3	2	0	0	5719	50	45	2	0	0	0	N/A	3	6	100	
32	4	0	2	3	2389.5	40	30	10	5	15	5	100	3	6,7	80	
33	0	2	0	6	572.4	10	1	1	1	50	40	N/A	1	5	40	
34	3	2	0	0	6211.8	40	60	2	1	0	5	20	3	6,7	75	Gallaghers Bridge
35	1	0	1	0	27.2	30	65	5	1	2	5	N/A	3	6,7	80	
36	5	0	0	0	594	50	30	20	0	0	0	N/A	3	6,7	85	
37	5	0	0	0	705.6	5	15	80	0	0	0	N/A	3	6,7	85	
38	3	2	1	1	23580	50	30	15	5	2	2	50	3	6,7	100	Side channel @ top
39	5	2	0	0	645	40	30	30	0	0	0	N/A	3	5	100	
40	4	2	0	0	2466	40	40	20	0	0	0	50	3	5	100	
41	3	1	0	0	285.6	20	60	20	0	0	0	0	3	5	80	
42	4	1	0	0	1611.6	35	60	5	0	0	0	20	3	7	99	
43	5	1	0	0	5888	70	30	1	0	0	0	0	3	7	100	
44	4	1	0	0	252	40	40	20	0	0	0	N/A	3	7	6	Log jam, alder
45	4	1	0	0	420	60	30	10	0	0	0	0	3	7	90	Log jam at d/s end
46	4	1	0	0	230	15	80	5	0	0	20	N/A	3	7	80	
47	3	1	0	0	60	40	60	0	0	0	0	0	3	7	70	
48	4	1	0	0	498.75	60	40	1	0	0	0	0	3	7	70	Trib on right
49	3	1	0	0	354	30	60	10	0	0	0	N/A	3	7	80	
50	4	1	0	0	2106	60	30	1	0	0	0	0	3	7	100	Fallen oak and tank
51	5	1	0	0	156.6	10	50	40	0	0	2	N/A	3	5,7	95	U/S of concrete mix
52	5	0	0	0	91.5	20	50	30	0	0	0	N/A	3	5,7,8	80	
53	4	1	0	0	34300	70	20	10	1	0	0	25	3	6,7	99	
54	4	1	0	0	9114	40	50	1	10	0	1	0	3	7,6	100	
55	3	2	1	0	4512	50	40	5	5	0	0	40	3	6	100	
56	4	1	0	0	45.6	30	70	0	0	0	0	N/A	3	6	80	
57	4	1	0	0	729.6	40	50	10	0	0	0	50	3	6	95	Confluence pool
58	2	1	1	0	58.5	5	35	60	2	0	5	N/A	3	5	75	Side channel d/s
59	3	1	0	0	90.75	30	55	15	0	0	1	N/A	3	5	85	
60	5	1	0	0	90	40	60	0	0	0	0	100	3	5,7	85	
61	3	1	0	0	9.6	15	75	10	0	0	0	N/A	3	5,7	75	
62	3	2	3	0	225	40	30	10	20	0	0	50	3	5,7	70	

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Habitat Unit Numb	Habitat Unit Type	Mean Length (ft)	Mean Width (ft)	Mean Dept h	Max Dept h	Depth of Pool Tail Crest	Surfac e Area (ft)2	Cumn Length	Cumn pool length	Cumn riffle length	Cumn run length	Shelt er Value	# of lg woody debris	% Unit Cov	Unde r-cut bank	swd (d<12")	lwd (d>12")	root mass
63	Pool	98	15	3	3.8	0.5	1470	17124	14725	1380	789	3	3	40	2	3	1	3
64	Riffle	56	15	0.5	1.1	N/A	840	17180	14725	1436	789	4	0	60	0	5	0	2
65	Pool	452	35	4	7.7	0.5	15820	17632	15177	1436	789	4	5	35	3	3	3	2
66	Pool	261	30	5	7.4	0.6	7830	17893	15438	1436	789	3	4	20	3	3	3	2
67	Riffle	34	20	0.8	1.7	N/A	680	17927	15438	1470	789	1	0	5	1	4	0	1
68	Pool	804	30	6	7.6	0.5	24120	18731	16242	1470	789	3	25	40	3	3	3	2
69	Run	94	14	1.2	2.7	N/A	1316	18825	16242	1470	883	4	6	80	2	3	3	3
70	Pool	196	23	1.8	4	0.7	4508	19021	16438	1470	883	3	5	30	2	3	3	1
71	Run	45	10	0.9	1.6	N/A	450	19066	16438	1470	928	2	3	15	3	4	3	2
72	Riffle	25	16	0.6	1.2	N/A	400	19091	16438	1495	928	1	0	5	3	4	0	1
73	Plunge	32	17	0.8	2.5	0.4	544	19123	16438	1495	928	4	2	40	3	3	3	3
74	Riffle	16	12	0.4	1	N/A	192	19139	16438	1511	928	3	4	30	2	3	3	3
75	Pool	54	14	1.8	4	0.5	756	19193	16492	1511	928	4	10	65	3	4	4	2
76	Riffle	49	18	0.7	1.3	N/A	882	19242	16492	1560	928	2	1	18	2	4	3	2
77	Run	54	20	0.8	1.4	N/A	1080	19296	16492	1560	982	4	2	80	2	3	2	3
78	Run	45	19	0.9	2.1	N/A	855	19341	16492	1560	1027	2	2	15	4	1	1	2
79	Riffle	45	24	0.3	1.4	N/A	1080	19386	16492	1605	1027	1	2	10	1	3	3	1
80	Pool	31	18	2.1	2.9	0.4	558	19417	16523	1605	1027	3	2	15	3	4	2	2
81	Run	61	18	1.8	2.5	N/A	1098	19478	16523	1605	1088	3	3	30	2	4	2	3
82	Pool	123	25	3.5	4.5	0.7	3075	19601	16646	1605	1088	3	1	30	3	3	2	1
83	Pool	71	26	0.9	2.1	0.6	1846	19672	16717	1605	1088	3	2	25	2	4	1	1
84	Pool	187	25	1.6	4	0.6	4675	19859	16904	1605	1088	3	3	28	3	3	2	2
85	Run	68	24	1.1	2.3	N/A	1632	19927	16904	1605	1156	2	3	12	0	5	2	1
86	Pool	24	11	2.1	2.9	0.5	264	19951	16928	1605	1156	3	0	35	3	2	0	5
87	Pool	160	22	6	7.3	0.4	3520	20111	17088	1605	1156	3	5	50	3	2	5	2
88	Pool	160	30	4	6	0.6	4800	20271	17248	1605	1156	3	12	60	2	3	5	1
89	Run	48	10	0.6	1.1	N/A	480	20319	17248	1605	1204	1	0	5	0	2	0	6
90	Pool	189	24	3.5	5.8	0.6	4536	20508	17437	1605	1204	3	3	40	1	3	4	3
91	Run	42	21	1.3	1.9	N/A	882	20550	17437	1605	1246	2	1	15	1	5	3	2
92	Pool	133	34	1.1	1.9	N/A	4522	20683	17570	1605	1246	2	1	20	3	3	1	3
93	Run	29	11	1.1	1.8	N/A	319	20712	17570	1605	1275	1	0	8	2	3	0	5
94	Pool	110	28	1.4	4.6	0.6	3080	20822	17680	1605	1275	1	1	10	3	1	1	6
95	Riffle	41	9	0.7	1.3	N/A	369	20863	17680	1646	1275	1	0	5	4	3	0	4
96	Pool	62	28	7	8.6	0.7	1736	20925	17742	1646	1275	4	6	35	2	4	4	2
97	Pool	65	22	1.8	3.7	0.8	1430	20990	17807	1646	1275	3	4	20	2	3	3	3
98	Run	19	8	0.8	1.9	N/A	152	21009	17807	1646	1294	2	1	35	2	2	5	2
99	Riffle	43	10	0.7	1.6	N/A	430	21052	17807	1689	1294	2	2	25	0	5	3	1
100	Pool	176	18	2.5	6.2	0.3	3168	21228	17983	1689	1294	2	4	20	3	4	3	2
101	Riffle	62	14	0.6	1.5	N/A	868	21290	17983	1751	1294	1	0	5	3	2	0	5
102	Pool	80	28	1.9	3.9	0.4	2240	21370	18063	1751	1294	3	3	40	1	2	4	2
103	Run	38	22	1	1.9	N/A	836	21408	18063	1751	1332	1	1	10	2	3	5	3
104	Pool	107	25	1.4	3.1	0.5	2675	21515	18170	1751	1332	1	3	8	3	2	3	3
105	Pool	238	30	2.1	3.9	1	7140	21753	18408	1751	1332	2	6	15	3	2	3	3
106	Run	104	26	1.3	2	N/A	2704	21857	18408	1751	1436	2	0	18	4	2	0	3
107	Pool	155	25	2.1	4.8	0.5	3875	22012	18563	1751	1436	3	2	30	3	3	2	3
108	Run	113	24	1.2	3.3	N/A	2712	22125	18563	1751	1549	2	1	15	3	2	2	5
109	Run	58	22	1.3	2.8	N/A	1276	22183	18563	1751	1607	3	1	35	3	4	1	3
110	Run	25	18	0.9	2.2	N/A	450	22208	18563	1751	1632	4	1	60	2	5	1	2
111	Pool	228	25	1.9	4.2	0.6	5700	22436	18791	1751	1632	2	2	20	2	4	1	2
112	Plunge	84	25	3.5	5.5	0.6	2100	22520	18791	1751	1632	4	5	35	3	3	3	3
113	Run	96	21	0.9	1.5	N/A	2016	22616	18791	1751	1728	2	0	20	1	3	0	3
114	Run	53	22	2.1	3	N/A	1166	22669	18791	1751	1781	2	8	85	0	4	4	1
115	Pool	184	22	1.4	3.1	0.5	4048	22853	18975	1751	1781	2	8	22	2	2	4	3
116	Riffle	37	18	0.8	1.4	N/A	666	22890	18975	1788	1781	1	0	8	4	2	0	4
117	Pool	198	21	1.6	3.3	0.6	4158	23088	19173	1788	1781	2	8	15	2	3	3	4
118	Pool	134	18	15	2.8	0.7	2412	23222	19307	1788	1781	2	5	25	3	3	3	3
119	Run	85	25	23	3.8	N/A	2125	23307	19307	1788	1866	2	8	25	2	3	5	3
120	Pool	98	22	2.7	4.6	0.9	2156	23405	19405	1788	1866	2	2	18	3	2	0	3
121	Run	129	15	1.7	3.2	N/A	1935	23534	19405	1788	1995	3	1	35	2	3	1	5
122	Pool	32	17	2.8	4	0.4	544	23566	19437	1788	1995	3	2	35	0	2	1	2
123	Run	13	14	0.8	1.4	N/A	182	23579	19437	1788	2008	1	0	8	0	2	0	6
124	Pool	319	25	3.8	6.6	0.6	7975	23898	19756	1788	2008	3	4	33	2	3	2	3
125	Pool	156	22	3.5	6	0.4	3432	24054	19912	1788	2008	3	3	20	1	3	2	4
126	Pool	123	22	3.5	5.3	0.7	2706	24177	20035	1788	2008	4	6	95	1	3	3	1
127	Run	183	20	1.7	2.3	N/A	3660	24360	20035	1788	2191	2	2	15	2	3	2	2
128	Run	72	14	1.4	2.4	N/A	1008	24432	20035	1788	2263	2	0	10	3	2	0	5

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Habitat Unit Numb	Terr. veg.	aquatic veg.	boulders (d>10")	bedrock ledges	Surface Area of Cover	Silt/ Clay /	Gravel	Small Cobble	Boulder	Bedrock	Exposed Substrat	Habitat Embed-dedness	Bank Compo-	Bank Dominant Veg.	Bank Veg. %	Comments
63	3	3	0	0	588	75	20	5	0	0	0	100	3	7	100	
64	3	1	0	0	504	15	70	15	0	0	0	N/A	3	7	100	
65	3	1	1	0	5537	70	25	5	5	0	0	25	3	7	100	Side channel begins
66	3	2	0	0	1566	80	20	3	0	0	0	10	3	7,8	100	Trib on right
67	4	0	0	0	34	10	80	10	0	0	0	N/A	3	7	90	
68	3	2	0	0	9648	45	40	15	0	0	0	10	3	7	100	Gravel yard
69	3	2	3	0	1052.8	10	60	20	10	0	0	N/A	3	7	100	
70	4	0	1	0	1352.4	60	20	15	5	0	0	40	3	7	98	
71	0	0	0	0	67.5	20	65	15	0	0	0	N/A	3	5	65	
72	4	0	0	0	20	15	80	5	0	0	2	N/A	3	5	85	
73	3	1	0	0	217.6	45	50	5	0	0	0	15	3	5,7	99	Nicasio Creek
74	3	1	0	0	57.6	20	65	15	0	0	0	N/A	3	5,7	95	
75	2	0	0	0	491.4	70	25	5	0	0	0	100	3	5,7	70	Log jam
76	3	1	0	0	158.76	25	65	10	0	0	0	N/A	3	5,7	96	
77	5	1	0	0	864	15	80	5	0	0	10	N/A	3	7	100	
78	4	1	0	0	128.25	35	60	5	0	0	10	N/A	3	5	65	
79	5	0	0	0	108	10	85	5	0	0	5	N/A	3	5	85	
80	4	0	0	0	83.7	55	40	5	0	0	0	10	3	7	75	2 debris jams
81	3	1	0	0	329.4	50	50	0	0	0	0	N/A	3	5,7	75	
82	4	0	0	0	922.5	90	5	5	1	0	0	100	3	7	98	
83	4	2	1	0	461.5	35	60	5	2	0	0	40	3,2	7	98	
84	3	1	0	0	1309	75	20	5	0	0	0	60	3	7	95	
85	3	1	0	0	195.84	40	50	10	0	0	10	N/A	3	5	85	
86	1	1	0	0	92.4	50	50	0	0	0	50	100	3	5	85	Sm side channel
87	2	2	0	0	1760	80	15	5	0	0	0	70	3	5,7	95	
88	3	0	0	0	2880	65	30	5	0	0	15	100	3	7	90	
89	0	0	0	0	24	25	70	5	0	0	0	N/A	3	5	70	
90	3	0	0	0	1814.4	55	40	5	0	0	0	80	3	5	85	
91	1	1	0	0	132.3	20	65	15	0	0	0	N/A	3	5,7	90	
92	3	1	0	0	904.4	20	70	10	0	0	0	5	3	5,7	95	
93	0	0	0	0	25.52	25	75	0	0	0	0	N/A	3	5	50	
94	1	1	0	0	308	85	15	0	0	0	3	100	3	5,7	97	
95	0	0	0	0	18.45	15	80	5	0	0	0	N/A	3	5	40	
96	2	1	0	2	607.6	70	15	10	0	5	0	50	1,3	7	80	Debris jam, bedrock
97	3	2	0	1	286	55	40	0	0	5	0	100	3	5,7	90	
98	0	0	1	0	53.2	20	10	5	5	0	0	N/A	3	5	25	
99	2	0	0	0	107.5	15	70	15	0	0	0	N/A	3	5,7	45	
100	3	1	0	0	633.6	70	25	5	0	0	0	25	3	5,7	80	
101	0	1	0	0	43.4	5	90	5	0	0	0	N/A	3	5	65	
102	4	2	0	0	896	65	35	0	0	0	0	100	3	5	85	
103	1	0	0	0	83.6	45	55	0	0	0	0	N/A	3	5	75	
104	2	2	0	0	214	60	35	5	0	0	0	100	3	5,7	65	
105	3	2	0	0	1071	85	15	2	0	0	3	100	3	5,7	95	
106	3	2	0	0	486.72	15	80	5	0	0	20	N/A	3	5,7	95	
107	3	2	0	0	1162.5	75	20	5	0	0	0	50	3	5	90	
108	2	1	0	0	406.8	20	70	10	0	0	0	N/A	3	5	85	
109	2	2	2	0	446.6	15	65	15	5	0	0	N/A	3	5,7	85	
110	3	1	0	0	270	20	75	5	0	0	0	N/A	3	7	75	
111	4	2	0	0	1140	70	25	5	0	0	0	60	3	7	60	
112	3	1	0	0	735	75	25	0	0	0	8	100	3	7	85	
113	4	2	0	0	403.2	15	80	5	0	0	5	N/A	3	7	85	
114	2	1	0	0	991.1	35	65	2	0	0	0	N/A	3	7	70	
115	3	1	0	0	890.56	85	15	2	0	0	3	15	3	7	80	
116	1	1	0	0	53.28	10	80	10	0	0	2	N/A	3	7	75	
117	3	1	0	0	623.7	35	65	2	0	0	0	15	3	5	90	
118	3	2	0	0	603	35	60	5	0	0	0	30	3	7	85	
119	0	0	0	0	531.25	80	20	0	0	0	0	N/A	3	5	75	
120	5	2	0	0	388.08	65	355	0	0	0	0	100	3	5	90	
121	3	0	0	0	677.25	20	75	5	0	0	0	N/A	3	5	75	
122	5	2	0	0	190.4	20	70	10	0	0	0	40	3	7	70	
123	3	0	0	0	14.56	5	80	15	0	0	0	N/A	3	7	65	
124	5	2	2	0	2631.75	25	55	15	5	2	0	35	3	7	90	
125	3	1	3	2	686.4	20	45	15	15	5	0	30	3	7	85	
126	5	1	2	0	2570.7	70	20	5	5	0	0	100	3	5,7	98	
127	5	1	2	0	549	15	55	15	15	0	3	N/A	3	7	90	
128	3	1	1	0	100.8	15	80	5	0	0	0	N/A	3	5,7	50	

1998-1999 Lagunitas Creek Habitat Typing Data

Bank Composition Type: 1) Bedrock 2)Boulder 3) Cobble, Gravel, Sand, Silt, Clay

Vegetation Types: 5) Herbs 6) Shrubs 7) Deciduous Trees 8) Coniferous Trees 9) No Vegetation

Shelter Value: 0) No shelter 1) Simple shelter 2) Moderate shelter 3) Complex shelter 4) Highly complex shelter

Shelter Rating: 0) 0% 1) 1%-5% 2) 6%-15% 3) 16%-25% 4) 26%-50% 5) 51%-75% 6) 76%-100%

Habitat Unit Numb	Habitat Unit Type	Mean Length (ft)	Mean Width (ft)	Mean Depth	Max Depth	Depth of Pool Tail Crest	Surface Area (ft)2	Cumn Length	Cumn pool length	Cumn riffle length	Cumn run length	Shelter Value	# of lg woody debris	% Unit Cov	Under-cut bank	swd (d<12")	lwd (d>12")	root mass
129	Pool	90	14	7.4	3	0.7	1260	24522	20125	1788	2263	3	6	40	0	3	4	3
130	Riffle	40	18	0.8	2.2	N/A	720	24562	20125	1828	2263	3	1	40	3	2	2	3
131	Pool	151	24	2.3	5	0.5	3624	24713	20276	1828	2263	4	3	90	2	3	3	2
132	Riffle	90	16	0.7	2.4	N/A	1440	24803	20276	1918	2263	2	0	18	2	3	0	1
133	Pool	95	25	1.9	3.7	0.6	2375	24898	20371	1918	2263	3	3	40	3	2	2	3
134	Pool	126	23	1.7	3.6	0.6	2898	25024	20497	1918	2263	2	2	15	3	2	3	3
135	Pool	361	38	3.2	6.7	0.7	13718	25385	20858	1918	2263	2	5	20	1	4	3	2
136	Pool	91	32	0.7	1.6	0.5	2912	25476	20949	1918	2263	1	1	5	2	2	1	4
137	Run	82	23	1.1	2.1	N/A	1886	25558	20949	1918	2345	3	0	40	1	4	0	0
138	Riffle	73	20	0.6	1	N/A	1460	25631	20949	1991	2345	1	0	11	4	1	0	4
139	Pool	59	21	1.4	2.1	0.5	1239	25690	21008	1991	2345	2	0	15	4	1	0	4
140	Riffle	58	24	0.6	1.1	N/A	1392	25748	21008	2049	2345	3	0	35	3	3	0	3
141	Pool	115	26	1	2.4	0.5	2990	25863	21123	2049	2345	4	3	75	1	3	2	1
142	Pool	114	31	2	4.3	0.3	3534	25977	21237	2049	2345	3	4	35	1	4	3	2
143	Run	80	21	1.6	2.4	N/A	1680	26057	21237	2049	2425	2	2	20	4	1	1	4
144	Pool	54	24	1.6	2.9	0.5	1296	26111	21291	2049	2425	3	0	33	1	6	0	1
145	Pool	82	20	2.4	3.6	0.6	1640	26193	21373	2049	2425	1	0	10	5	1	0	0
146	Run	68	15	2.2	3.4	N/A	1020	26261	21373	2049	2493	2	1	18	2	1	3	1
147	Pool	123	27	1.8	3.6	0.6	3321	26384	21496	2049	2493	3	0	40	2	4	0	3
148	Run	95	18	1.6	2.3	N/A	1710	26479	21496	2049	2588	2	0	15	4	1	0	1
149	Pool	68	21	2.1	3.4	0.4	1428	26547	21564	2049	2588	4	1	70	2	4	1	2
150	Pool	57	21	1.8	4.2	0.3	1197	26604	21621	2049	2588	3	0	28	2	3	0	4
151	Run	88	18	1.4	2.8	N/A	1584	26692	21621	2049	2676	2	0	18	4	2	0	3
152	Run	87	23	1.6	2.4	N/A	2001	26779	21621	2049	2763	4	2	60	2	2	2	2
153	Run	33	32	1.2	2.3	N/A	1056	26812	21621	2049	2796	4	1	60	3	4	1	2
154	Riffle	45	19	0.4	1.2	N/A	855	26857	21621	2094	2796	1	0	5	3	1	0	4
155	Pool	103	19	2.9	4.3	0.5	1957	26960	21724	2094	2796	2	0	25	3	1	0	0
156	Run	50	14	1.1	2.1	N/A	700	27010	21724	2094	2846	2	0	15	2	4	0	1
157	Pool	178	20	2.8	5	0.5	3560	27188	21902	2094	2846	2	3	16	3	4	3	3
158	Pool	160	24	3.6	5.2	0.9	3840	27348	22062	2094	2846	2	3	18	2	2	3	3
159	Pool	252	22	2.9	4.9	0.6	5544	27600	22314	2094	2846	3	2	45	2	4	3	3
160	Riffle	48	21	0.5	1.1	N/A	1008	27648	22314	2142	2846	2	0	20	3	4	0	3
161	Pool	191	22	1.2	3	0.5	4202	27839	22505	2142	2846	2	0	15	3	2	0	4
162	Pool	149	19	1.4	3.8	0.5	2831	27988	22654	2142	2846	2	0	20	4	2	0	4
163	Riffle	43	33	0.6	1	N/A	1419	28031	22654	2185	2846	3	3	35	2	4	2	4
164	Pool	217	23	1.4	2.9	0.4	4991	28248	22871	2185	2846	3	2	25	1	4	1	3
165	Riffle	39	15	0.7	1	N/A	585	28287	22871	2224	2846	1	0	8	0	3	0	3
166	Pool	66	18	1.8	3.2	0.5	1188	28353	22937	2224	2846	2	0	12	3	2	0	4
167	Run	184	18	1.4	2.1	N/A	3312	28537	22937	2224	3030	2	1	15	1	4	1	3
168	Run	33	19	1.6	2	N/A	627	28570	22937	2224	3063	1	0	8	1	2	0	2
169	Riffle	67	7	0.6	1	N/A	469	28637	22937	2291	3063	3	0	40	3	2	0	1
170	Pool	249	19	1.6	2.8	0.5	4731	28886	23186	2291	3063	3	0	20	2	4	0	2
171	Pool	235	22	1.9	4	0.6	5170	29121	23421	2291	3063	3	4	28	3	3	3	2
172	Riffle	51	28	0.6	1.1	N/A	1428	29172	23421	2342	3063	1	1	8	4	1	1	3
173	Pool	301	23	2.2	5.5	0.4	6923	29473	23722	2342	3063	4	15	60	2	4	3	3
174	Pool	508	31	3.2	5.5	0.6	15748	29981	24230	2342	3063	4	7	50	2	4	2	1

1998-1999 Lagunitas Creek Habitat Typing Data

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Vegetation Types: 5) Herbs 6) Shrubs 7) Deciduous Trees 8) Coniferous Trees 9) No Vegetation

Shelter Value: 0) No shelter 1) Simple shelter 2) Moderate shelter 3) Complex shelter 4) Highly complex shelter

Shelter Rating: 0) 0% 1) 1%-5% 2) 6%-15% 3) 16%-25% 4) 26%-50% 5) 51%-75% 6) 76%-100%

Habitat Unit Numb	Terr. veg.	aquatic veg.	boulders (d>10")	bedrock ledges	Surface Area of Cover	Silt/ Clay /	Gravel	Small Cobble	Boulder	Bed-rock	Exposed Substrat	Habitat Embed-dedness	Bank Compo-	Bank Dominant Veg.	Bank Veg. %	Comments
129	3	0	2	0	504	20	60	10	5	0	0	20	3	7	75	
130	5	0	0	0	288	15	80	5	0	0	10	N/A	3	7	80	
131	4	2	0	0	3261.6	90	10	2	0	0	0	100	9	7	90	
132	0	1	0	0	259.2	15	60	25	0	0	0	N/A	9	5	40	Trib on L, dead cow
133	4	1	0	0	950	25	60	15	0	0	0	5	3	5	60	
134	4	0	0	0	434.7	30	70	2	0	0	0	100	3	5,7	90	
135	4	1	0	1	2743.6	60	25	10	0	5	1	35	1,3	5,7	90	
136	3	3	0	0	145.6	45	45	10	0	0	0	30	3	5,7	90	
137	4	0	0	0	754.4	30	55	15	0	0	0	N/A	3	5,7	85	Trib on Left u/s
138	1	1	0	0	160.6	10	60	30	0	0	0	N/A	3	7	95	
139	3	1	0	0	185.85	45	45	10	0	0	0	0	3	5,7	100	
140	3	2	0	0	487.2	5	70	25	0	0	0	N/A	3	7	98	
141	5	1	0	0	2242.5	30	60	10	0	0	2	5	3	7	99	
142	3	2	0	0	1236.9	50	45	5	0	0	3	100	3	7	99	
143	2	1	0	0	336	35	60	5	0	0	0		3	7	99	
144	1	1	0	0	427.68	85	15	0	0	0	0	100	3	7	98	
145	3	2	1	0	164	10	68	20	2	0	0	50	3	5,7	70	ER site
146	1	5	2	0	183.6	15	63	20	2	0	0	N/A	3	7	60	ER site
147	4	1	0	0	1328.4	35	50	15	0	0	0	5	3	7	82	
148	3	3	2	0	256.5	50	40	5	5	0	0	N/A	3	5,7	65	
149	4	1	0	0	999.6	35	55	10	0	0	2	35	3	7	100	
150	3	2	0	0	335.16	57	40	3	0	0	0	25	3	7	85	
151	3	0	0	0	285.12	27	70	3	0	0	3	N/A	3	5,7	70	
152	3	2	0	0	1200.6	10	80	10	0	0	5	N/A	3	7	90	
153	3	2	0	0	633.6	25	65	10	0	0	80	N/A	3	7	75	Alder covered bar
154	3	0	0	0	42.75	10	80	10	0	0	1	N/A	3	7	95	
155	3	1	3	3	489.25	15	40	15	15	15	0	40	3,1	7	70	
156	3	2	0	0	105	15	70	15	0	0	0	N/A	3	7	80	
157	1	1	0	0	569.6	45	45	10	0	0	0	30	3	7,5	97	
158	3	1	0	0	691.2	60	30	10	0	0	0	100	3	7	95	
159	2	1	0	0	2494.8	45	45	10	0	0	0	35	3	7	99	Trib on R d/s
160	2	2	0	0	201.6	10	90	0	0	0	30	N/A	3	7,5	100	
161	2	2	0	0	630.3	30	35	8	0	0	1	80	3	5,7	85	
162	1	1	0	0	566.2	55	42	3	0	0	0	40	3	5,7	78	
163	1	1	0	0	496.65	8	90	2	0	0	35	N/A	3	5,7	65	
164	3	1	0	0	1247.75	35	60	5	0	0	0	15	3	5,7	88	
165	3	2	0	0	46.8	5	95	0	0	0	0	N/A	3	7	73	
166	2	1	0	0	142.56	35	65	3	0	0	0	8	3	7	81	
167	3	1	0	0	496.8	25	70	5	0	0	0	N/A	3	7	100	
168	4	4	0	0	50.16	40	50	10	0	0	0	N/A	3	7	90	
169	3	3	0	0	187.6	5	85	10	0	0	0	N/A	3	7	100	
170	4	2	0	0	946.2	42	50	8	0	0	0	30	3	7	98	
171	3	1	0	0	1447.6	35	55	10	0	0	1	20	3,1	7	100	
172	3	2	0	0	114.24	5	80	15	0	0	80	N/A	3	7,5	70	
173	3	2	1	0	4153.8	61	35	2	1	0	0	100	3	7,3	90	
174	4	1	1	0	7874	93	5	1	1	0	1	100	3	7,5	98	Tocaloma Bridge

1998 Lagunitas Creek Habitat Typing Data

Bank Composition Type: 1) Bedrock 2)Boulder 3) Cobble, Gravel, Sand, Silt, Clay
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Shelter Value: 0) No shelter 1) Simple shelter 2) Moderate shelter 3) Complex shelter 4) Highly complex shelter
Shelter Rating: 0) 0% 1) 1%-5% 2) 6%-15% 3) 16%-25% 4) 26%-50% 5) 51%-75% 6) 76%-100%

Habitat Unit Number	Habitat Unit Type	Mean Length (ft)	Mean Width (ft)	Mean Depth	Max Depth	Depth of Pool Tail Crest	Surface Area (ft)2	Cumn Length	Cumn pool length	Cumn riffle length	Cumn run length	Shelter Value	# of lg woody debris	% Unit Cover	Under cut bank	swd (d<12")	lwd (d>12")	root mass
1	Pool	332	43.6	3	4.5	N/A	14475.2	332	332	0	0	3		40	4	2	0	1
2	Run	118	15.5	1.25	2.5	N/A	1829	450	332	0	118	2		10	1	1	0	2
3	Riffle	30	25.4	0.5	1	N/A	762	480	332	30	118	1		5	0	1	0	1
4	Run	106	26.5	0.5	1.5	N/A	2809	586	332	30	224	3		10	0	1	0	2
5	Pool	130	20.4	2.5	3.75	N/A	2652	716	462	30	224	4		60	2	1	1	3
6	Pool	117	19.9	1.75	2.5	0.5	2328.3	833	579	30	224	1		15	0	1	0	1
7	Pool	94	8.25	3	4	0.5	775.5	927	673	30	224	4		60	1	2	0	2
8	Riffle	34	13.7	0.5	0.8	N/A	465.8	961	673	64	224	3		70	0	2	0	0
9	Run	49	12	1	2	N/A	588	1010	673	64	273	4	1	60	2	2	1	3
10	Pool	69	21	1.75	2.75	0.6	1449	1079	742	64	273	3	2	40	1	3	1	3
11	Pool	217	17.2	2	3.5	0.6	3732.4	1296	959	64	273	3	3	30	1	2	1	2
12	Run	92	10.5	1.5	3	N/A	966	1388	959	64	365	2	10	25	2	3	3	2
13	Pool	75	22.5	2	3	0.5	1687.5	1463	1034	64	365	2	3	15	2	1	1	1
14	Run	37	12	0.6	1	N/A	444	1500	1034	64	402	1	0	5	1	0	0	5
15	Pool	151	38	1.5	2.5	0.6	5738	1651	1185	64	402	1	2	2	1	1	1	5
16	Pool	227	33	1	2.5	0.4	7491	1878	1412	64	402	2	1	15	2	2	1	4
17	Run	196	36	0.75	4	N/A	7056	2074	1412	64	598	2	1	10	2	1	1	5
18	Riffle	57	15	0.5	0.75	N/A	855	2131	1412	121	598	0	0	2	0	6	0	0
19	Pool	29	21.2	2	2.5	0.75	614.8	2160	1441	121	598	3	3	30	1	2	1	1
20	Pool	101	16.7	1.5	3.5	0.6	1686.7	2261	1542	121	598	3	1	20	0	1	1	1
21	Pool	243	35	1.5	3	0.5	8505	2504	1785	121	598	2	3	15	1	1	1	2
22	Riffle	116	18.6	0.5	1.25	N/A	2157.6	2620	1785	237	598	1	2	8	1	1	1	2
23	Run	550	43	1	2.5	N/A	23650	3170	1785	237	1148	2	3	20	1	2	1	3
24	Pool	145	28	3.5	5	0.5	4060	3315	1930	237	1148	4	5	30	2	2	1	2
25	Run	552	11	1	2.5	N/A	6072	3867	1930	237	1700	2	1	10	1	2	1	2
26	Run	445	31	1	2	N/A	13795	4312	1930	237	2145	3	1	25	2	2	1	2
27	Pool	192	24.8	3	5	0.4	4761.6	4504	2122	237	2145	2	3	20	2	2	1	2
28	Run	246	39	0.6	3.5	N/A	9594	4750	2122	237	2391	1	0	5	3	1	0	2
29	Pool	62	15.8	2.5	3.5	0.5	979.6	4812	2184	237	2391	1	0	10	5	0	0	2
30	Run	118	43.4	2	4	N/A	5121.2	4930	2184	237	2509	3	7	35	0	3	3	2
31	Run	459	33	1.5	4	N/A	15147	5389	2184	237	2968	2	3	15	3	3	2	3
32	Run	618	18	0.75	4.5	N/A	11124	6007	2184	237	3586	2	6	18	2	2	2	3
33	Pool	204	28	2	4	0.75	5712	6211	2388	237	3586	3	1	35	2	1	1	3
34	Pool	287	20	2	4	0.75	5740	6498	2675	237	3586	2	6	12	3	1	1	3
35	Run	86	16.6	0.5	1.5	N/A	1427.6	6584	2675	237	3672	3	0	5	0	2	0	3
36	Pool	93	39.6	2	4	0.5	3682.8	6677	2768	237	3672	2	0	15	2	3	0	3
37	Run	89	15.2	0.75	1.5	N/A	1352.8	6766	2768	237	3761	1	0	3	0	3	0	4
38	Pool	176	21.4	1.5	3	0.5	3766.4	6942	2944	237	3761	2	1	10	2	2	1	3
39	Run	102	18	0.5	1.5	N/A	1836	7044	2944	237	3863	1	1	7	0	4	0	3
40	Run	290	31	0.5	1.5	N/A	8990	7334	2944	237	4153	3	1	25	0	2	1	2
41	Run	153	13.6	1.5	1.5	N/A	2080.8	7487	2944	237	4306	1	0	8	1	1	0	2
42	Pool	216	20	2	3	0.5	4320	7703	3160	237	4306	3	3	20	2	2	1	5
43	Riffle	59	12	0.5	1	N/A	708	7762	3160	296	4306	1	0	5	2	2	0	4
44	Pool	189	32.3	3.5	6	0.5	6104.7	7951	3349	296	4306	2	2	15	1	1	2	4
45	Pool	250	33	2	4	0.5	8250	8201	3599	296	4306	3	0	20	2	2	0	3
46	Run	109	25	0.5	1	N/A	2725	8310	3599	296	4415	1	0	5	5	0	0	1
47	Pool	85	23	1	2.5	1	1955	8395	3684	296	4415	4	6	60	0	4	4	0
48	Run	177	31.7	0.5	2	N/A	5610.9	8572	3684	296	4592	2	2	15	2	2	1	1
49	Pool	252	16	1.5	4.5	0.75	4032	8824	3936	296	4592	3	3	20	1	2	2	2
50	Run	142	21.2	0.5	1.5	N/A	3010.4	8966	3936	296	4734	3	0	25	2	2	0	2
51	Riffle	125	14.9	0.25	1.5	N/A	1862.5	9091	3936	421	4734	1	1	7	3	1	1	4
52	Run	286	23	0.75	3.75	N/A	6578	9377	3936	421	5020	1	1	8	0	4	2	3
53	Riffle	50	22	0.25	1	N/A	1100	9427	3936	471	5020	2	0	15	0	5	0	0
54	Run	232	21.8	1	2	N/A	5057.6	9659	3936	471	5252	2	1	7	0	4	0	2
55	Run	81	14.2	1	1.5	N/A	1150.2	9740	3936	471	5333	2	1	20	0	1	2	0
56	Riffle	67	13.1	0.5	1.5	N/A	877.7	9807	3936	538	5333	2	0	12	0	5	0	0
57	Pool	279	28.9	2	4.5	0.5	8063.1	10086	4215	538	5333	3	6	30	0	3	2	3
58	Riffle	52	23	0.5	1	N/A	1196	10138	4215	590	5333	0	0	0	0	0	0	0
59	Pool	40	23.8	2.5	3.25	0.5	952	10178	4255	590	5333	3	0	40	1	2	1	3
60	Riffle	90	45.7	0.5	1.5	N/A	4113	10268	4255	680	5333	1	1	10	1	3	1	3
61	Pool	291	39.6	1.5	5	0.4	11523.6	10559	4546	680	5333	2	3	15	1	1	2	4
62	Run	224	37.4	0.5	1.5	N/A	8377.6	10783	4546	680	5557	1	2	10	1	5	1	1
63	Pool	223	38	0.5	3	0.5	8474	11006	4769	680	5557	3	3	20	1	3	1	3
64	Pool	88	17.7	1	2	1	1557.6	11094	4857	680	5557	1	0	5	0	1	0	6
65	Riffle	89	12	0.5	1.1	N/A	1068	11183	4857	769	5557	1	1	5	1	4	1	4

1998 Lagunitas Creek Habitat Typing Data

Bank Composition Type: 1) Bedrock 2)Boulder 3) Cobble, Gravel, Sand, Silt, Clay
Vegetation Types: 5) Herbs 6) Shrubs 7) Deciduous Trees 8) Coniferous Trees 9) No Vegetation
Shelter Value: 0) No shelter 1) Simple shelter 2) Moderate shelter 3) Complex shelter 4) Highly complex shelter
Shelter Rating: 0) 0% 1) 1%-5% 2) 6%-15% 3) 16%-25% 4) 26%-50% 5) 51%-75% 6) 76%-100%

Habitat Unit Number	Terr. veg.	aquatic veg.	boulders (d>10")	bedrock ledges	Surface Area of Cover	Silt/ Clay/ Sand	Gravel	Small Cobble	Boulder	Bed-rock	Exposed Substrate %	Habitat Embed-dedness	Bank Compo-sition	Bank Dominant Veg.	Bank Veg. %	Comments
1	4	1	1	0	5790.08	85	15	0	3	0	1	N\A	3	7	83	Tocaloma Bridge
2	0	1	1	0	182.9	35	65	0	1	0	2	N\A	3	7	85	
3	1	0	0	0	38.1	20	70	10	0	0	12	N\A	3	7	90	
4	4	0	1	0	280.9	35	60	5	1	0	1	N\A	3	7	55	Culvert on left bank
5	4	1	1	0	1591.2	80	10	10	2	0	0	0	3	7	95	
6	1	0	1	0	349.245	50	35	10	5	0	0	2	3	7	80	
7	3	1	0	0	465.3	40	40	15	0	0	4	0	3	7	95	
8	5	1	0	0	326.06	40	35	35	0	0	3	N/A	3	7	98	
9	4	1	0	0	352.8	70	20	10	0	0	2	N/A	3	7	100	
10	3	0	0	0	579.6	90	5	5	0	0	0	N/A	3	7	90	
11	4	1	0	0	1119.72	40	40	20	0	0	0	60	3	7	70	
12	1	1	0	0	241.5	40	50	10	0	0	0	N/A	3	7	65	
13	2	1	0	0	253.125	50	30	20	0	0	0	50	3	7	55	
14	2	1	0	0	22.2	10	70	20	0	0	0	N/A	3	7	50	
15	1	0	0	0	114.76	70	30	0	0	0	1	0	3	7	70	
16	2	1	1	0	1123.65	27	30	10	3	0	30	25	3	7	90	
17	2	2	1	0	705.6	20	60	10	1	0	10	N/A	3	7	80	
18	0	0	0	0	17.1	20	40	40	0	0	0	N/A	3	7	55	
19	2	3	0	0	184.44	50	35	15	0	0	0	0	3	7	70	
20	5	1	0	0	337.34	35	40	25	0	0	0	50	3	7	50	
21	3	2	0	0	1275.75	40	40	20	0	0	1	50	3	7	95	
22	4	2	0	0	172.608	10	60	30	0	0	0	N/A	3	7	70	Trib on left side
23	3	2	0	0	4730	35	40	15	0	0	3	N/A	3	7	100	
24	5	1	0	0	1218	50	30	20	0	0	0	N/A	3	7	98	
25	3	2	0	0	607.2	30	40	30	0	0	5	N/A	3	7	85	
26	3	2	1	0	3448.75	44	50	5	1	0	4	N/A	3	7	90	Top of run is weir
27	2	1	2	3	952.32	30	20	30	5	15	0	50	3	7	80	House w/ wood deck
28	5	1	0	0	479.7	35	40	25	0	0	2	N/A	3	7	80	
29	2	0	1	0	97.96	37	30	30	3	0	0	25	3	7	65	
30	3	1	0	0	1792.42	40	30	30	0	0	10	N/A	3	7	80	
31	2	1	0	0	2272.05	40	40	20	0	0	0	N/A	3	7	85	
32	3	2	0	0	2002.32	10	50	40	0	0	10	N/A	3	7	70	
33	4	2	0	0	1999.2	50	30	20	0	0	2	100	3	7	95	
34	2	2	0	0	688.8	45	25	30	0	0	5	25	3	7	80	
35	5	1	0	0	71.38	20	50	30	0	0	5	N/A	3	7	90	
36	3	1	0	0	552.42	40	30	30	0	0	1	100	3	7	90	
37	2	2	0	0	40.584	20	40	40	0	0	10	N/A	3	7	75	
38	2	1	1	1	376.64	43	30	15	3	5	0	30	3	7	80	
39	0	1	0	0	128.52	60	20	20	0	0	0	N/A	3	7	80	
40	5	1	0	0	2247.5	20	40	40	0	0	2	N/A	3	7	99	
41	6	0	0	0	166.464	20	40	40	0	0	10	N/A	3	7	65	
42	2	1	0	0	864	47	40	10	0	3	0	10	3	7	60	Cheda Creek
43	3	0	0	0	35.4	10	60	20	0	0	0	N/A	3	7	50	
44	3	2	1	0	915.705	35	20	10	5	30	0	100	3	7	95	
45	3	1	0	0	1650	50	40	10	0	0	0	70	3	7	100	
46	3	0	0	0	136.25	30	50	20	0	0	20	N/A	3	7	80	
47	2	1	0	0	1173	60	30	10	0	0	10	50	3	7	90	Tributary
48	4	2	0	0	841.635	40	40	20	0	0	1	N/A	3	7	90	
49	4	2	1	0	806.4	40	30	20	5	10	5	80	3	7	60	House w/ satellite
50	5	1	0	0	752.6	20	50	30	0	0	0	N/A	3	7	80	
51	3	1	0	0	130.375	15	35	40	0	0	5	N/A	3	7	70	
52	1	0	0	0	526.24	28	30	30	0	10	2	N/A	3	7	70	Telephone pole
53	0	3	0	0	165	12	40	40	0	3	5	N/A	3	7	60	above Jewell
54	4	1	3	0	354.032	20	50	20	10	0	1	N/A	3	7,8	50	
55	3	3	3	0	230.04	35	30	20	12	0	1	N/A	3	7	80	
56	3	1	1	0	105.324	18	50	30	1	0	0	N/A	3	7	50	
57	3	2	0	2	2418.93	38	40	10	2	10	1	10	3	7,8	50	
58	0	0	0	0	0	19	50	20	1	0	50	N/A	3	7	5	
59	3	2	3	0	380.8	10	20	30	30	0	15	15	3	7	5	
60	3	2	3	0	411.3	20	30	30	20	0	60	N/A	3	7	50	
61	3	1	1	0	1728.54	41	30	20	5	0	4	50	3	7	50	
62	0	2	0	0	837.76	55	30	15	0	0	5	N/A	3	7	90	
63	3	2	3	0	1694.8	37	60	20	5	5	3	10	3	7	95	
64	0	0	0	0	77.88	20	40	40	0	0	0	50	3	7	50	
65	0	1	0	0	53.4	20	50	30	0	0	5	N/A	3	7	60	

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Shelter Value: 0) No shelter 1) Simple shelter 2) Moderate shelter 3) Complex shelter 4) Highly complex shelter

Shelter Rating: 0) 0% 1) 1%-5% 2) 6%-15% 3) 16%-25% 4) 26%-50% 5) 51%-75% 6) 76%-100%

Habitat Unit Number	Habitat Unit Type	Mean Length (ft)	Mean Width (ft)	Mean Depth	Max Depth	Depth of Pool Tail Crest	Surface Area (ft)2	Cumn Length	Cumn pool length	Cumn riffle length	Cumn run length	Shelter Value	# of lg woody debris	% Unit Cover	Under cut bank	swd (d<12")	lwd (d>12")	root mass
66	Pool	75	26.8	2.5	3.5	0.5	2010	11258	4932	769	5557	1	0	10	0	0	0	3
67	Run	108	22	1	1.5	N/A	2376	11366	4932	769	5665	1	1	5	0	3	1	5
68	Pool	136	28.8	3	6	0.5	3916.8	11502	5068	769	5665	2	1	15	0	1	2	6
69	Run	102	27	0.5	2	N/A	2754	11604	5068	769	5767	2	4	15	0	2	0	2
70	Pool	320	48.5	3.5	8	1.5	15520	11924	5388	769	5767	2	2	15	2	3	1	3
71	Pool	77	55	2	4	0.4	4235	12001	5465	769	5767	2	1	15	2	1	6	0
72	Run	209	35	1.5	3	N/A	7315	12210	5465	769	5976	2	1	12	3	2	2	3
73	Pool	168	22	2	4	0.75	3696	12378	5633	769	5976	2	1	17	3	2	2	3
74	Run	32	25	2.5	3.5	N/A	800	12410	5633	769	6008	2	0	3	0	2	4	0
75	Plunge	124	30	2	4	0.6	3720	12534	5633	769	6008	1	0	8	0	0	0	6
76	Cascade	115	39	1	2	N/A	4485	12649	5633	769	6008	3	1	35	0	2	0	2
77	Pool	137	55	1.5	4	1	7535	12786	5770	769	6008	4	1	60	2	3	1	2
78	Pool	460	38	3.5	6	0.5	17480	13246	6230	769	6008	4	1	60	2	3	1	2
79	Riffle	48	19	0.25	1	N/A	912	13294	6230	817	6008	2	2	20	0	2	1	1
80	Pool	96	30	2.5	4	0.75	2880	13390	6326	817	6008	3	0	25	2	0	0	2
81	Cascade	49	26	0.25	1.5	N/A	1274	13439	6326	817	6008	2	0	12	0	2	0	0
82	Pool	95	28	1.5	3.5	0.5	2660	13534	6421	817	6008	3	0	30	2	2	0	2
83	Pool	122	23	1.5	3.5	0.5	2806	13656	6543	817	6008	1	0	7	2	1	0	3
84	Pool	191	32	1.5	3.5	0.5	6112	13847	6734	817	6008	1	0	5	0	1	0	5
85	Run	40	25	0.75	1	N/A	1000	13887	6734	817	6048	1	0	8	0	1	0	3
86	Pool	143	28	2	3.5	0.75	4004	14030	6877	817	6048	3	1	25	0	2	1	4
87	Pool	139	34	1.5	2.5	1	4726	14169	7016	817	6048	1	0	8	0	2	0	3
88	Pool	193	30.5	1.5	3.5	0.5	5886.5	14362	7209	817	6048	2	0	13	2	0	0	2
89	Cascade	191	20	2	4	N/A	3820	14553	7209	817	6048	3	0	50	0	1	0	1
90	Pool	186	29	4	6.5	1	5394	14739	7395	817	6048	3	2	30	1	2	5	3
91	Run	93	27	0.75	2.5	N/A	2511	14832	7395	817	6141	1	0	5	0	2	0	3
92	Pool	186	46	2	3.5	0.5	8556	15018	7581	817	6141	2	0	18	2	1	0	4
93	Run	94	38	0.75	3	N/A	3572	15112	7581	817	6235	1	0	5	0	3	0	0
94	Run	148	37	0.5	2	N/A	5476	15260	7581	817	6383	1	2	10	0	3	2	3
95	Pool	262	26	1.5	3	0.5	6812	15522	7843	817	6383	2	2	12	1	2	2	3
96	Run	56	18	1	2	N/A	1008	15578	7843	817	6439	2	0	12	1	1	0	3
97	Riffle	101	17	0.5	1	N/A	1717	15679	7843	918	6439	1	0	2	3	1	0	4
98	Pool	77	42	3	4.75	0.5	3234	15756	7920	918	6439	3	0	50	0	4	0	1
99	Pool	354	38	1.5	4	0.5	13452	16110	8274	918	6439	1	1	8	1	3	1	3
100	Riffle	168	24	0.5	1.5	N/A	4032	16278	8274	1086	6439	1	0	2	5	0	1	2
101	Pool	410	28	2	3.5	0.5	11480	16688	8684	1086	6439	2	0	16	1	0	4	2
102	Pool	102	42	2	6	0.5	4284	16790	8786	1086	6439	2	0	25	0	3	0	2
103	Pool	548	39	2	3	0.5	21372	17338	9334	1086	6439	2	2	13	1	1	1	3
104	Pool	249	40	1	3	1.5	9960	17587	9583	1086	6439	1	1	7	0	1	0	4
105	Run	389	35	1	3	N/A	13615	17976	9583	1086	6828	1	1	5	1	2	2	4
106	Riffle	148	44	0.5	1	N/A	6512	18124	9583	1234	6828	0	3	0	0	0	0	0
107	Pool	479	36	3	5.5	1	17244	18603	10062	1234	6828	3	1	30	0	2	1	4
108	Cascade	43	28	1	2	N/A	1204	18646	10062	1234	6828	4	0	70	0	1	0	3
109	Run	170	25.3	1.5	5	N/A	4301	18816	10062	1234	6998	3	1	3	0	2	2	2
110	Run	173	25.3	1.5	3.5	0.5	4376.9	18989	10235	1234	6998	3	2	30	0	3	2	3
111	Riffle	98	26.7	0.5	1	N/A	2616.6	19087	10235	1332	6998	3	0	30	0	3	0	3
112	Run	208	43	0.5	2	N/A	8944	19295	10235	1332	7206	1	0	10	3	2	0	3
113	Pool	269	53.5	2.5	5.5	1	14391.5	19564	10504	1332	7206	3	10	30	2	3	3	1
114	Run	186	48.3	1	3.5	N/A	8983.8	19750	10504	1332	7392	3	0	25	0	1	0	4
115	Pool	249	48.3	1.5	3	0.5	12026.7	19999	10753	1332	7392	2	0	14	0	2	0	3
116	Run	51	16	1	2	N/A	816	20050	10753	1332	7443	2	0	14	0	1	0	3
117	Pool	173	31.7	1.5	2.5	1	5484.1	20223	10926	1332	7443	2	1	14	2	0	2	4
118	Riffle	85	28	1	1.5	N/A	2380	20308	10926	1417	7443	4	0	80	0	1	0	1
119	Run	80	30.7	1.5	2.25	N/A	2456	20388	10926	1417	7523	3	0	45	0	1	0	1
120	Run	122	24	1.5	2	N/A	2928	20510	10926	1417	7645	3	0	50	0	2	0	2
121	Riffle	158	29	1	2	N/A	4582	20668	10926	1575	7645	4	0	80	1	2	0	1
122	Run	52	45	1.5	2.5	N/A	2340	20720	10926	1575	7697	4	0	70	2	2	0	2
123	Riffle	41	29.1	0.25	0.75	N/A	1193.1	20761	10926	1616	7697	3	0	40	0	1	0	1
124	Pool	489	48	3.5	8	0.75	23472	21250	11415	1616	7697	4	1	70	2	3	1	3
125	Pool	321	22.6	2	2.5	1	7254.6	21571	11736	1616	7697	2	2	14	4	2	2	2
126	Pool	193	30.9	2	3	0.5	5963.7	21764	11929	1616	7697	2	0	16	1	1	0	3
127	Run	39	11.8	2	2.5	N/A	460.2	21803	11929	1616	7736	1	0	5	0	3	0	3
128	Pool	97	35	4.5	8	1.25	3395	21900	12026	1616	7736	2	0	20	1	0	2	1
129	Run	154	24.7	1.75	3.5	N/A	3803.8	22054	12026	1616	7890	2	0	18	1	3	0	3
130	Pool	186	45.3	3	7	1	8425.8	22240	12212	1616	7890	3	2	35	2	2	4	4

Bank Composition Type: 1) Bedrock 2)Boulder 3) Cobble, Gravel, Sand, Silt, Clay

Vegetation Types: 5) Herbs 6) Shrubs 7) Deciduous Trees 8) Coniferous Trees 9) No Vegetation

Shelter Value: 0) No shelter 1) Simple shelter 2) Moderate shelter 3) Complex shelter 4) Highly complex shelter

Shelter Rating: 0) 0% 1) 1%-5% 2) 6%-15% 3) 16%-25% 4) 26%-50% 5) 51%-75% 6) 76%-100%

Habitat Unit Number	Terr. veg.	aquatic veg.	boulders (d>10")	bedrock ledges	Surface Area of Cover	Silt/ Clay/ Sand	Gravel	Small Cobble	Boulder	Bed-rock	Exposed Substrate %	Habitat Embed-dedness	Bank Compo-sition	Bank Dominant Veg.	Bank Veg. %	Comments
66	0	1	5	1	201	10	25	25	30	10	0	15	3	7	40	
67	0	1	2	0	118.8	20	40	30	10	0	3	N/A	3	7	5	
68	2	0	0	1	587.52	50	35	20	1	5	5	75	3	7	15	
69	6	0	0	15	413.1	50	30	5	0	15	5	N/A	3	7	70	
70	3	2	2	2	2328	35	30	15	10	10	0	15	3	7	85	Green Br. Pool
71	1	1	0	0	635.25	35	50	10	1	4	10	50	3	7	90	Very deep
72	3	3	1	2	877.8	30	50	20	0	5	10	N/A	3	7	60	
73	3	3	1	2	628.32	20	30	20	10	20	0	50	3	7	90	
74	2	3	2	3	24	35	10	20	10	30	5	N/A	1,3	7	80	
75	2	1	0	1	297.6	25	10	30	10	30	1	90	3	7	60	
76	2	3	2	4	1569.75	5	10	15	30	40	40	N/A	3	7	90	
77	4	2	1	0	4521	40	20	15	10	15	15	0	3	7	80	
78	5	2	0	0	10488	75	15	10	0	0	2	70	3	5,7	100	Bedrock cascade
79	4	1	0	0	182.4	30	50	20	0	0	2	N/A	3	5,7	40	
80	5	1	0	2	720	55	15	10	10	10	0	0	1,3	7	95	
81	6	0	1	1	152.88	0	3	10	0	80	15	N/A	1,3	7	70	
82	5	2	0	0	798	20	20	20	20	20	0	15	1	7	100	
83	4	2	0	3	196.42	30	30	30	0	5	5	50	1	7	58	Devil's Gulch
84	3	3	1	1	305.6	15	40	25	5	15	5	50	1,3	5,7	65	
85	2	3	2	2	80	0	10	40	30	20	15	N/A	1,3	5,7	80	
86	3	1	2	2	1001	5	5	20	35	30	3	50	1	7	70	
87	4	2	0	2	378.08	20	50	10	5	15	4	30	3	7	85	Deadman's Gulch
88	1	2	4	4	765.245	15	10	20	25	30	2	50	3	5,7	65	
89	1	2	3	4	1910	5	5	5	5	80	35	N/A	1	7	60	
90	1	1	1	1	1618.2	25	35	5	5	30	10	50	1	7	80	USGS gauge
91	1	3	1	3	125.55	20	25	10	10	20	15	N/A	1,3	5,7	90	
92	2	2	2	2	1540.08	30	50	10	5	5	0	85	2,3	5,7	90	
93	1	2	4	0	178.6	15	35	35	15	2	30	N/A	3	5,7	70	
94	1	3	2	0	547.6	10	30	16	5	3	8	N/A	3	5,7	90	
95	3	3	3	3	817.44	20	40	10	10	10	5	40	3	5,7	95	
96	0	6	0	2	120.96	8	20	30	15	15	2	N/A	3	5,7	80	
97	2	1	2	0	34.34	32	60	10	5	1	2	N/A	3	5,7	60	
98	1	1	4	0	1617	25	20	20	30	5	40	30	3	5,7	70	
99	3	2	1	2	1076.16	25	50	15	5	10	5	50	3	5,7	98	Trib. on right
100	0	4	0	1	80.64	5	30	40	2	3	10	N/A	3	5,7	85	
101	2	0	2	2	1836.8	20	40	10	5	20	5	40	3	5,7	85	
102	4	1	0	3	1071	15	25	5	5	50	20	70	3	5,7	90	
103	1	2	5	3	2778.36	20	30	30	5	10	5	25	3	7	80	
104	1	2	2	3	697.2	31	40	20	2	5	2	0	2,3	7	70	
105	2	2	2	0	680.75	12	40	30	10	5	2	N/A	3	5,7	85	SPT Park Bridge
106	0	0	0	0	0	9	40	50	1	0	5	N/A	1,3	5,7	80	
107	1	2	2	3	5173.2	30	10	10	25	25	3	30	3	5,7	75	
108	0	1	3	4	842.8	5	10	0	5	80	60	N/A	3	5,7	85	
109	2	2	2	3	129.03	20	15	15	10	40	20	N/A	3	7	70	
110	3	2	1	2	1313.07	30	20	25	10	15	3	30	1,2,3	7	75	Woody debris site
111	3	4	1	0	784.98	8	40	40	2	2	8	N/A	3	7	50	
112	3	2	1	0	894.4	30	35	20	5	5	3	N/A	3	5,7	95	SPT ranger station
113	3	3	2	2	4317.45	10	50	15	5	20	25	50	3	5,7	95	
114	3	3	2	2	2245.95	15	25	20	15	25	25	N/A	2,3	7	75	
115	1	2	3	3	1683.738	15	25	20	5	35	5	50	1	7,8	70	
116	2	3	1	4	114.24	5	15	10	10	60	2	N/A	1	7,8	60	
117	0	2	2	4	767.774	15	35	10	5	35	2	80	2,3	7,8	80	
118	3	4	4	1	1904	20	40	20	30	10	15	N/A	1,2	5,7	50	
119	1	3	4	3	1105.2	30	30	10	30	20	25	N/A	1,2	5,7,8	85	
120	3	2	2	2	1464	15	20	30	5	30	1	N/A	1,3	5,7	85	
121	4	2	3	2	3665.6	10	30	30	10	20	50	N/A	1,3	5,7	98	
122	3	3	2	2	1638	15	30	30	10	15	40	N/A	3	5,7	90	
123	1	3	1	5	477.24	0	15	20	5	60	20	N/A	1	5,7	100	
124	4	2	1	3	16430.4	30	30	5	5	30	0	15	1,3		60	Bike path bridge
125	2	1	0	1	1015.644	47	30	10	3	10	2	50	3	7,8	80	
126	3	2	3	1	954.192	40	35	10	10	5	3	25	3	5,7	98	
127	3	3	1	0	23.01	25	40	19	1	15	2	N/A	1,3	5,7	40	
128	1	1	4	3	679	25	15	30	15	15	15	0	1,3	5,7	50	
129	2	2	3	0	684.684	25	30	30	8	2	5	N/A	3	5,7	60	Trib. on right
130	1	1	0	2	2949.03	40	35	20	0	5	5	0	3	7	60	Irving Bridge

1998 Lagunitas Creek Habitat Typing Data

Bank Composition Type: 1) Bedrock 2)Boulder 3) Cobble, Gravel, Sand, Silt, Clay

Vegetation Types: 5) Herbs 6) Shrubs 7) Deciduous Trees 8) Coniferous Trees 9) No Vegetation

Shelter Value: 0) No shelter 1) Simple shelter 2) Moderate shelter 3) Complex shelter 4) Highly complex shelter

Shelter Rating: 0) 0% 1) 1%-5% 2) 6%-15% 3) 16%-25% 4) 26%-50% 5) 51%-75% 6) 76%-100%

Habitat Unit Number	Habitat Unit Type	Mean Length (ft)	Mean Width (ft)	Mean Depth	Max Depth	Depth of Pool Tail Crest	Surface Area (ft)2	Cumn Length	Cumn pool length	Cumn riffle length	Cumn run length	Shelter Value	# of lg woody debris	% Unit Cover	Under cut bank	swd (d<12")	lwd (d>12")	root mass
131	Run	110	15	0.75	2	N/A	1650	22350	12212	1616	8000	1	1	8	2	0	1	6
132	Riffle	51	8	0.5	0.75	N/A	408	22401	12212	1667	8000	1	0	20	1	2	0	5
133	Pool	299	33	1.5	3.5	0.3	9867	22700	12511	1667	8000	1	1	9	3	2	3	3
134	Run	364	30.6	0.5	2	N/A	11138.4	23064	12511	1667	8364	1	2	6	4	2	3	3
135	Pool	279	44	1.5	3	0.4	12276	23343	12790	1667	8364	2	1	15	3	1	3	4
136	Riffle	50	21	0.5	1	N/A	1050	23393	12790	1717	8364	1	0	8	0	0	1	1
137	Pool	170	33	3	3	0.5	5610	23563	12960	1717	8364	4	1	60	1	2	2	2
138	Riffle	56	10	0.5	0.5	N/A	560	23619	12960	1773	8364	1	0	4	3	2	0	5
139	Pool	310	36	2	5	0.5	11160	23929	13270	1773	8364	2	0	22	4	2	0	2
140	Run	267	36	1	2	N/A	9612	24196	13270	1773	8631	2	0	14	2	2	0	2
141	Riffle	87	34	0.25	0.5	N/A	2958	24283	13270	1860	8631	1	0	8	1	1	0	4
142	Run	182	14	1	1.5	N/A	2548	24465	13270	1860	8813	2	0	22	2	0	0	5
143	Pool	290	40	2	3.5	0.6	11600	24755	13560	1860	8813	2	0	15	3	2	0	3
144	Pool	126	32	1.5	2	0.75	4032	24881	13686	1860	8813	1	0	12	1	1	0	6
145	Riffle	235	16	0.75	1.5	N/A	3760	25116	13686	2095	8813	2	0	18	1	1	0	3
146	Pool	301	27	2.5	6	0.5	8127	25417	13987	2095	8813	3	2	35	2	2	1	3
147	Run	154	35	1	2	N/A	5390	25571	13987	2095	8967	2	0	20	0	1	0	4
148	Run	170	21.6	1	1.5	N/A	3672	25741	13987	2095	9137	2	1	12	2	1	1	5
149	Run	77	20.6	0.75	1.5	N/A	1586.2	25818	13987	2095	9214	2	0	15	2	1	0	3
150	Pool	145	36	1	3	0.5	5220	25963	14132	2095	9214	3	4	45	0	3	4	3
151	Run	109	38	1	2	N/A	4142	26072	14132	2095	9323	2	0	19	3	2	0	4
152	Pool	125	29.4	1.5	3.5	0.5	3675	26197	14257	2095	9323	2	0	12	1	3	0	3
153	Run	265	29.4	0.75	1.25	N/A	7791	26462	14257	2095	9588	1	1	6	0	2	2	3
154	Run	451	45	1.25	2.5	N/A	20295	26913	14257	2095	10039	1	3	10	2	3	2	2
155	Run	261	22	1	1.5	N/A	5742	27174	14257	2095	10300	1	1	9	2	1	2	3
156	Pool	442	45	1.5	3	0.5	19890	27616	14699	2095	10300	2	2	18	3	2	2	3
157	Run	272	45	1	2	N/A	12240	27888	14699	2095	10572	3	2	23	2	4	3	3
158	Run	158	22	1	2.5	N/A	3476	28046	14699	2095	10730	2	1	18	0	3	2	0
159	Riffle	66	24.2	0.5	1	N/A	1597.2	28112	14699	2161	10730	2	0	25	1	1	0	1
160	Run	104	29	1	2	N/A	3016	28216	14699	2161	10834	1	0	10	0	3	0	1
161	Pool	175	28.6	1.25	2.5	0.5	5005	28391	14874	2161	10834	2	0	12	0	1	0	1
162	Run	61	24	0.25	0.8	N/A	1464	28452	14874	2161	10895	1	0	3	3	1	0	1
163	Pool	201	35	2	3.5	0.75	7035	28653	15075	2161	10895	2	0	20	2	0	0	3
164	Riffle	95	13.5	1	1.5	N/A	1282.5	28748	15075	2256	10895	2	0	14	2	0	0	4
165	Pool	134	29	1.5	3.5	1	3886	28882	15209	2256	10895	3	0	35	0	2	0	2
166	Riffle	53	36	0.5	1.5	N/A	1908	28935	15209	2309	10895	1	0	10	0	1	0	1
167	Run	155	26.5	1	2.5	N/A	4107.5	29090	15209	2309	11050	1	0	9	0	1	0	2
168	Riffle	143	30	0.5	0.75	N/A	4290	29233	15209	2452	11050	1	0	8	2	1	0	4
169	Pool	187	18	1.5	2.5	0.75	3366	29420	15396	2452	11050	2	1	14	2	1	1	4
170	Pool	119	20	1.5	2.5	0.5	2380	29539	15515	2452	11050	2	1	14	2	2	1	2
171	Run	41	13	1	1.5	N/A	533	29580	15515	2452	11091	1	0	6	0	1	0	0
172	Pool	120	23	2	2.5	0.75	2760	29700	15635	2452	11091	2	0	18	0	1	0	1
173	Pool	142	24	1.5	2	1	3408	29842	15777	2452	11091	2	0	18	0	4	0	1
174	CS	52	13	0.75	1	1	676	29894	15777	2452	11091	3	0	35	0	0	0	0
175	Pool	150	40	3.5	5	0.3	6000	30044	15927	2452	11091	2	2	15	0	2	1	1
176	Run	69	20	0.5	1.5	N/A	1380	30113	15927	2452	11160	1	0	10	0	1	0	1
177	Riffle	58	21	1.25	2.5	N/A	1218	30171	15927	2510	11160	2	0	12	0	0	0	1
178	Run	53	30	1.75	3	0.5	1590	30224	15927	2510	11213	2	0	12	2	2	0	2
179	Pool	118	29	1.5	2.5	N/A	3422	30342	16045	2510	11213	2	0	18	2	1	0	2
180	Run	130	17	1	1.5	N/A	2210	30472	16045	2510	11343	2	0	14	2	1	0	2
181	Run	55	17	1	1.5	N/A	935	30527	16045	2510	11398	2	0	14	2	1	0	2
182	Run	48	18	0.5	1	N/A	864	30575	16045	2510	11446	1	0	5	0	1	0	1
183	Plunge	28	26	1.5	2.5	0.5	728	30603	16045	2510	11446	3	0	20	0	1	0	3
184	Riffle	70	33	0.25	1.25	N/A	2310	30673	16045	2580	11446	1	0	2	0	3	0	4
185	Pool	109	19	1.5	2.5	0.5	2071	30782	16154	2580	11446	1	1	8	0	2	3	2
186	Run	130	22.3	1	2	N/A	2899	30912	16154	2580	11576	3	7	30	0	3	3	3
187	Plunge	348	115	4	10	1.5	40020	31260	16154	2580	11576	3	5	30	0	2	2	2
188	Run	27	10	1.5	2	N/A	270	31287	16154	2580	11603	2	0	18	0	1	0	1
189	Cascade	32	4	1	1.5	N/A	128	31319	16154	2580	11603	4	1	70	0	0	1	3
190	Run	27	6	1	1.5	N/A	162	31346	16154	2580	11630	4	0	60	0	0	0	3
191	Run	30	8	0.75	1.5	N/A	240	31376	16154	2580	11660	4	0	50	0	1	0	4
192	Pool	27	13	2	3	1	351	31403	16181	2580	11660	4	0	40	0	0	0	3

1998 Lagunitas Creek Habitat Typing Data

Bank Composition Type: 1) Bedrock 2)Boulder 3) Cobble, Gravel, Sand, Silt, Clay
Vegetation Types: 5) Herbs 6) Shrubs 7) Deciduous Trees 8) Coniferous Trees 9) No Vegetation
Shelter Value: 0) No shelter 1) Simple shelter 2) Moderate shelter 3) Complex shelter 4) Highly complex shelter
Shelter Rating: 0) 0% 1) 1%-5% 2) 6%-15% 3) 16%-25% 4) 26%-50% 5) 51%-75% 6) 76%-100%

Habitat Unit Number	Terr. veg.	aquatic veg.	boulders (d>10")	bedrock ledges	Surface Area of Cover	Silt/ Clay/ Sand	Gravel	Small Cobble	Boulder	Bed-rock	Exposed Substrate %	Habitat Embed-dedness	Bank Compo-sition	Bank Dominant Veg.	Bank Veg. %	Comments
131	0	0	0	1	132	10	60	25	0	5	1	N/A		3	5,7	65	Picnic tables
132	1	1	0	0	81.6	10	65	25	0	0	2	N/A		3	5,7,8	55	
133	2	2	2	1	888.03	40	35	15	3	2	2	10		3	7,8	80	Woody debris site
134	1	1	0	0	668.304	40	35	25	1	0	5	N/A		3	7	70	
135	3	2	1	1	1841.4	20	35	23	4	8	2	25	1,3	5,7	90	Woody debris site
136	0	6	5	0	84	10	45	40	3	2	3	N/A		3	5,7	98	
137	4	1	1	1	3366	40	30	20	3	5	2	50		3	7	100	Woody debris site
138	0	2	0	0	22.4	15	50	35	0	0	1	N/A		3	5,7	70	
139	1	1	0	4	2455.2	25	10	15	0	50	0	50	1,3	5,7,8	100	
140	1	2	2	0	1345.68	40	30	20	2	3	5	N/A	1,3	5,7,8	90	
141	0	4	1	0	236.64	20	40	40	8	2	8	N/A		3	5,7,8	55	
142	2	1	1	0	560.56	35	30	30	5	0	0	N/A		3	7	70	
143	2	3	0	3	1740	30	5	20	5	40	3	30	1,3	7	65	
144	2	1	1	2	483.84	35	10	20	5	31	4	50		3	5,7	90	
145	2	4	1	2	676.8	10	30	30	5	25	15	N/A		3	5,7	70	
146	2	2	1	3	2844.45	15	35	15	5	30	3	25	1,3	5,7,8	85	Old road butt
147	1	1	1	4	1078	20	30	20	5	25	8	N/A		3	7	70	
148	1	2	0	1	440.64	25	25	30	5	15	1	N/A		3	5,7	95	
149	1	0	1	3	237.93	25	10	10	5	50	5	N/A	1,3	5,7,8	85	
150	2	1	0	0	2349	40	30	15	5	10	0	50		3	5,7	95	
151	3	1	0	0	786.98	25	25	30	13	2	15	N/A		3	5,7	80	
152	4	1	0	0	441	40	30	25	2	5	5	50		3	5,7,8	85	
153	1	2	3	0	467.46	25	20	30	15	10	15	N/A		3	5,7,8	90	W 13
154	1	3	2	0	2029.5	35	35	20	10	0	3	N/A	1,3	7,5	90	
155	3	3	1	1	516.78	35	25	30	5	5	10	N/A		3	6,7	98	
156	3	2	1	0	3580.2	42	45	10	1	0	1	25		3	7	98	
157	2	1	1	0	2815.2	47	30	20	3	0	5	N/A		3	7	80	
158	1	2	2	3	625.68	15	20	30	5	30	3	N/A	1,3	7,8	70	
159	2	3	3	3	399.3	5	10	5	10	70	15	N/A		3	7,8	50	
160	2	3	3	3	301.6	20	20	20	15	25	5	N/A	1,3	7,5	85	
161	1	3	1	4	600.6	30	12	8	20	30	0	20	1,2,3	7,8	85	
162	0	3	4	0	43.92	30	25	35	10	0	30	N/A		3	7,8	50	
163	1	3	3	3	1407	5	5	20	30	30	3	50	3,2	7	50	
164	0	3	2	3	179.55	25	25	20	15	15	4	N/A	2,3	7,5	70	
165	5	2	0	0	1360.1	20	50	20	5	0	5	60	2,3	7	65	San Geronimo Cr.
166	1	1	6	0	190.8	5	15	20	38	2	8	N/A	2,3	7	20	Under Shafter Br.
167	1	0	1	5	369.675	15	35	25	5	10	7	N/A	1,3	5,7	70	Culvert on right
168	4	3	0	0	343.2	10	45	40	2	2	20	N/A		3	7,8	90	
169	2	3	2	1	471.24	23	45	15	5	10	5	0	3,1	7	65	Gate on right
170	1	3	3	0	333.2	20	40	30	5	5	1	0	2,3	5,7	70	
171	0	0	3	0	31.98	5	60	30	5	0	3	N/A	2,3	7,8	60	
172	0	0	6	0	496.8	10	30	40	20	0	1	15	2,3	7	65	
173	1	1	4	1	613.44	15	25	40	15	5	0	20	1,3	5,7	80	
174	0	2	6	0	236.6	5	45	40	30	5	13	N/A	1,2,3	5,7	70	
175	1	2	4	3	900	25	15	15	25	20	1	40	1,2,3	5,7	40	WD site, culvert
176	0	1	6	0	138	35	20	20	15	0	10	N/A	2,3	5,6,7	80	
177	1	3	4	0	146.16	7	40	35	15	2	10	N/A	2,3	5,7	80	
178	1	2	3	1	190.8	40	35	10	5	10	3	N/A	1,3	5,7	85	
179	4	3	1	0	615.96	30	40	15	5	10	5	50	2,3	5,8	95	
180	0	4	4	0	309.4	20	20	15	30	15	20	N/A	2,3	5,7,8	85	
181	0	4	4	0	130.9	30	40	15	10	5	10	N/A	1,3	7,5	65	
182	0	5	2	0	43.2	20	40	30	4	1	5	N/A		3	5,7	95	
183	0	3	3	3	145.6	10	35	50	5	1	2	25	2,3	5,7	85	WD #1
184	0	3	3	0	46.2	13	50	30	4	3	30	N/A		3	5,7	85	
185	1	2	3	3	165.68	30	30	15	5	15	5	10		3	7,8	70	Pool=30' longer
186	2	2	2	0	869.7	15	45	20	20	0	10	N/A		3	5,7,8	90	
187	2	3	3	3	12006	20	20	20	20	20	5	30	1,2	5,7	60	
188	0	3	2	0	48.6	5	65	15	15	0	5	N/A		2	7	35	
189	0	3	4	0	89.6	5	60	5	30	0	15	N/A		2	7	40	
190	1	4	3	0	97.2	10	60	0	10	20	5	N/A		2	5,8	60	
191	4	0	2	0	120	10	75	5	10	0	10	N/A		2	5,7	75	
192	3	3	3	0	140.4	10	60	10	20	0	10	100	2,3	5,7	100	Peters Dam discharge

APPENDIX E

1998 San Geronimo Creek habitat typing survey data

1998 San Geronimo Creek Habitat Typing Data

Bank Composition Type: 1) Bedrock 2)Boulder 3) Cobble, Gravel, Sand, Silt, Clay

Vegetation Types: 5) Herbs 6) Shrubs 7) Deciduous Trees 8) Coniferous Trees 9) No Vegetation

Shelter Value: 0) No shelter 1) Simple shelter 2) Moderate shelter 3) Complex shelter 4) Highly complex shelter

Shelter Rating: 0) 0% 1) 1%-5% 2) 6%-15% 3) 16%-25% 4) 26%-50% 5) 51%-75% 6) 76%-100%

Habitat Unit Numb	Habitat Unit Type	Mean Length (ft)	Mean Width (ft)	Mean Depth	Max Depth	Depth of Pool Tail Crest	Surface Area (ft)2	Cumn Length	Cumn pool length	Cumn riffle length	Cumn run length	Shelter Value	# of lg woody debris	% Unit Cov	Under-cut bank	swd (d<12")	lwd (d>12")	root mass
1	Pool	108	28.3	2	3.5	0.5	3056.4	108	108	0	0	3	0	30	2	1	0	2
2	Plunge	18.8	20	3	5	0.75	376	126.8	108	0	0	4	0	75	0	1	0	0
3	Plunge	12	21.4	11	12	0.2	256.8	138.8	108	0	0	4	0	60	0	0	0	0
4	Cascad	15	4	0.5	1.5	N/A	60	153.8	108	0	0	1	0	2	0	0	0	0
5	Plunge	43.2	26	6	10	N/A	1123.2	197	108	0	0	3	0	25	0	0	0	0
6	Cascad	85	9	1	1.5	N/A	765	282	108	0	0	3	0	35	0	1	0	1
7	Pool	66	13.4	1	1.5	0.5	884.4	348	174	0	0	2	0	20	0	3	0	5
8	Run	72	17.4	1	1.5	0.5	1252.8	420	174	0	72	3	0	35	0	1	0	2
9	Cascad	51	15.5	1.5	2	N/A	790.5	471	174	0	72	3	0	28	0	2	0	0
10	Pool	32	14.2	1	2	0.75	454.4	503	206	0	72	2	0	18	2	2	0	2
11	Run	89	11	1	2	N/A	979	592	206	0	161	1	0	8	0	1	0	3
12	Riffle	52	12.6	0.5	0.75	N/A	655.2	644	206	52	161	1	0	4	0	0	0	3
13	Run	126	17.4	0.5	1.5	N/A	2192.4	770	206	52	287	1	0	4	0	1	0	5
14	Riffle	33	16.7	0.5	0.5	N/A	551.1	803	206	85	287	1	0	5	0	1	0	4
15	Pool	71	16.6	1	2.5	N/A	1178.6	874	277	85	287	2	0	14	3	2	0	5
16	Run	225	18	0.5	1	N/A	4050	1099	277	85	512	1	0	4	5	1	0	2
17	Pool	191	17.6	1	1.5	0.25	3361.6	1290	468	85	512	3	0	25	3	2	0	3
18	Pool	666	30	3	7	N/A	19980	1956	1134	85	512	4	7	30	2	2	2	3
19	Pool	82	15	0.75	2	1	1230	2038	1216	85	512	2	0	14	0	1	0	5
20	Run	110	16	0.4	0.8	N/A	1760	2148	1216	85	622	1	1	4	4	1	3	3
21	Run	85	15	0.2	0.5	N/A	1275	2233	1216	85	707	2	0	12	3	1	0	5
22	Pool	191	13.3	1	2	0.25	2540.3	2424	1407	85	707	2	0	22	2	3	0	3
23	Riffle	77	16	0.25	0.5	N/A	1232	2501	1407	162	707	2	0	20	2	4	0	3
24	Pool	28	22	0.75	1.5	0.5	616	2529	1435	162	707	1	0	10	0	1	0	0
25	Riffle	25	10	0.25	0.5	N/A	250	2554	1435	187	707	1	0	6	0	2	0	2
26	Pool	32	11	0.5	1	0.5	352	2586	1467	187	707	1	0	10	3	1	0	4
27	Pool	91	14	1	1.5	0.5	1274	2677	1558	187	707	2	0	10	3	1	0	4
28	Run	49	16	0.5	1	N/A	784	2726	1558	187	756	3	0	30	0	1	0	2
29	Pool	37	25	1	1.5	N/A	925	2763	1595	187	756	2	0	15	0	1	0	1
30	Run	84	20	0.75	1.5	N/A	1680	2847	1595	187	840	3	0	30	0	2	0	2
31	Riffle	66	18	0.5	1	N/A	1188	2913	1595	253	840	3	1	35	1	1	0	1
32	Pool	50	13.7	0.75	1.25	0.75	685	2963	1645	253	840	1	0	8	5	2	0	2
33	Riffle	40	17.6	0.25	0.5	N/A	704	3003	1645	293	840	2	0	16	0	2	0	1
34	Pool	167	23	1.5	3.5	0.25	3841	3170	1812	293	840	4	1	35	3	4	3	3
35	Pool	113	26	0.35	2	0.5	2938	3283	1925	293	840	2	0	18	2	2	0	5
36	Pool	186	17	1.5	3	0.25	3162	3469	2111	293	840	3	0	24	1	3	0	3
37	Run	65	18.5	0.5	0.75	N/A	1202.5	3534	2111	293	905	1	0	8	0	1	0	6
38	Pool	122	21.6	1.5	2.5	0.5	2635.2	3656	2233	293	905	2	0	14	2	1	0	5
39	Pool	96	15	1	2.5	0.5	1440	3752	2329	293	905	3	1	35	1	4	2	3
40	Run	78	24	0.5	1	N/A	1872	3830	2329	293	983	3	2	30	2	2	1	3
41	Pool	69	22	1	1.5	0.5	1518	3899	2398	293	983	3	0	25	2	1	0	3
42	Run	29	16	0.5	0.5	N/A	464	3928	2398	293	1012	0	0	0	0	0	0	0
43	Pool	193	25	2	5.5	0.5	4825	4121	2591	293	1012	4	0	40	2	3	0	4
44	Riffle	33	12	0.25	0.5	N/A	396	4154	2591	326	1012	2	0	12	0	1	0	5
45	Pool	83	11.8	1	2	0.5	979.4	4237	2674	326	1012	2	0	12	2	1	0	5
46	Pool	76	16	1.5	2.5	0.25	1216	4313	2750	326	1012	3	1	25	2	5	1	3
47	Riffle	43	14	0.25	0.5	N/A	602	4356	2750	369	1012	0	0	0	0	0	0	0
48	Pool	89	26	0.75	2.5	0.25	2314	4445	2839	369	1012	2	0	18	0	1	0	5
49	Riffle	92	33	0.5	1.5	N/A	3036	4537	2839	461	1012	1	0	12	1	2	0	5
50	Pool	352	35	2	5.5	0.5	12320	4889	3191	461	1012	3	0	18	1	3	0	3
51	Riffle	42	23	0.5	0.5	N/A	966	4931	3191	503	1012	1	0	10	1	5	0	3
52	Pool	121	24	1	3	1	2904	5052	3312	503	1012	2	0	12	1	1	0	4
53	Run	24	13	0.25	0.5	N/A	312	5076	3312	503	1036	1	1	8	0	2	3	0
54	Pool	45	24	0.75	1.25	0.5	1080	5121	3357	503	1036	2	0	12	3	1	0	4
55	Pool	208	18	2	3	0.5	3744	5329	3565	503	1036	4	3	40	4	2	3	2
56	Cascad	200	12	1	1.5	N/A	2400	5529	3565	503	1036	3	0	0	0	1	0	0
57	Run	26	14.8	0.5	1.75	N/A	384.8	5555	3565	503	1062	3	0	30	1	2	0	5
58	Pool	64	28	2.5	3.25	0.5	1792	5619	3629	503	1062	1	0	2	0	2	0	2
59	Riffle	73	19	0.4	0.8	N/A	1387	5692	3629	576	1062	0	0	0	0	0	0	0
60	Pool	153	20	0.75	1.75	0.5	3060	5845	3782	576	1062	2	0	14	0	2	0	6

1998 San Geronimo Creek Habitat Typing Data

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Shelter Value: 0) No shelter 1) Simple shelter 2) Moderate shelter 3) Complex shelter 4) Highly complex shelter

Shelter Rating: 0) 0% 1) 1%-5% 2) 6%-15% 3) 16%-25% 4) 26%-50% 5) 51%-75% 6) 76%-100%

Habitat Unit Numb	Terr. veg.	aquatic veg.	boulders (d>10")	bedrock ledges	Surface Area of Cover	Silt/ Clay /	Gravel	Small Cobble	Boulder	Bedrock	Exposed Substrat	Habitat Embed-dedness	Bank Compo-	Bank Dominant Veg.	Bank Veg. %	Comments
1	1	1	5	1	916.92	30	35	15	12	3	5	0	1,2,3	6,7	85	
2	0	0	4	5	282	23	5	2	30	40	5	N/A	1,2,3	6,7	40	
3	0	0	0	6	154.08	10	0	0	0	90	0	N/A	1	5,6,7	10	
4	0	0	0	6	1.2	0	10	30	0	60	5	N/A	1	5,6,7	20	
5	0	0	3	5	280.8	35	20	5	10	30	2	N/A	1	6,7	35	
6	3	3	3	3	267.75	5	10	10	15	60	15	N/A	1,2	5,7	90	
7	0	0	1	1	176.88	55	17	3	5	20	2	N/A	1,2	7	80	
8	0	0	4	4	438.48	10	0	10	30	40	40	N/A	1,2	7	30	
9	0	1	5	3	221.34	10	10	10	20	50	20	N/A	1,2	7	30	
10	1	1	4	1	81.792	60	5	5	15	15	10	100	1,2	5,7	50	
11	0	1	6	1	78.32	25	15	10	40	10	5	N/A	1,2	5,7	65	
12	1	0	4	3	26.208	30	5	0	15	50	10	N/A	1,2,3	5,2	75	
13	1	0	2	1	87.696	35	30	5	10	20	8	N/A	1,3	5,7	80	
14	0	0	0	4	27.555	25	19	5	1	50	15	N/A	1,3	7,8	30	
15	2	0	1	0	165.004	27	50	10	2	10	1	N/A	3	8	60	
16	0	0	2	0	162	38	50	5	2	9	10	N/A	2,3	8	85	
17	4	1	1	1	840.4	37	35	5	3	20	10	20	3	7,8	80	
18	3	1	3	1	5994	30	35	15	10	1	1	100	1,2,3	5,7,8	50	Sir F. Drake Bridge
19	1	0	3	0	172.2	45	40	5	5	5	2	10	2,3	5,7	75	
20	1	1	2	2	70.4	58	35	5	2	0	3	N/A	3	7	70	Small culvert on R.
21	2	0	0	0	153	55	40	5	0	0	25	N/A	3	7,8	60	
22	2	0	2	2	558.866	25	20	20	15	20	3	20	2,3	7	50	
23	3	1	1	0	246.4	45	30	15	5	5	8	N/A	3	7,8,5	80	Concrete weir 1'
24	0	3	5	0	61.6	30	20	20	25	5	5	10	1,3	7	65	Small weir at pool
25	3	4	2	0	15	35	40	15	5	5	15	N/A	1,3	5,7	70	
26	1	0	3	0	35.2	30	40	20	5	5	3	10	3	5,7	70	
27	3	0	1	0	127.4	40	40	5	5	10	2	50	1,2,3	7	80	
28	1	1	6	0	235.2	30	10	15	40	5	20	N/A	2,3	7	90	
29	1	0	6	0	138.75	35	30	5	15	15	8	N/A	2	5,7	98	Culvert on L, Rd. L
30	0	1	4	2	504	25	35	15	15	10	10	N/A	2,3	5,7	55	
31	0	0	6	1	415.8	10	25	25	15	25	25	N/A	2,3	7,8	75	Br. frame, H2O pipe
32	2	0	1	1	54.8	34	30	5	1	30	10	50	2,3	5,7,8	75	
33	3	2	4	1	112.64	25	40	25	5	5	15	N/A	1,3	6,7	95	
34	2	0	1	2	1344.35	40	25	20	5	10	2	10	3	5,7,8	80	Trib enters on R.
35	2	0	0	0	528.84	24	55	5	1	0	5	50	3	5,7	90	Sacrete wall on Left
36	4	1	2	1	758.88	35	35	15	5	10	10	100	1,3	5,7	95	
37	1	0	0	0	96.2	40	40	20	0	0	8	N/A	3	5,7	95	
38	3	0	1	0	368.928	45	44	10	1	0	1	50	3	5,6	90	
39	3	0	2	0	504	35	40	10	15	0	2	60	3	5,7	75	
40	4	1	1	0	561.6	28	40	25	3	0	40	N/A	3	5,7	95	
41	5	0	1	0	379.5	65	30	5	0	0	0	70	3	5,7	100	Lagunitas Rd. Br.
42	0	0	0	0	0	20	50	30	5	0	40	N/A	3	5,7	90	
43	3	1	0	3	1930	27	10	10	0	50	3	70	1,3	5,7	80	
44	0	1	1	0	47.52	28	40	30	2	0	20	N/A	3	5,7	65	
45	3	1	0	0	117.528	23	60	5	0	10	2	0	3	5,7	95	
46	1	1	0	0	304	50	40	10	0	0	0	100	3	5,7	95	
47	0	0	0	0	0	20	50	30	0	0	45	N/A	3	5,7	95	
48	2	0	3	0	416.52	30	25	25	10	10	3	50	2,3	5,6,7	80	
49	3	1	0	1	364.32	30	20	20	20	10	70	N/A	3	5,7	80	
50	2	1	3	2	2217.6	20	20	20	20	20	5	40	1,3	5,7	90	
51	0	2	2	0	96.6	20	30	30	15	5	35	N/A	3	5,7	95	
52	3	2	3	1	348.48	15	30	25	5	25	1	N/A	3	5,7	60	
53	0	4	3	0	24.96	15	40	30	15	0	25	N/A	3	5,7	85	
54	3	2	2	0	129.6	60	20	0	15	0	5	35	2,3	5,7	85	Old broken dam
55	0	0	0	3	1497.6	25	15	20	10	30	3	10	1,2,3	5,7	60	
56	3	3	0	4	0	0	10	0	0	90	20	N/A	1	7	90	
57	3	1	1	0	115.44	50	39	0	1	10	5	N/A	2	7	20	Lower pump house
58	0	0	0	6	35.84	30	30	0	0	40	5	100	2,3	5,7	65	Upper pump house
59	0	0	0	0	0	10	50	40	0	0	15	N/A	3	5,7	85	Pump culvert on L.
60	1	0	0	0	428.4	40	35	25	0	0	2	25	3	5,7	80	

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Habitat Unit Numb	Habitat Unit Type	Mean Length (ft)	Mean Width (ft)	Mean Depth	Max Depth	Depth of Pool Tail Crest	Surface Area (ft2)	Cumn Length	Cumn pool length	Cumn riffle length	Cumn run length	Shelter Value	# of lg woody debris	% Unit Cov	Under-cut bank	swd (d<12")	lwd (d>12")	root mass
61	Run	44	6	0.25	0.75	N/A	264	5889	3782	576	1106	2	0	14	4	2	0	4
62	Pool	139	28.6	3.75	7	0.5	3975.4	6028	3921	576	1106	4	0	50	0	2	0	6
63	Pool	251	22	1.5	3.5	1	5522	6279	4172	576	1106	4	0	35	0	3	0	4
64	Run	153	10.5	0.5	1.5	N/A	1606.5	6432	4172	576	1259	3	0	30	0	4	0	4
65	Pool	210	16	0.75	2	1	3360	6642	4382	576	1259	2	0	14	2	2	0	2
66	Run	47	17	0.75	1.5	N/A	799	6689	4382	576	1306	1	0	10	2	1	0	5
67	Pool	130	20	2	3.25	1	2600	6819	4512	576	1306	2	0	20	0	2	0	0
68	Riffle	27	10	0.25	0.5	N/A	270	6846	4512	603	1306	2	0	18	3	2	0	0
69	Pool	202	20.5	1.5	2.5	0.2	4141	7048	4714	603	1306	2	1	13	0	3	1	3
70	Pool	183	13	1.5	2.5	0.2	2379	7231	4897	603	1306	1	0	10	1	2	0	5
71	Run	93	13	0.5	1	N/A	1209	7324	4897	603	1399	2	0	12	0	1	0	4
72	Riffle	27	13	0.5	0.5	N/A	351	7351	4897	630	1399	1	0	2	0	0	0	4
73	Pool	80	16	1.5	2.5	0.5	1280	7431	4977	630	1399	2	0	14	0	2	0	5
74	Pool	147	15.2	1	2.5	0.5	2234.4	7578	5124	630	1399	3	1	25	2	2	1	5
75	Pool	87	15	2	3	0.5	1305	7665	5211	630	1399	2	0	12	2	1	0	5
76	Riffle	24	13.8	0.5	1	N/A	331.2	7689	5211	654	1399	1	0	12	0	2	0	5
77	Pool	57	13.5	0.75	1.5	1	769.5	7746	5268	654	1399	1	0	8	3	0	0	5
78	Pool	102	17.4	2	4	N/A	1774.8	7848	5370	654	1399	4	0	40	2	3	0	4
79	Riffle	47	5	0.5	1.25	N/A	235	7895	5370	701	1399	1	0	20	0	1	0	0
80	Pool	73	10	0.5	2	0.75	730	7968	5443	701	1399	1	0	10	1	2	0	5
81	Run	47	10	0.5	1	N/A	470	8015	5443	701	1446	2	0	18	0	1	0	2
82	Pool	55	16	2	3.5	0.5	880	8070	5498	701	1446	4	0	28	5	1	0	1
83	Riffle	20	8	0.25	0.5	N/A	160	8090	5498	721	1446	0	0	0	0	0	0	0
84	Pool	106	22	1.25	3.25	0.5	2332	8196	5604	721	1446	3	1	35	3	1	2	5
85	Run	127	16	1.25	3.25	0.5	2032	8323	5604	721	1573	2	0	12	2	1	0	4
86	Pool	109	16	1	1.5	N/A	1744	8432	5713	721	1573	1	0	5	2	2	0	5
87	Run	27	20	0.5	1.5	0.25	540	8459	5713	721	1600	1	0	8	0	1	0	4
88	Pool	271	20	1.75	5	0.5	5420	8730	5984	721	1600	2	1	20	3	3	1	4
89	Pool	40	15	1.5	2.5	0.5	600	8770	6024	721	1600	1	0	10	0	5	0	4
90	Riffle	49	8	0.4	0.5	N/A	392	8819	6024	770	1600	0	0	0	0	0	0	0
91	Pool	258	23	1	2	0.5	5934	9077	6282	770	1600	1	0	8	1	2	0	4
92	Riffle	40	23	0.25	0.8	N/A	920	9117	6282	810	1600	1	0	8	1	1	0	4
93	Pool	182	16	1.5	2.75	0.5	2912	9299	6464	810	1600	2	0	14	2	1	0	5
94	Riffle	23	8	0.5	0.75	N/A	184	9322	6464	833	1600	1	0	5	0	1	0	1
95	Pool	89	14	1	2	0.5	1246	9411	6553	833	1600	1	0	10	0	3	0	0
96	Riffle	81	16	0.5	1	N/A	1296	9492	6553	914	1600	2	0	12	1	2	0	4
97	Pool	90	11	1	2.5	0.5	990	9582	6643	914	1600	2	1	18	0	3	1	1
98	Run	98	12	1	2	N/A	1176	9680	6643	914	1698	2	0	16	1	1	0	3
99	Riffle	23	9	0.5	1.25	N/A	207	9703	6643	937	1698	3	1	30	2	4	1	2
100	Pool	148	24	2.5	6.5	0.75	3552	9851	6791	937	1698	4	2	70	0	3	2	2
101	Run	123	14	0.4	0.8	N/A	1722	9974	6791	937	1821	1	0	8	3	1	1	4
102	Riffle	30	18	0.25	0.5	N/A	540	10004	6791	967	1821	1	0	10	0	3	0	0
103	Pool	169	25	1.5	2.5	0.5	4225	10173	6960	967	1821	2	0	14	2	2	0	4
104	Riffle	38	6	0.75	1	N/A	228	10211	6960	1005	1821	1	0	10	0	0	0	5
105	Pool				6	0.5		6960	1005	1821		4	1		3		1	4
106	Riffle						?	6960	1005	1821								
107	Pool						?	6960	1005	1821								
108	Riffle						?	6960	1005	1821								
109	Riffle	?	20	0.5	1.25	N/A		10914	6960	1005	1821	1	0	10	0	1	0	2
110	Pool	183	32	2.5	6	0.75	5856	11097	7143	1005	1821	3	1	30	0	2	1	0
111	Cascad	54	7	1	1.5	N/A	378	11151	7143	1005	1821	2	0	15	0	2	0	5
112	Pool	40	12	2	2.25	1	480	11191	7183	1005	1821	1	0	6	1	1	0	5
113	Riffle	26	12	0.25	0.5	N/A	312	11217	7183	1031	1821	0	0	0	0	0	0	0
114	Pool	310	20	1	1.5	0.4	6200	11527	7493	1031	1821	1	2	8	0	3	2	1
115	Run	52	11	1	1.5	N/A	572	11579	7493	1031	1873	3	3	45	2	3	3	3
116	Riffle	30	3	0.25	0.5	N/A	90	11609	7493	1061	1873	0	0	0	0	0	0	0
117	Pool	369	20	3	5.5	0.5	7380	11978	7862	1061	1873	2	3	14	2	4	2	3
118	Run	44	6	1	1.25	N/A	264	12022	7862	1061	1917	2	0	12	0	0	0	6
119	Pool	97	35	3	5.5	0.5	3395	12119	7959	1061	1917	4	5	60	2	3	3	3
120	Riffle	69	12	0.5	0.75	N/A	828	12188	7959	1130	1917	1	0	3	0	3	2	5
121	Pool	301	16	2.5	5	0.5	4816	12489	8260	1130	1917	3	0	35	2	3	0	3
122	Run	86	21	1	2	N/A	1806	12575	8260	1130	2003	1	0	8	0	2	0	3
123	Pool	66	30	0.5	1.5	N/A	1980	12641	8326	1130	2003	1	0	5	0	2	0	4
124	Run	41	4	0.5	1.25	N/A	164	12682	8326	1130	2044	1	0	8	2	1	0	3
125	Pool	73	18	1.5	2.75	0.5	1314	12755	8399	1130	2044	1	0	10	2	2	0	4
126	Run	31	9	0.3	0.6	N/A	279	12786	8399	1130	2075	1	1	7	3	2	2	3

1998 San Geronimo Creek Habitat Typing Data

Bank Composition Type: 1) Bedrock 2)Boulder 3) Cobble, Gravel, Sand, Silt, Clay

Vegetation Types: 5) Herbs 6) Shrubs 7) Deciduous Trees 8) Coniferous Trees 9) No Vegetation

Shelter Value: 0) No shelter 1) Simple shelter 2) Moderate shelter 3) Complex shelter 4) Highly complex shelter

Shelter Rating: 0) 0% 1) 1%-5% 2) 6%-15% 3) 16%-25% 4) 26%-50% 5) 51%-75% 6) 76%-100%

Habitat Unit Numb	Terr. veg.	aquatic veg.	boulders (d>10")	bedrock ledges	Surface Area of Cover	Silt/ Clay /	Gravel	Small Cobble	Boulder	Bed-rock	Exposed Substrat	Habitat Embed-dedness	Bank Compo-	Bank Dominant Veg.	Bank Veg. %	Comments
61	0	0	0	0	36.96	20	40	40	0	0	10	N/A	3	5,7	95	
62	0	0	0	0	1987.7	65	35	0	0	0	0	100	3	5,7	60	
63	3	0	0	2	1932.7	50	34	5	1	10	1	50	1,3	5,7	90	Man-made dam
64	2	1	0	0	481.95	35	29	30	1	5	5	N/A	1,3	5,7	75	Arroyo Rd Cr. (?)
65	4	0	0	0	470.4	20	35	30	0	5	0	100	1,3	5,7	80	Man-made dam
66	0	1	1	0	79.9	30	55	10	5	0	40	N/A	2,3	5,7	55	
67	3	0	0	5	520	60	20	10	0	10	2	90	2,3	5,7	70	
68	5	0	0	0	48.6	20	50	30	0	0	8	N/A	3	5,6,7	80	
69	4	2	2	0	538.33	45	37	5	3	0	3	7	3	5,7	80	
70	1	1	0	1	237.9	50	40	5	2	3	3	100	3	7	75	
71	4	0	2	0	145.08	45	30	15	10	0	5	N/A	3	5,7	85	
72	0	0	4	0	7.02	20	30	40	10	0	20	N/A	3	5,7	60	
73	1	0	1	1	179.2	50	20	5	5	20	2	30	3	5,7	90	
74	2	0	1	0	558.6	40	40	5	5	10	5	20	2,3	6,7	65	
75	1	0	0	2	156.6	25	50	15	0	10	0	0	3	5,7	50	Large trib. on right
76	0	0	3	0	39.744	10	40	20	25	5	35	N/A	3	7	20	
77	3	0	1	1	61.56	9	0	0	1	90	5	100	1,3	5,7	98	
78	3	0	0	3	709.92	30	0	20	0	50	5	100	1	5,7	70	No tail
79	5	0	0	3	47	10	0	0	0	90	10	N/A	1	5,7	85	
80	0	0	0	3	73	42	30	3	0	25	0	100	3	5,7	100	
81	0	0	6	0	84.6	20	50	10	20	0	35	N/A	2,3	5,7	90	
82	1	1	2	2	246.4	38	40	2	5	15	8	50	2	5,7	25	All concrete walls
83	0	0	0	0	0	15	80	5	0	0	20	N/A	3	5,7	5	Below F.K. Bridge
84	1	1	0	0	816.2	45	50	5	0	0	0	25	3	5,7	90	
85	4	2	0	0	243.84	30	60	10	0	0	3	N/A	3	5,7	95	
86	1	0	0	1	87.2	25	50	10	0	15	0	100	3	5,7	85	
87	1	0	3	0	43.2	30	50	15	5	0	23	20	3	5,7	65	Old bridge column
88	3	1	0	0	1084	39	50	10	1	0	0	40	3	5,7	95	
89	0	0	0	0	60	45	50	5	0	0	3	0	3	5,7	92	
90	0	0	0	0	0	15	70	15	0	0	15	N/A	3	5,7	90	
91	2	1	4	0	474.72	30	50	15	5	0	2	20	2,3	5,7	95	
92	2	4	0	0	73.6	20	60	20	0	0	10	N/A	3	5,6,7	100	
93	1	0	1	0	407.68	20	55	15	5	5	3	40	2,3	5,7	60	
94	0	0	6	0	9.2	35	50	10	5	0	10	N/A	1,2,3	5,7	75	
95	0	0	3	3	124.6	30	10	5	5	50	30	50	1,3	5,7	65	
96	3	1	5	0	155.52	30	30	30	5	5	13	N/A	2,3	5,7	80	
97	1	0	5	2	178.2	30	40	12	8	5	5	40	1,3	5,7	80	
98	2	0	5	0	188.16	48	40	2	10	0	2	N/A	2,3	5,7	95	
99	3	0	0	0	62.1	20	50	10	20	0	15	N/A	3	5,7	95	
100	1	1	4	3	2486.4	35	20	10	25	10	10	30	2,3	5,7	65	
101	0	0	1	0	137.76	50	30	15	5	0	3	N/A	3	5,7	70	
102	2	4	0	0	54	45	40	15	0	0	15	N/A	3	5,7	90	
103	1	0	1	4	591.5	45	35	5	5	10	3	70	1,3	5,7	88	
104	0	0	0	3	22.8	30	10	10	0	50	5	N/A	1	5,7	85	
105												10				Mean dogs
106																Mean dogs
107																Mean dogs
108																Mean dogs
109	0	0	6	0		20	50	20	10	0	20	N/A				
110	2	0	4	3	1756.8	45	15	5	25	10	2	100	1,2	5,7	85	White culvert on L.
111	0	0	0	3	56.7	10	10	10	0	70	10	N/A	1	5,7	65	
112	0	0	0	3	28.8	25	30	5	0	40	1	60	1,3	5	60	
113	0	0	0	0	0	35	60	5	0	0	40	N/A	3	5	70	
114	2	2	3	0	496	45	40	5	9	1	0	70	2,3	6,7	95	Trib. on Left
115	3	0	0	2	257.4	25	40	15	10	10	10	N/A	2,3	6,7	75	
116	0	0	0	0	0	20	70	10	0	0	10	N/A	3	5,7	90	
117	2	1	1	0	1033.2	50	30	10	10	0	2	40	3	5,7	85	
118	1	0	0	0	31.68	45	65	0	0	0	0	N/A	3	6,7	95	
119	3	0	0	0	2037	40	50	10	0	0	10	100	3	6,7	87	Weir
120	1	0	0	0	24.84	25	65	10	0	0	10	N/A	2,3	5,7	85	
121	4	2	2	0	1685.6	40	10	35	5	10	5	30	2,3	5,6,7	90	Meadow Way Br. (?)
122	0	0	3	3	144.48	25	20	20	20	15	15	N/A	2,3	5,7	85	
123	0	0	4	0	99	40	10	15	15	20	10	50	1,2,3	5,7	85	
124	1	0	4	0	13.12	45	50	2	3	0	5	N/A	3	5,7	92	
125	0	0	3	1	131.4	25	40	5	12	10	5	100	1,3	5,7	40	
126	2	2	1	0	19.53	3	50	30	2	0	15	N/A	2,3	5,7	80	

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Shelter Value: 0) No shelter 1) Simple shelter 2) Moderate shelter 3) Complex shelter 4) Highly complex shelter

Shelter Rating: 0) 0% 1) 1%-5% 2) 6%-15% 3) 16%-25% 4) 26%-50% 5) 51%-75% 6) 76%-100%

Habitat Unit Numb	Habitat Unit Type	Mean Length (ft)	Mean Width (ft)	Mean Depth	Max Depth	Depth of Pool Tail Crest	Surface Area (ft)2	Cumn Length	Cumn pool length	Cumn riffle length	Cumn run length	Shelter Value	# of lg woody debris	% Unit Cov	Under-cut bank	swd (d<12")	lwd (d>12")	root mass
127	Pool	111	18	1.75	4.5	0.5	1998	12897	8510	1130	2075	2	0	18	2	3	0	3
128	Pool	90	11	0.75	1.5	0.5	990	12987	8600	1130	2075	2	0	12	0	1	0	3
129	Pool	50	14	1.5	2.5	0.6	700	13037	8650	1130	2075	2	0	14	0	1	0	3
130	Run	22	10	1	1.5	N/A	220	13059	8650	1130	2097	3	0	30	0	2	0	0
131	Pool	73	12	2	3.5	0.75	876	13132	8723	1130	2097	2	0	12	2	1	0	0
132	Riffle	69	5	0.25	0.6	N/A	345	13201	8723	1199	2097	1	0	5	3	3	3	3
133	Pool	129	10	1	2.5	0.5	1290	13330	8852	1199	2097	3	2	28	3	3	3	3
134	Riffle	9	5	0.5	1.5	N/A	45	13339	8852	1208	2097	2	0	15	4	2	0	3
135	Pool	123	31	1.5	4	0.5	3813	13462	8975	1208	2097	4	0	50	3	3	0	3
136	Riffle	31	10	0.5	1	N/A	310	13493	8975	1239	2097	3	0	35	2	5	0	2
137	Pool	45	13	0.4	1.25	0.2	585	13538	9020	1239	2097	3	1	30	0	4	3	3
138	Run	27	16	0.25	0.5	N/A	432	13565	9020	1239	2124	1	0	2	0	3	0	0
139	Pool	112	13	0.8	1.1	0.25	1456	13677	9132	1239	2124	4	2	35	3	3	3	3
140	Pool	86	22	0.4	1.5	N/A	1892	13763	9218	1239	2124	1	0	8	0	1	0	4
141	Riffle	76	29	3	4.5	0.25	2204	13839	9218	1315	2124	2	0	15	1	2	0	3
142	Pool	52	8	0.5	1	N/A	416	13891	9270	1315	2124	3	0	30	1	1	0	2
143	Cascad	21	10	1.5	2.25	0.25	210	13912	9270	1315	2124	2	0	20	0	0	0	0
144	Pool	25	10	1.5	2.25	0.25	250	13937	9295	1315	2124	3	0	35	0	0	0	2
145	Cascad	27	3	0.5	1.5	N/A	81	13964	9295	1315	2124	2	0	20	0	0	0	4
146	Pool	35	12	0.75	1.9	0.8	420	13999	9330	1315	2124	2	0	15	1	1	0	6
147	Riffle	29	10	0.2	0.5	N/A	290	14028	9330	1344	2124	1	0	5	4	0	0	4
148	Run	34	20	0.75	1.25	N/A	680	14062	9330	1344	2158	2	0	15	0	4	0	4
149	Pool	96	20	2	4.5	0.75	1920	14158	9426	1344	2158	4	1	35	2	4	1	5
150	Run	134	16	0.5	1.75	N/A	2144	14292	9426	1344	2292	1	1	10	1	1	1	3
151	Riffle	40	26	0.4	1.5	N/A	1040	14332	9426	1384	2292	2	0	15	0	2	0	5
152	Pool	189	15	1.5	4	0.5	2835	14521	9615	1384	2292	4	0	30	3	2	0	4
153	Riffle	81	9	0.5	1.25	N/A	729	14602	9615	1465	2292	2	0	20	0	2	0	1
154	Pool	80	10	1	2	0.75	800	14682	9695	1465	2292	3	0	15	2	1	0	4
155	Run	46	8	0.5	1	N/A	368	14728	9695	1465	2338	1	0	5	0	0	0	1
156	Pool	85	16	1	3	0.25	1360	14813	9780	1465	2338	3	0	25	4	1	0	3
157	Riffle	38	14	0.5	1.25	N/A	532	14851	9780	1503	2338	2	0	10	2	1	0	4
158	Pool	32	18	1.5	2.5	0.4	576	14883	9812	1503	2338	2	0	10	2	5	0	3
159	Run	16	4	0.4	0.75	N/A	64	14899	9812	1503	2354	1	0	8	3	1	0	4
160	Pool	44	11	0.75	1.75	0.2	484	14943	9856	1503	2354	2	0	20	4	2	0	3
161	Riffle	85	9	0.25	0.5	N/A	765	15028	9856	1588	2354	1	0	10	0	0	0	3
162	Pool	157	17	1.25	4	0.25	2669	15185	10013	1588	2354	3	0	20	2	3	0	2
163	Pool	79	12	1	1.9	0.3	948	15264	10092	1588	2354	2	0	15	1	1	0	5
164	Riffle	23	8	0.5	0.8	N/A	184	15287	10092	1611	2354	2	0	20	1	1	0	1
165	Pool	66	15	2	3	0.5	990	15353	10158	1611	2354	3	0	30	1	1	0	4
166	Pool	42	14	1.8	3	0.5	588	15395	10200	1611	2354	3	1	20	3	1	1	5
167	Riffle	45	7	0.25	0.6	N/A	315	15440	10200	1656	2354	1	0	5	0	3	0	5
168	Pool	51	14	2.5	5.25	0.5	714	15491	10251	1656	2354	4	0	30	3	1	0	5
169	Pool	49	19	1.5	3	0.4	931	15540	10300	1656	2354	3	0	25	1	1	0	5
170	Riffle	54	17	0.25	0.6	N/A	918	15594	10300	1710	2354	2	0	25	0	1	0	5
171	Pool	47	16	1.8	3	0.25	752	15641	10347	1710	2354	3	0	15	5	1	0	3
172	Pool	55	17	1.75	2.3	0.4	935	15696	10402	1710	2354	3	2	30	1	1	2	5
173	Run	131	13	1	1.8	N/A	1703	15827	10402	1710	2485	3	0	40	0	1	0	1
174	Pool	62	12	1.5	2	0.5	744	15889	10464	1710	2485	2	0	15	3	1	0	4
175	Pool	55	11	1	2	0.3	605	15944	10519	1710	2485	2	0	15	2	0	0	4
176	Run	78	15	0.75	1	N/A	1170	16022	10519	1710	2563	3	1	35	1	3	1	2
177	Pool	60	11	0.75	1.6	0.25	660	16082	10579	1710	2563	2	0	20	0	2	0	4
178	Pool	52	12	0.5	1	0.25	624	16134	10631	1710	2563	1	0	10	0	1	0	5
179	Pool	19	8	1	1.75	0.4	152	16153	10650	1710	2563	1	0	10	2	3	0	5
180	Run	94	10	1.5	2	0.25	940	16247	10744	1710	2563	1	0	3	0	1	0	4
181	Riffle	69	6	0.5	0.8	N/A	414	16316	10744	1779	2563	2	1	10	2	1	1	4
182	Pool	76	14	2.5	5.8	0.25	1064	16392	10820	1779	2563	4	5	45	3	2	4	4
183	Pool	31	12	1	1.4	0.2	372	16423	10851	1779	2563	1	0	5	1	1	0	5
184	Run	37	7	0.5	1.1	0.2	259	16460	10851	1779	2600	1	0	5	0	3	0	5
185	Pool	53	8	0.75	1.5	0.2	424	16513	10904	1779	2600	1	0	2	3	3	0	3
186	Pool	58	9	1.5	2.5	0.2	522	16571	10962	1779	2600	3	1	25	3	1	2	4
187	Pool	48	8	0.6	1.25	0.4	384	16619	11010	1779	2600	1	0	10	0	1	0	5
188	Pool	177	15	1.2	2	0.25	2655	16796	11187	1779	2600	3	0	20	2	1	0	4
189	Pool	163	12	1	2.3	0.25	1956	16959	11350	1779	2600	4	0	30	2	2	0	5
190	Pool	125	16	1.25	2.5	0.2	2000	17084	11475	1779	2600	2	0	10	2	1	0	5
191	Pool	30	9	2	3	0.4	270	17114	11505	1779	2600	4	0	40	4	2	0	4
192	Cascad	18	10	0.75	1	N/A	180	17132	11505	1779	2600	4	0	70	1	1	0	2

1998 San Geronimo Creek Habitat Typing Data

Bank Composition Type: 1) Bedrock 2)Boulder 3) Cobble, Gravel, Sand, Silt, Clay

Vegetation Types: 5) Herbs 6) Shrubs 7) Deciduous Trees 8) Coniferous Trees 9) No Vegetation

Shelter Value: 0) No shelter 1) Simple shelter 2) Moderate shelter 3) Complex shelter 4) Highly complex shelter

Shelter Rating: 0) 0% 1) 1%-5% 2) 6%-15% 3) 16%-25% 4) 26%-50% 5) 51%-75% 6) 76%-100%

Habitat Unit Numb	Terr. veg.	aquatic veg.	boulders (d>10")	bedrock ledges	Surface Area of Cover	Silt/ Clay /	Gravel	Small Cobble	Boulder	Bedrock	Exposed Substrat	Habitat Embed-dedness	Bank Compo-	Bank Dominant Veg.	Bank Veg. %	Comments
127	3	1	3	0	359.64	35	45	15	15	0	2	70	2,3	5,7	90	Larsen Cr. (?)
128	1	0	5	0	118.8	30	40	20	10	0	8	0	1,3	5,7	80	
129	0	0	5	0	98	36	20	5	23	2	4	10	1,3	5,7	80	
130	0	0	6	0	66	10	10	10	60	10	60	N/A	1,2	7	45	
131	0	0	6	0	105.12	30	40	5	5	20	2	0	1,3	5,7	60	
132	3	0	1	0	17.25	20	40	30	10	0	10	N/A	2,3	5,7	75	
133	3	0	1	0	361.2	43	40	10	5	0	2	25	1,3	5,7	90	
134	3	0	3	0	6.75	20	70	5	5	0	10	N/A	3	5,7	75	
135	3	2	3	0	1906.5	50	30	10	10	0	3	70	2,3	5,7	97	
136	1	1	0	0	108.5	5	80	10	5	0	30	N/A	3	5,6,7	80	
137	1	0	0	1	175.5	30	45	25	0	2	1	15	3	6,7	65	
138	1	0	4	0	8.64	45	40	15	3	0	2	N/A	3	6,7	60	
139	2	0	3	0	509.6	50	35	5	10	0	4	45	2,3	7	70	Trib. on right
140	1	0	4	1	151.36	30	50	10	10	2	3	30	2,3	6,7	80	
141	1	1	4	1	330.6	20	40	20	20	5	40	N/A	2,3	6,7	70	
142	1	1	2	6	124.8	45	25	1	5	25	3	50	1,2,3	6,7	60	
143	0	0	5	3	42	15	20	2	20	45	25	N/A	1	6	45	Bedrock notch d/s
144	0	0	3	5	87.5	10	20	5	30	45	3	10	1	6,7	60	
145	0	0	1	5	16.2	10	15	10	5	60	5	N/A	1	6	40	
146	0	0	1	1	63	45	40	1	2	15	0	50	1,3	5,7	65	
147	0	0	1	2	14.5	40	50	6	3	3	5	N/A	3	7	75	
148	1	0	1	3	102	35	40	10	2	15	40	N/A	1,3	6,7	80	
149	1	0	1	0	672	70	30	2	1	0	2	40	3	6,7	80	
150	5	0	2	0	214.4	45	50	5	3	0	20	N/A	3	7	80	
151	2	0	1	0	156	40	60	1	2	0	70	N/A	3	5,7	60	
152	1	0	4	0	850.5	45	35	5	15	0	5	100	3	5,7	45	
153	0	0	6	0	145.8	25	15	10	50	0	15	N/A	2	6,7	70	
154	2	1	3	0	120	45	40	6	3	0	5	10	3	6	60	
155	1	0	6	0	18.4	60	40	2	5	0	5	N/A	3	7	40	
156	2	0	3	0	340	40	45	10	5	0	5	0	2	6,7	80	
157	1	0	5	0	53.2	50	40	2	10	0	60	N/A	2,3	6,7	80	
158	0	0	1	1	57.6	35	60	5	1	0	2	N/A	3	6	80	Creamery Gulch on R.
159	1	0	2	0	5.12	60	35	2	3	0	1	N/A	1,3	5	30	Footbridge
160	2	0	4	0	96.8	50	40	0	10	0	5	100	3	5	80	
161	4	1	2	0	76.5	30	55	15	5	0	15	N/A	3	7	80	
162	1	0	2	0	533.8	50	45	2	5	0	5	40	3	7	75	
163	1	0	2	0	142.2	40	40	12	8	0	5	60	3	7	80	
164	0	0	3	0	36.8	15	35	15	35	0	15	N/A	2,3	7	65	
165	0	0	5	0	297	40	30	5	25	0	25	60	2,3	7	85	
166	0	0	0	0	117.6	60	65	5	0	0	1	100	3	7	75	
167	2	0	0	0	15.75	45	45	10	0	0	15	N/A	3	7,8	80	
168	2	0	0	0	214.2	55	35	2	0	0	3	90	3	6,7	65	Lg. alder on R.
169	4	0	0	0	232.75	55	40	8	0	0	3	100	3	6,7	55	
170	1	0	2	0	229.5	40	30	25	5	0	50	N/A	3	7	80	
171	0	0	1	0	112.8	50	35	10	3	0	2	35	3	7	85	
172	1	0	3	1	280.5	60	15	10	15	3	5	40	3	7	85	
173	0	0	4	4	681.2	25	15	10	20	30	35	N/A	1	7,8	70	Creamery Rd. Br.
174	2	0	1	3	111.6	60	20	0	2	20	10	100	3	7	50	
175	4	0	0	3	90.75	45	40	0	0	15	5	100	3	7,8	70	
176	4	2	0	0	409.5	60	40	3	0	0	10	N/A	3	6	65	
177	4	1	0	0	132	60	40	3	0	0	0	70	3	5,7	60	
178	0	0	1	1	62.4	40	40	10	3	10	2	20	1,3	7	80	
179	0	1	0	1	15.2	60	35	1	0	5	0	0	1,3	6	65	
180	0	0	4	1	28.2	50	25	5	15	5	10	100	2,3	6,7	75	
181	3	0	0	0	41.4	30	65	5	0	0	10	N/A	3	7	65	
182	0	0	1	0	478.8	60	35	1	2	0	2	100	3	5,7	50	
183	3	0	0	0	18.6	55	40	1	3	0	2	100	3	6	60	
184	0	1	0	0	12.95	50	50	1	0	0	3	60	3	7	70	
185	0	0	3	0	8.48	60	35	1	3	0	3	100	3	7	60	
186	1	0	0	0	130.5	60	35	5	0	0	5	95	3	7	80	Cabled rootball Left
187	3	0	0	0	38.4	45	50	5	0	0	4	0	3	7,8	70	
188	3	0	2	0	531	40	45	10	4	0	3	25	3	7	90	Sm tribs on L & R
189	1	0	2	0	586.8	35	50	10	5	0	3	30	3	7	90	Old footbridge
190	1	0	3	0	200	35	35	10	20	0	5	30	3	7	90	Culvert extends on R.
191	0	0	3	0	108	35	40	10	15	0	5	0	3	7	80	
192	0	0	6	0	126	15	10	5	70	0	50	N/A	1	7	50	Boulders strewn

APPENDIX F

1998 Devil's Gulch habitat typing survey data

From the National Park Service

1998 Devil's Gulch Habitat Typing Data

Unit Type: MC=Mid-channel pool, SC=Scour Pool, R=Riffle, FW=Flatwater, BW=Backwater, PL=Plunge Pool

Section #	Section Code	Unit #	Unit Code	Unit Type	Length (m)	Est Width (m)	# of widths	MW 1	MW 2	MW 3	MW 4	Est Surface Area	Meas. SA	Crest Depth	Max Depth	Resid Pool Depth	Cum Length	Cum Pool	Cum Run	Cum Riffle
1	LG-08-1	1	DG-H-01-1	MC	5.4	1.5		0	0	0	0	8.1		0.08	0.25	0.17	5.4	5.4	0.0	0.0
1	LG-08-1	2	DG-H-01-2	R	16.2	2		0	0	0	0	32.4					21.6	5.4	0.0	16.2
1	LG-08-1	3	DG-H-01-3	MC	9.8	2.5	3	3.5	2	3.6	0	24.5	29.73	0.04			31.4	15.2	0.0	16.2
1	LG-08-1	4	DG-H-01-4	MC	12.3	1.3		0	0	0	0	15.99					43.7	27.5	0.0	16.2
1	LG-08-1	5	DG-H-01-5	MC	7.4	2		0	0	0	0	14.8		0.1	0.38	0.28	51.1	34.9	0.0	16.2
1	LG-08-1	6	DG-H-01-6	R	5.7	1.5		0	0	0	0	8.55					56.8	34.9	0.0	21.9
1	LG-08-1	7	DG-H-01-7	SC	4.3	1	3	4.1	2.6	1.2	0	4.3	11.32	0.02			61.1	39.2	0.0	21.9
1	LG-08-1	8	DG-H-01-8	R	6.2	1		0	0	0	0	6.2					67.3	39.2	0.0	28.1
1	LG-08-1	9	DG-H-01-9	SC	8.4	1.5		0	0	0	0	12.6					75.7	47.6	0.0	28.1
1	LG-08-1	10	DG-H-01-10	SC	6	1.3		0	0	0	0	7.8					81.7	53.6	0.0	28.1
1	LG-08-1	11	DG-H-01-11	SC	14.1	1.5		0	0	0	0	21.15		0.06	0.9	0.84	95.8	67.7	0.0	28.1
1	LG-08-1	12	DG-H-01-12	R	2.2	1		0	0	0	0	2.2					98	67.7	0.0	30.3
2	LG-08-2	13	DG-H-01-13	SC	4.1	1		0	0	0	0	4.1					102.1	71.8	0.0	30.3
2	LG-08-2	14	DG-H-01-14	SC	6.9	1	3	1.1	1.3	0.6	0	6.9	6.90	0.11	0.24	0.13	109	78.7	0.0	30.3
2	LG-08-2	15	DG-H-01-15	R	2.7	0.3		0	0	0	0	0.81					111.7	78.7	0.0	33.0
2	LG-08-2	16	DG-H-01-16	SC	2.8	2		0	0	0	0	5.6					114.5	81.5	0.0	33.0
2	LG-08-2	17	DG-H-01-17	SC	13.1	2		0	0	0	0	26.2		0.1	0.29	0.19	127.6	94.6	0.0	33.0
2	LG-08-2	18	DG-H-01-18	SC	3.5	2		0	0	0	0	7					131.1	98.1	0.0	33.0
2	LG-08-2	19	DG-H-01-19	SC	5.5	2		0	0	0	0	11		0.06	0.59	0.53	136.6	103.6	0.0	33.0
2	LG-08-2	20	DG-H-01-20	SC	2.7	2.5		0	0	0	0	6.75					139.3	106.3	0.0	33.0
2	LG-08-2	21	DG-H-01-21	R	5.1	1		0	0	0	0	5.1					144.4	106.3	0.0	38.1
2	LG-08-2	22	DG-H-01-22	SC	3.2	2		0	0	0	0	6.4		0.1	0.21	0.11	147.6	109.5	0.0	38.1
2	LG-08-2	23	DG-H-01-23	R	5.1	1		0	0	0	0	5.1					152.7	109.5	0.0	43.2
2	LG-08-2	24	DG-H-01-24	FW	6.7	1.2	4	1.5	0.5	1.7	1	8.04	7.94				159.4	109.5	6.7	43.2
2	LG-08-2	25	DG-H-01-25	SC	4.9	1.5	4	2.2	0.9	4.1	1.8	7.35	11.03	0.04	0.3	0.26	164.3	114.4	6.7	43.2
2	LG-08-2	26	DG-H-01-26	R	3.2	1		0	0	0	0	3.2					167.5	114.4	6.7	46.4
2	LG-08-2	27	DG-H-01-27	SC	13	2		0	0	0	0	26					180.5	127.4	6.7	46.4
2	LG-08-2	28	DG-H-01-28	SC	16.2	3.5		0	0	0	0	56.7		0.11	0.56	0.45	196.7	143.6	6.7	46.4
3	LG-08-3	29	DG-H-01-29	R	4.3	1		0	0	0	0	4.3					201	143.6	6.7	50.7
3	LG-08-3	30	DG-H-01-30	MC	4.5	1		0	0	0	0	4.5					205.5	148.1	6.7	50.7
3	LG-08-3	31	DG-H-01-31	SC	26.1	3.5		0	0	0	0	91.35		0.04	0.41	0.37	231.6	174.2	6.7	50.7
3	LG-08-3	32	DG-H-01-32	FW	6.4	2.5	3	3.2	3	2.1	0	16	17.71	0.06	0.19	0.13	238	174.2	13.1	50.7
3	LG-08-3	33	DG-H-01-33	R	5.1	2.5		0	0	0	0	12.75					243.1	174.2	13.1	55.8
3	LG-08-3	34	DG-H-01-34	SC	13.4	3	4	3.7	3.3	3.6	2.5	40.2	43.89	0.08	0.26	0.18	256.5	187.6	13.1	55.8
3	LG-08-3	35	DG-H-01-35	SC	6.7	2.5		0	0	0	0	16.75					263.2	194.3	13.1	55.8
3	LG-08-3	36	DG-H-01-36	SC	4.8	1		0	0	0	0	4.8		0.04	0.24	0.2	268	199.1	13.1	55.8
3	LG-08-3	37	DG-H-01-37	SC	5.1	3		0	0	0	0	15.3					273.1	204.2	13.1	55.8
3	LG-08-3	38	DG-H-01-38	SC	6.2	1		0	0	0	0	6.2		0.1	0.49	0.39	279.3	210.4	13.1	55.8
3	LG-08-3	39	DG-H-01-39	FW	8.9	2	2	2.3	1.8	0	0	17.8	18.25			-0.5	288.2	210.4	22.0	55.8
4	LG-08-4	40	DG-H-01-40	MC	21.7	3.5	4	4.2	3.7	5	3.3	75.95	87.89	0.03	0.8	0.77	309.9	232.1	22.0	55.8
4	LG-08-4	41	DG-H-01-41	R	20.5	4		0	0	0	0	82					330.4	232.1	22.0	76.3
4	LG-08-4	42	DG-H-01-42	SC	24.7	4.5		0	0	0	0	111.15					355.1	256.8	22.0	76.3
4	LG-08-4	43	DG-H-01-43	R	5.5	3.5		0	0	0	0	19.25					360.6	256.8	22.0	81.8
4	LG-08-4	44	DG-H-01-44	FW	11.8	2	3	2.1	2.1	2.5	0	23.6	26.35				372.4	256.8	33.8	81.8
4	LG-08-4	45	DG-H-01-45	R	25.6	3.5		0	0	0	0	89.6					398	256.8	33.8	107.4
4	LG-08-4	46	DG-H-01-46	SC	9.1	2.5		0	0	0	0	22.75		0.12	0.2	0.08	407.1	265.9	33.8	107.4
4	LG-08-4	47	DG-H-01-47	SC	13.7	4		0	0	0	0	54.8					420.8	279.6	33.8	107.4
4	LG-08-4	48	DG-H-01-48	R	3.6	0.5		0	0	0	0	1.8					424.4	279.6	33.8	111.0
4	LG-08-4	49	DG-H-01-49	SC	5	2		0	0	0	0	10		0.06	0.26	0.2	429.4	284.6	33.8	111.0
4	LG-08-4	50	DG-H-01-50	R	15.2	3		0	0	0	0	45.6					444.6	284.6	33.8	126.2
4	LG-08-4	51	DG-H-01-51	FW	9.6	3	3	3.7	2.7	2.8	0	28.8	29.44				454.2	284.6	43.4	126.2
4	LG-08-4	52	DG-H-01-52	SC	23.3	4	4	5.5	3.6	5.4	2.7	93.2	100.19	0.06	0.46	0.4	477.5	307.9	43.4	126.2
5	LG-08-5	53	DG-H-01-53	R	22.4	3.5		0	0	0	0	78.4					499.9	307.9	43.4	148.6
5	LG-08-5	54	DG-H-01-54	SC	22.5	3		0	0	0	0	67.5					522.4	330.4	43.4	148.6
5	LG-08-5	55	DG-H-01-55	R	22.1	2.5		0	0	0	0	55.25					544.5	330.4	43.4	170.7
5	LG-08-5	56	DG-H-01-56	SC	12	2		0	0	0	0	24		0.06	0.34		556.5	342.4	43.4	170.7
5	LG-08-5	57	DG-H-01-57	SC	4.5	1.5		0	0	0	0	6.75					561	346.9	43.4	170.7
5	LG-08-5	58	DG-H-01-58	R	18.6	1.5		0	0	0	0	27.9					579.6	346.9	43.4	189.3
5	LG-08-5	59	DG-H-01-59	SC	11.8	2.5		0	0	0	0	29.5		0.06	0.59	0.53	591.4	358.7	43.4	189.3
6	LG-08-6	60	DG-H-01-60	R	5.4	1		0	0	0	0	5.4					596.8	358.7	43.4	194.7
6	LG-08-6	61	DG-H-01-61	SC	10.7	2	4	3	1.9	2.4	1.2	21.4	22.74	0.05	0.35	0.3	607.5	369.4	43.4	194.7

Unit Type: MC=Mid-channel pool, SC=Scour Pool, R=Riffle, FW=Flatwater, BW=Backwater, PL=Plunge Pool

Section #	Section Code	Unit #	Unit Code	Unit Type	Length (m)	Est Width (m)	# of widths	MW 1	MW 2	MW 3	MW 4	Est Surface Area	Meas. SA	Crest Depth	Max Depth	Resid Pool Depth	Cum Length	Cum Pool	Cum Run	Cum Riffle
6	LG-08-6	62	DG-H-01-62	SC	9.2	3		0	0	0	0	27.6					616.7	378.6	43.4	194.7
6	LG-08-6	63	DG-H-01-63	R	12	1		0	0	0	0	12					628.7	378.6	43.4	206.7
6	LG-08-6	64	DG-H-01-64	SC	17.9	2		0	0	0	0	35.8		0.05	0.54	0.49	646.6	396.5	43.4	206.7
6	LG-08-6	65	DG-H-01-65	SC	20	2.5		0	0	0	0	50					666.6	416.5	43.4	206.7
6	LG-08-6	66	DG-H-01-66	R	16.3	1.5		0	0	0	0	24.45					682.9	416.5	43.4	223.0
6	LG-08-6	67	DG-H-01-67	SC	11.5	2.5		0	0	0	0	28.75		0.04	0.36	0.32	694.4	428.0	43.4	223.0
7	LG-08-7	68	DG-H-01-68	R	17.8	1		0	0	0	0	17.8					712.2	428.0	43.4	240.8
7	LG-08-7	69	DG-H-01-69	SC	11.9	4	4	1.7	4.2	1.6	2.9	47.6	30.94	0.06	0.62	0.56	724.1	439.9	43.4	240.8
7	LG-08-7	70	DG-H-01-70	R	17.8	1.5		0	0	0	0	26.7					741.9	439.9	43.4	258.6
7	LG-08-7	71	DG-H-01-71	SC	11.1	2		0	0	0	0	22.2					753	451.0	43.4	258.6
7	LG-08-7	72	DG-H-01-72	MC	30.9	3		0	0	0	0	92.7		0.04	0.5	0.46	783.9	481.9	43.4	258.6
7	LG-08-7	73	DG-H-01-73	R	14.3	1		0	0	0	0	14.3					798.2	481.9	43.4	272.9
8	LG-08-8	73.5	DG-H-01-73.5	BW	10.8			0	0	0	0						809	481.9	43.4	272.9
8	LG-08-8	74	DG-H-01-74	SC	27	3	3	1.8	0.8	1.5	0	81	36.90	0.17	0.38	0.21	836	508.9	43.4	272.9
8	LG-08-8	75	DG-H-01-75	SC	6	1		0	0	0	0	6		0.06	0.2	0.14	842	514.9	43.4	272.9
8	LG-08-8	76	DG-H-01-76	R	13.6	3		0	0	0	0	40.8					855.6	514.9	43.4	286.5
8	LG-08-8	77	DG-H-01-77	MC	21.7	4	4	3.8	5.2	4.1	3	86.8	87.34	0.06	0.26	0.2	877.3	536.6	43.4	286.5
8	LG-08-8	78	DG-H-01-78	R	5.8	4		0	0	0	0	23.2					883.1	536.6	43.4	292.3
9	LG-08-9	79	DG-H-01-79	SC	19.9	1.8		0	0	0	0	35.82					903	556.5	43.4	292.3
9	LG-08-9	80	DG-H-01-80	FW	11.5	4	3	1.4	2	2.3	0	46	21.66				914.5	556.5	54.9	292.3
9	LG-08-9	81	DG-H-01-81	SC	9.4	4		0	0	0	0	37.6		0.12	0.86	0.74	923.9	565.9	54.9	292.3
9	LG-08-9	82	DG-H-01-82	R	13.5	2.5		0	0	0	0	33.75					937.4	565.9	54.9	305.8
9	LG-08-9	83	DG-H-01-83	SC	4.8	1.5		0	0	0	0	7.2					942.2	570.7	54.9	305.8
9	LG-08-9	84	DG-H-01-84	FW	5.7	2	3	2.2	2.7	2.8	0	11.4	14.63				947.9	570.7	60.6	305.8
9	LG-08-9	85	DG-H-01-85	R	38.7	2.5		0	0	0	0	96.75					986.6	570.7	60.6	344.5
9	LG-08-9	86	DG-H-01-86	PL	13	4.5	4	2.8	3.4	3	7.5	58.5	54.28	0.12	0.82	0.7	999.6	570.7	60.6	344.5
9	LG-08-9	87	DG-H-01-87	SC	17.4	2.5	4	3.6	3	3	1.9	43.5	50.03	0.06	0.33	0.27	1017	588.1	60.6	344.5
10	LG-08-10	88	DG-H-01-88	R	6.9	2		0	0	0	0	13.8					1024	588.1	60.6	351.4
10	LG-08-10	89	DG-H-01-89	SC	19.2	2.5		0	0	0	0	48					1043	607.3	60.6	351.4
10	LG-08-10	90	DG-H-01-90	R	20.4	1.5		0	0	0	0	30.6					1064	607.3	60.6	371.8
10	LG-08-10	91	DG-H-01-91	SC	18.2	3.5		0	0	0	0	63.7		0.05	0.58	0.53	1082	625.5	60.6	371.8
10	LG-08-10	92	DG-H-01-92	R	7.1	2		0	0	0	0	14.2					1089	625.5	60.6	378.9
10	LG-08-10	93	DG-H-01-93	SC	6.1	1.5		0	0	0	0	9.15					1095	631.6	60.6	378.9
10	LG-08-10	94	DG-H-01-94	R	7.5	3		0	0	0	0	22.5					1102	631.6	60.6	386.4
10	LG-08-10	95	DG-H-01-95	SC	14.6	3.5		0	0	0	0	51.1		0.06	0.37	0.31	1117	646.2	60.6	386.4
10	LG-08-10	96	DG-H-01-96	R	7.8	1.5		0	0	0	0	11.7					1125	646.2	60.6	394.2
11	LG-08-11	97	DG-H-01-97	SC	19.7	4	4	4.4	4.7	4.7	4.8	78.8	91.61	0.09	0.37	0.28	1145	665.9	60.6	394.2
11	LG-08-11	98	DG-H-01-98	R	7.8	2		0	0	0	0	15.6					1152	665.9	60.6	402.0
11	LG-08-11	99	DG-H-01-99	MC	25	3		0	0	0	0	75					1177	690.9	60.6	402.0
11	LG-08-11	100	DG-H-01-100	SC	5	1.5		0	0	0	0	7.5		0.12	0.2	0.08	1182	695.9	60.6	402.0
11	LG-08-11	101	DG-H-01-101	SC	2.5	2		0	0	0	0	5					1185	698.4	60.6	402.0
11	LG-08-11	102	DG-H-01-102	R	5.2	3.5		0	0	0	0	18.2					1190	698.4	60.6	407.2
11	LG-08-11	103	DG-H-01-103	SC	5.2	2	4	1.9	2.4	2.3	1.5	10.4	10.53	0.12	0.42	0.3	1195	703.6	60.6	407.2
11	LG-08-11	104	DG-H-01-104	R	7	1.5		0	0	0	0	10.5					1202	703.6	60.6	414.2
11	LG-08-11	105	DG-H-01-105	MC	10.4	2.5		0	0	0	0	26					1213	714.0	60.6	414.2
11	LG-08-11	106	DG-H-01-106	SC	6.7	2		0	0	0	0	13.4		0.06	0.22	0.16	1219	720.7	60.6	414.2
11	LG-08-11	107	DG-H-01-107	R	3.2	1.5		0	0	0	0	4.8					1223	720.7	60.6	417.4
11	LG-08-11	108	DG-H-01-108	SC	10.3	3		0	0	0	0	30.9					1233	731.0	60.6	417.4
12	LG-08-12	109	DG-H-01-109	R	8.8	2.5		0	0	0	0	22					1242	731.0	60.6	426.2
12	LG-08-12	110	DG-H-01-110	SC	22	2		0	0	0	0	44		0.04	0.56	0.52	1264	753.0	60.6	426.2
12	LG-08-12	111	DG-H-01-111	MC	7.5	1.5	3	2.3	1	1.6	0	11.25	12.25	0.13	0.3	0.17	1271	760.5	60.6	426.2
12	LG-08-12	112	DG-H-01-112	SC	10.4	1.5		0	0	0	0	15.6					1282	770.9	60.6	426.2
12	LG-08-12	113	DG-H-01-113	SC	12.1	2.5		0	0	0	0	30.25		0.1	1.1	1	1294	783.0	60.6	426.2
12	LG-08-12	114	DG-H-01-114	R	13.1	1		0	0	0	0	13.1					1307	783.0	60.6	439.3
12	LG-08-12	115	DG-H-01-115	FW	14.1	1	3	1.3	1	1	0	14.1	15.28	0.02	0.15	0.13	1321	783.0	74.7	439.3
12	LG-08-12	116	DG-H-01-116	SC	7	3		0	0	0	0	21					1328	790.0	74.7	439.3
12	LG-08-12	117	DG-H-01-117	SC	9.5	3		0	0	0	0	28.5		0.04	0.5	0.46	1337	799.5	74.7	439.3
12	LG-08-12	118	DG-H-01-118	R	5.9	2.5		0	0	0	0	14.75					1343	799.5	74.7	445.2
13	LG-08-13	119	DG-H-01-119	SC	19.3	4	4	2.7	3.8	3.5	2.3	77.2	59.35	0.08	0.55	0.47	1363	818.8	74.7	445.2
13	LG-08-13	120	DG-H-01-120	FW	8.2	1.2	3	1	1.1	1.7	0	9.84	10.39				1371	818.8	82.9	445.2
13	LG-08-13	121	DG-H-01-121	R	23.2	1.5		0	0	0	0	34.8					1394	818.8	82.9	468.4

1998 Devil's Gulch Habitat Typing Data

Unit Type: MC=Mid-channel pool, SC=Scour Pool, R=Riffle, FW=Flatwater, BW=Backwater, PL=Plunge Pool

Section #	Section Code	Unit #	Unit Code	Unit Type	Length (m)	Est Width (m)	# of widths	MW 1	MW 2	MW 3	MW 4	Est Surface Area	Meas. SA	Crest Depth	Max Depth	Resid Pool Depth	Cum Length	Cum Pool	Cum Run	Cum Riffle
13	LG-08-13	122	DG-H-01-122	MC	9.4	3.5		0	0	0	0	32.9					1403	828.2	82.9	468.4
13	LG-08-13	123	DG-H-01-123	SC	6.4	2		0	0	0	0	12.8		0.05	0.68	0.63	1410	834.6	82.9	468.4
14	LG-08-14	124	DG-H-01-124	R	5	3		0	0	0	0	15					1415	834.6	82.9	473.4
14	LG-08-14	125	DG-H-01-125	SC	12.2	3		0	0	0	0	36.6					1427	846.8	82.9	473.4
14	LG-08-14	126	DG-H-01-126	R	9.7	2		0	0	0	0	19.4					1437	846.8	82.9	483.1
14	LG-08-14	127	DG-H-01-127	MC	10.8	2.5		0	0	0	0	27		0.12	0.3	0.18	1447	857.6	82.9	483.1
14	LG-08-14	128	DG-H-01-128	R	9.7	2		0	0	0	0	19.4					1457	857.6	82.9	492.8
14	LG-08-14	129	DG-H-01-129	SC	8.2	2.5	3	2	3.1	2.7	0	20.5	21.32	0.06	0.24	0.18	1465	865.8	82.9	492.8
14	LG-08-14	130	DG-H-01-130	SC	9.6	3		0	0	0	0	28.8					1475	875.4	82.9	492.8
14	LG-08-14	131	DG-H-01-131	FW	12.8	3	4	2.2	3.8	2.4	2.6	38.4	35.20				1488	875.4	95.7	492.8
14	LG-08-14	132	DG-H-01-132	R	28.9	2		0	0	0	0	57.8					1517	875.4	95.7	521.7
15	LG-08-15	133	DG-H-01-133	SC	11.6	3.5		0	0	0	0	40.6		0.06	0.78	0.72	1528	887.0	95.7	521.7
15	LG-08-15	134	DG-H-01-134	R	3.8	1.5		0	0	0	0	5.7					1532	887.0	95.7	525.5
15	LG-08-15	135	DG-H-01-135	SC	11	2.5		0	0	0	0	27.5					1543	898.0	95.7	525.5
15	LG-08-15	136	DG-H-01-136	R	26.2	3.5		0	0	0	0	91.7					1569	898.0	95.7	551.7
15	LG-08-15	137	DG-H-01-137	SC	3.8	1.5		0	0	0	0	5.7		0.08	0.23	0.15	1573	901.8	95.7	551.7
15	LG-08-15	138	DG-H-01-138	R	11.2	1.5		0	0	0	0	16.8					1584	901.8	95.7	562.9
15	LG-08-15	139	DG-H-01-139	SC	13.1	4	4	2.8	3.5	3.8	4.8	52.4	48.80	0.08	0.76	0.68	1597	914.9	95.7	562.9
15	LG-08-15	140	DG-H-01-140	SC	14.7	2		0	0	0	0	29.4					1612	929.6	95.7	562.9
15	LG-08-15	141	DG-H-01-141	R	3.4	1		0	0	0	0	3.4					1615	929.6	95.7	566.3
16	LG-08-16	142	DG-H-01-142	SC	11.6	3		0	0	0	0	34.8		0.06	0.4	0.34	1627	941.2	95.7	566.3
16	LG-08-16	143	DG-H-01-143	R	8.1	4		0	0	0	0	32.4					1635	941.2	95.7	574.4
16	LG-08-16	144	DG-H-01-144	SC	17.1	3.5		0	0	0	0	59.85					1652	958.3	95.7	574.4
16	LG-08-16	145	DG-H-01-145	R	2.7	2.5		0	0	0	0	6.75					1655	958.3	95.7	577.1
16	LG-08-16	146	DG-H-01-146	SC	18.6	3		0	0	0	0	55.8		0.06	0.4	0.34	1674	976.9	95.7	577.1
16	LG-08-16	147	DG-H-01-147	R	16.5	2		0	0	0	0	33					1690	976.9	95.7	593.6
16	LG-08-16	148	DG-H-01-148	SC	21.6	4.5	4	1.4	4.8	2.8	1.5	97.2	56.70	0.09	1.12	1.03	1712	998.5	95.7	593.6
16	LG-08-16	149	DG-H-01-149	MC	5.7	2.5		0	0	0	0	14.25					1717	1004.2	95.7	593.6
16	LG-08-16	150	DG-H-01-150	R	2.5	1.5		0	0	0	0	3.75					1720	1004.2	95.7	596.1
17	LG-08-17	151	DG-H-01-151	PL	5.6	3	3	2.3	3.4	3.8	0	16.8	17.73	0.04	0.44	0.4	1725	1004.2	95.7	596.1
17	LG-08-17	152	DG-H-01-152	R	4.7	2		0	0	0	0	9.4					1730	1004.2	95.7	600.8
17	LG-08-17	153	DG-H-01-153	SC	5.4	2		0	0	0	0	10.8					1736	1009.6	95.7	600.8
17	LG-08-17	154	DG-H-01-154	SC	29.9	4	4	2.2	2.2	3.8	2.2	119.6	77.74	0.12	0.32		1765	1039.5	95.7	600.8
17	LG-08-17	155	DG-H-01-155	SC	19.3	3		0	0	0	0	57.9				0.2	1785	1058.8	95.7	600.8
17	LG-08-17	156	DG-H-01-156	R	9.5	3		0	0	0	0	28.5					1794	1058.8	95.7	610.3
17	LG-08-17	157	DG-H-01-157	SC	10.5	1.5		0	0	0	0	15.75		0.06	0.32	0.26	1805	1069.3	95.7	610.3
17	LG-08-17	158	DG-H-01-158	FW	10.5	2	3	0.8	1.2	0.9	0	21	10.15				1815	1069.3	106.2	610.3
18	LG-08-18	159	DG-H-01-159	R	49.6	3		0	0	0	0	148.8					1865	1069.3	106.2	659.9
18	LG-08-18	160	DG-H-01-160	SC	19.4	3		0	0	0	0	58.2					1884	1088.7	106.2	659.9
18	LG-08-18	161	DG-H-01-161	R	37.6	3		0	0	0	0	112.8					1922	1088.7	106.2	697.5
18	LG-08-18	162	DG-H-01-162	SC	10.5	1		0	0	0	0	10.5		0.08	0.22	0.14	1932	1099.2	106.2	697.5
18	LG-08-18	163	DG-H-01-163	R	11.4	2.5		0	0	0	0	28.5					1944	1099.2	106.2	708.9
19	LG-08-19	164	DG-H-01-164	FW	11.3	2	4	2.3	2.1	2.3	2.3	22.6	25.43				1955	1099.2	117.5	708.9
19	LG-08-19	165	DG-H-01-165	SC	10.7	2.5	2	3	3.3	0	0	26.75	33.71	0.14	0.5	0.36	1966	1109.9	117.5	708.9
19	LG-08-19	166	DG-H-01-166	R	6.6	1		0	0	0	0	6.6					1972	1109.9	117.5	715.5
19	LG-08-19	167	DG-H-01-167	MC	20.9	2		0	0	0	0	41.8					1993	1130.8	117.5	715.5
19	LG-08-19	168	DG-H-01-168	SC	12	2.5		0	0	0	0	30		0.13	0.29	0.16	2005	1142.8	117.5	715.5
19	LG-08-19	169	DG-H-01-169	R	7.5	1.5		0	0	0	0	11.25					2013	1142.8	117.5	723.0
19	LG-08-19	170	DG-H-01-170	SC	6.2	1.5		0	0	0	0	9.3					2019	1149.0	117.5	723.0
19	LG-08-19	171	DG-H-01-171	MC	8.5	2		0	0	0	0	17		0.1	0.29	0.19	2027	1157.5	117.5	723.0
19	LG-08-19	172	DG-H-01-172	SC	5.9	2	3	2.2	1.1	2.1	0	11.8	10.62	0.05	0.33	0.28	2033	1163.4	117.5	723.0
19	LG-08-19	173	DG-H-01-173	SC	2.5	1.5		0	0	0	0	3.75					2036	1165.9	117.5	723.0
19	LG-08-19	174	DG-H-01-174	BW	2.9	2	2	2.3	1.9	0	0	5.8	6.09	0.02	0.3	0.28	2039	1165.9	117.5	723.0
19	LG-08-19	175	DG-H-01-175	FW	6.9	0.5	4	0.8	0.7	0.7	0.3	3.45	4.31				2046	1165.9	124.4	723.0
19	LG-08-19	176	DG-H-01-176	SC	10.8	1.5		0	0	0	0	16.2		0.05	0.45	0.4	2056	1176.7	124.4	723.0
20	LG-08-20	177	DG-H-01-177	R	25.5	3.5		0	0	0	0	89.25					2082	1176.7	124.4	748.5
20	LG-08-20	178	DG-H-01-178	SC	20.6	2	4	1.1	2.3	1.6	2.4	41.2	38.11	0.12	0.36	0.24	2103	1197.3	124.4	748.5
20	LG-08-20	179	DG-H-01-179	SC	12	3		0	0	0	0	36					2115	1209.3	124.4	748.5
20	LG-08-20	180	DG-H-01-180	R	5.4	1.5		0	0	0	0	8.1					2120	1209.3	124.4	753.9
20	LG-08-20	181	DG-H-01-181	SC	12.3	2	4	2.1	3.4	1.9	3.5	24.6	33.52	0.08	0.31	0.23	2132	1221.6	124.4	753.9
20	LG-08-20	182	DG-H-01-182	SC	3.8	2		0	0	0	0	7.6					2136	1225.4	124.4	753.9
20	LG-08-20	183	DG-H-01-183	R	9.4	1		0	0	0	0	9.4					2145	1225.4	124.4	763.3
20	LG-08-20	184	DG-H-01-184	MC	13.7	4		0	0	0	0	54.8		0.08	0.84	0.76	2159	1239.1	124.4	763.3
21	LG-08-21	185	DG-H-01-185	R	12.6	2.5		0	0	0	0	31.5					2172	1239.1	124.4	775.9
21	LG-08-21	186	DG-H-01-186	FW	6.9	2.5	3	2.7	3.2	2.3	0	17.25	18.86				2179	1239.1	131.3	775.9
21	LG-08-21	187	DG-H-01-187	MC	15	1.5		0	0	0	0	22.5					2194	1254.1	131.3	775.9
21	LG-08-21	188	DG-H-01-188	SC	3.4	3		0	0	0	0	10.2		0.11	0.52	0.41	2197	1257.5	131.3	775.9

Unit Type: MC=Mid-channel pool, SC=Scour Pool, R=Riffle, FW=Flatwater, BW=Backwater, PL=Plunge Pool

Section #	Section Code	Unit #	Unit Code	Unit Type	Length (m)	Est Width (m)	# of widths	MW 1	MW 2	MW 3	MW 4	Est Surface Area	Meas. SA	Crest Depth	Max Depth	Resid Pool Depth	Cum Length	Cum Pool	Cum Run	Cum Riffle
21	LG-08-21	189	DG-H-01-189	R	27.4	2		0	0	0	0	54.8					2224	1257.5	131.3	803.3
21	LG-08-21	190	DG-H-01-190	SC	9.6	3	3	4.6	3.6	3.6	0	28.8	37.76	0.06	0.81	0.75	2234	1267.1	131.3	803.3
21	LG-08-21	191	DG-H-01-191	R	6.2	2.5		0	0	0	0	15.5					2240	1267.1	131.3	809.5
21	LG-08-21	192	DG-H-01-192	FW	8.1	2.5	4	3	1.7	3.2	1.1	20.25	18.23				2248	1267.1	139.4	809.5
21	LG-08-21	193	DG-H-01-193	FW	15	1.5	3	2.3	1.3	1.5	0	22.5	25.50				2263	1267.1	154.4	809.5
21	LG-08-21	194	DG-H-01-194	R	11	1.5		0	0	0	0	16.5					2274	1267.1	154.4	820.5
21	LG-08-21	195	DG-H-01-195	SC	9.2	1.5		0	0	0	0	13.8					2284	1276.3	154.4	820.5
21	LG-08-21	196	DG-H-01-196	FW	6.4	2.5	3	1.7	3.3	2.4	0	16	15.79				2290	1276.3	160.8	820.5
22	LG-08-22	197	DG-H-01-197	SC	18.9	2		0	0	0	0	37.8		0.06	0.36	0.3	2309	1295.2	160.8	820.5
22	LG-08-22	198	DG-H-01-198	R	10	2.5		0	0	0	0	25					2319	1295.2	160.8	830.5
22	LG-08-22	199	DG-H-01-199	SC	10	3		0	0	0	0	30					2329	1305.2	160.8	830.5
22	LG-08-22	200	DG-H-01-200	R	6.1	1.5		0	0	0	0	9.15					2335	1305.2	160.8	836.6
22	LG-08-22	201	DG-H-01-201	SC	25.1	1.5		0	0	0	0	37.65		0.1	0.34	0.24	2360	1330.3	160.8	836.6
22	LG-08-22	202	DG-H-01-202	MC	6.5	1	4	0.7	1.6	1.1	1.2	6.5	7.48				2367	1336.8	160.8	836.6
23	LG-08-23	203	DG-H-01-203	R	22.5	3		0	0	0	0	67.5					2389	1336.8	160.8	859.1
23	LG-08-23	204	DG-H-01-204	PL	2.5	1.5		0	0	0	0	3.75					2392	1336.8	160.8	859.1
23	LG-08-23	205	DG-H-01-205	SC	10.6	2		0	0	0	0	21.2					2402	1347.4	160.8	859.1
23	LG-08-23	206	DG-H-01-206	R	5.5	1.5		0	0	0	0	8.25					2408	1347.4	160.8	864.6
23	LG-08-23	207	DG-H-01-207	FW	9.4	2	3	2	1.7	2	0	18.8	17.86				2417	1347.4	170.2	864.6
23	LG-08-23	208	DG-H-01-208	R	10.4	2		0	0	0	0	20.8					2427	1347.4	170.2	875.0
23	LG-08-23	209	DG-H-01-209	MC	3.9	1		0	0	0	0	3.9		0.05	0.24	0.19	2431	1351.3	170.2	875.0
23	LG-08-23	210	DG-H-01-210	BW	2	1	2	1.2	1	0	0	2	2.20	0.06	0.2	0.14	2433	1351.3	170.2	875.0
23	LG-08-23	211	DG-H-01-211	MC	7.2	2		0	0	0	0	14.4		0.14	0.45	0.31	2441	1358.5	170.2	875.0
23	LG-08-23	212	DG-H-01-212	SC	6.1	2		0	0	0	0	12.2					2447	1364.6	170.2	875.0
23	LG-08-23	213	DG-H-01-213	R	4.1	1		0	0	0	0	4.1					2451	1364.6	170.2	879.1
23	LG-08-23	214	DG-H-01-214	FW	5	2	3	2.5	1.5	1.7	0	10	9.50				2456	1364.6	175.2	879.1
23	LG-08-23	215	DG-H-01-215	R	9.7	2		0	0	0	0	19.4					2465	1364.6	175.2	888.8
23	LG-08-23	216	DG-H-01-216	SC	7.7	2	4	1.5	1.6	2.2	1.2	15.4	12.51	0.07	0.31	0.24	2473	1372.3	175.2	888.8
23	LG-08-23	217	DG-H-01-217	R	10.1	2.5		0	0	0	0	25.25					2483	1372.3	175.2	898.9
24	LG-08-24	218	DG-H-01-218	FW	13.1	1.5	4	2	0.9	1.5	1.2	19.65	18.34	0.06	0.23	0.17	2496	1372.3	188.3	898.9
24	LG-08-24	219	DG-H-01-219	R	5.5	1.5		0	0	0	0	8.25					2502	1372.3	188.3	904.4
24	LG-08-24	220	DG-H-01-220	MC	9	1.5		0	0	0	0	13.5					2511	1381.3	188.3	904.4
24	LG-08-24	221	DG-H-01-221	R	5.6	2		0	0	0	0	11.2					2516	1381.3	188.3	910.0
24	LG-08-24	222	DG-H-01-222	SC	5.5	2.5		0	0	0	0	13.75		0.06	0.18	0.12	2522	1386.8	188.3	910.0
24	LG-08-24	223	DG-H-01-223	MC	6.9	1.5		0	0	0	0	10.35					2529	1393.7	188.3	910.0
24	LG-08-24	224	DG-H-01-224	SC	15.1	2		0	0	0	0	30.2		0.05	0.38	0.33	2544	1408.8	188.3	910.0
24	LG-08-24	225	DG-H-01-225	FW	4	2		2.3	1.6	1.4	0	8	5.22				2548	1408.8	192.3	910.0
24	LG-08-24	226	DG-H-01-226	SC	15.6	2	3	3	1.6	2.3	0	31.2	35.88				2564	1424.4	192.3	910.0
24	LG-08-24	227	DG-H-01-227	R	7.8	1		0	0	0	0	7.8					2571	1424.4	192.3	917.8
24	LG-08-24	228	DG-H-01-228	SC	6.4	0.5		0	0	0	0	3.2					2578	1430.8	192.3	917.8
25	LG-08-25	229	DG-H-01-229	SC	18.3	3		0	0	0	0	54.9		0.06	0.3	0.24	2596	1449.1	192.3	917.8
25	LG-08-25	230	DG-H-01-230	SC	5.4	1		0	0	0	0	5.4					2601	1454.5	192.3	917.8
25	LG-08-25	231	DG-H-01-231	R	12.8	1		0	0	0	0	12.8					2614	1454.5	192.3	930.6
25	LG-08-25	232	DG-H-01-232	SC	11.6	2		0	0	0	0	23.2		0.05			2626	1466.1	192.3	930.6
25	LG-08-25	233	DG-H-01-233	SC	3.3	1.5		0	0	0	0	4.95					2629	1469.4	192.3	930.6
25	LG-08-25	234	DG-H-01-234	R	4.4	1		0	0	0	0	4.4					2634	1469.4	192.3	935.0
25	LG-08-25	235	DG-H-01-235	SC	17.3	1.5	4	1.8	1.7	1.7	1.5	25.95	28.98	0.05	0.41	0.36	2651	1486.7	192.3	935.0
25	LG-08-25	236	DG-H-01-236	R	11.2	1.5		0	0	0	0	16.8					2662	1486.7	192.3	946.2
25	LG-08-25	237	DG-H-01-237	SC	4.6	1.5		0	0	0	0	6.9					2667	1491.3	192.3	946.2
25	LG-08-25	238	DG-H-01-238	R	3.6	1.5						5.4					2670	1491.3	192.3	949.8
26	LG-08-26	239	DG-H-01-239	SC	14.3	1.5	0	0	0	0	0	21.45	2.15	0.05	0.25	0.2	2685	1505.6	192.3	949.8
26	LG-08-26	240	DG-H-01-240	R	7.6	1	0	0	0	0	0	7.6					2692	1505.6	192.3	957.4
26	LG-08-26	241	DG-H-01-241	SC	8.6	1.5	0	0	0	0	0	12.9					2701	1514.2	192.3	957.4
26	LG-08-26	242	DG-H-01-242	R	6.9	0.25	0	0	0	0	0	1.725					2708	1514.2	192.3	964.3
26	LG-08-26	243	DG-H-01-243	SC	6.5	2	0	0	0	0	0	13		0.04	0.32	0.28	2714	1520.7	192.3	964.3
26	LG-08-26	244	DG-H-01-244	SC	15.3	2.5	4	2	0.9	3.9	0.6	38.25	28.31	0.05			2729	1536.0	192.3	964.3
26	LG-08-26	245	DG-H-01-245	R	3.7	1.5	0	0	0	0	0	5.55					2733	1536.0	192.3	968.0
26	LG-08-26	246	DG-H-01-246	SC	7.1	0.5		0	0	0	0	3.55					2740	1543.1	192.3	968.0
26	LG-08-26	247	DG-H-01-247	R	26.3	1		0	0	0	0	26.3					2767	1543.1	192.3	994.3
26	LG-08-26	248	DG-H-01-248	FW	9.3	1.8	3	1.2	2.1	2	0	16.74	16.43				2776	1543.1	201.6	994.3
26	LG-08-26	249	DG-H-01-249	R	19.1	2	0	0	0	0	0	38.2					2795	1543.1	201.6	1013.4
27	LG-08-27	250	DG-H-01-250	SC	3	2	0	0	0	0	0	6		0.08	0.21	0.13	2798	1546.1	201.6	1013.4
27	LG-08-27	251	DG-H-01-251	SC	5.5	1.5	0	0	0	0	0	8.25					2803	1551.6	201.6	1013.4
27	LG-08-27	252	DG-H-01-252	FW	7.7	1	3	0.8	0.4	1.5	0	7.7	6.93				2811	1551.6	209.3	1013.4

Unit Type: MC=Mid-channel pool, SC=Scour Pool, R=Riffle, FW=Flatwater, BW=Backwater, PL=Plunge Pool

Section #	Section Code	Unit #	Unit Code	Unit Type	Length (m)	Est Width (m)	# of widths	MW 1	MW 2	MW 3	MW 4	Est Surface Area	Meas. SA	Crest Depth	Max Depth	Resid Pool Depth	Cum Length	Cum Pool	Cum Run	Cum Riffle
27	LG-08-27	253	DG-H-01-253	SC	4.4	0.75	0	0	0	0	0	3.3		0.09	0.23	0.14	2816	1556.0	209.3	1013.4
27	LG-08-27	254	DG-H-01-254	R	3.4	1	0	0	0	0	0	3.4					2819	1556.0	209.3	1016.8
27	LG-08-27	255	DG-H-01-255	MC	5.4	2	3	1.6	2.3	2.5	0	10.8	11.52	0.07	0.27	0.2	2824	1561.4	209.3	1016.8
27	LG-08-27	256	DG-H-01-256	SC	12.7	0.5	0	0	0	0	0	6.35					2837	1574.1	209.3	1016.8
27	LG-08-27	257	DG-H-01-257	MC	4.2	0.5	0	0	0	0	0	2.1		0.04	0.13	0.09	2841	1578.3	209.3	1016.8
27	LG-08-27	258	DG-H-01-258	R	16.6		0	0	0	0	0						2858	1578.3	209.3	1033.4
27	LG-08-27	259	DG-H-01-259	MC	17.6	2	0	0	0	0	0	35.2		0.03	0.42	0.39	2875	1595.9	209.3	1033.4
28	LG-08-28	260	DG-H-01-260	R	12.7	1	0	0	0	0	0	12.7					2888	1595.9	209.3	1046.1
28	LG-08-28	261	DG-H-01-261	SC	8	2	0	0	0	0	0	16					2896	1603.9	209.3	1046.1
28	LG-08-28	262	DG-H-01-262	R	4.5	0.5	0	0	0	0	0	2.25					2901	1603.9	209.3	1050.6
28	LG-08-28	263	DG-H-01-263	MC	6.8	1.5	3	1.5	1.7	2.5	0	10.2	12.92	0.07	0.25	0.18	2907	1610.7	209.3	1050.6
28	LG-08-28	264	DG-H-01-264	R	9		0	0	0	0	0						2916	1610.7	209.3	1059.6
28	LG-08-28	265	DG-H-01-265	SC	10.4	2.5	0	0	0	0	0	26					2927	1621.1	209.3	1059.6
28	LG-08-28	266	DG-H-01-266	R	8.4	1	0	0	0	0	0	8.4					2935	1621.1	209.3	1068.0
28	LG-08-28	267	DG-H-01-267	SC	12.2	1.5	0	0	0	0	0	18.3		0.05	0.29	0.24	2947	1633.3	209.3	1068.0
28	LG-08-28	268	DG-H-01-268	R	3.3	0.25	0	0	0	0	0	0.825					2951	1633.3	209.3	1071.3
28	LG-08-28	269	DG-H-01-269	MC	9.6	1.5	0	0	0	0	0	14.4					2960	1642.9	209.3	1071.3
28	LG-08-28	270	DG-H-01-270	R	9.6	0.5	0	0	0	0	0	4.8					2970	1642.9	209.3	1080.9
28	LG-08-28	271	DG-H-01-271	SC	15.7	2.5	0	0	0	0	0	39.25		0.03	0.48	0.45	2986	1658.6	209.3	1080.9
29	LG-08-29	272	DG-H-01-272	R	13.1	1.5	0	0	0	0	0	19.65					2999	1658.6	209.3	1094.0
29	LG-08-29	273	DG-H-01-273	MC	12.5	2	4	1.7	2.3	2.6	0.8	25	23.13	0.04	0.42	0.38	3011	1671.1	209.3	1094.0
29	LG-08-29	274	DG-H-01-274	MC	11.8	1	0	0	0	0	0	11.8					3023	1682.9	209.3	1094.0
29	LG-08-29	275	DG-H-01-275	R	14.8	2.5	0	0	0	0	0	37					3038	1682.9	209.3	1108.8
29	LG-08-29	276	DG-H-01-276	MC	9.9	2	0	0	0	0	0	19.8		0.03	0.24	0.21	3048	1692.8	209.3	1108.8
29	LG-08-29	277	DG-H-01-277	R	6.2	1.5	0	0	0	0	0	9.3					3054	1692.8	209.3	1115.0
29	LG-08-29	278	DG-H-01-278	SC	15.8	2.5	0	0	0	0	0	39.5					3070	1708.6	209.3	1115.0
29	LG-08-29	279	DG-H-01-279	DR	5.4			0	0	0	0						3075	1708.6	209.3	1115.0
29	LG-08-29	280	DG-H-01-280	SC	9.5	2	0	0	0	0	0	19		0.02	0.65	0.63	3085	1718.1	209.3	1115.0
29	LG-08-29	281	DG-H-01-281	R	7	0.5	0	0	0	0	0	3.5					3092	1718.1	209.3	1122.0
30	LG-08-30	282	DG-H-01-282	SC	12.3	1.2	4	1	1.4	0.8	1.9	14.76	15.68	0.03	0.61	0.58	3104	1730.4	209.3	1122.0
30	LG-08-30	283	DG-H-01-283	SC	10.3	1.5	0	0	0	0	0	15.45					3114	1740.7	209.3	1122.0
30	LG-08-30	284	DG-H-01-284	R	2.5	0.5	0	0	0	0	0	1.25					3117	1740.7	209.3	1124.5
30	LG-08-30	285	DG-H-01-285	MC	9.1	1	0	0	0	0	0	9.1		0.06	0.34	0.28	3126	1749.8	209.3	1124.5
30	LG-08-30	286	DG-H-01-286	FW	3.9	1.5	3	0.8	1.5	1.5	0	5.85	4.94				3130	1749.8	213.2	1124.5
30	LG-08-30	287	DG-H-01-287	R	2.6	1	0	0	0	0	0	2.6					3132	1749.8	213.2	1127.1
30	LG-08-30	288	DG-H-01-288	BW	4	1.5	4	1	2	1.5	0.5	6	5.00	0.09	0.41	0.32	3136	1749.8	213.2	1127.1
30	LG-08-30	289	DG-H-01-289	MC	8.4	2	0	0	0	0	0	16.8					3145	1758.2	213.2	1127.1
30	LG-08-30	290	DG-H-01-290	R	9.5	1.5	0	0	0	0	0	14.25					3154	1758.2	213.2	1136.6
30	LG-08-30	291	DG-H-01-291	SC	9.4	2	0	0	0	0	0	18.8		0.04	0.69	0.65	3164	1767.6	213.2	1136.6
30	LG-08-30	292	DG-H-01-292	R	3.1	1	0	0	0	0	0	3.1					3167	1767.6	213.2	1139.7
30	LG-08-30	293	DG-H-01-293	MC	7	1	3	1.3	0.9	1.6	0	7	8.87	0.1	0.24	0.14	3174	1774.6	213.2	1139.7
30	LG-08-30	294	DG-H-01-294	R	6.4	0.5	0	0	0	0	0	3.2					3180	1774.6	213.2	1146.1
30	LG-08-30	295	DG-H-01-295	SC	9.3	2.5	0	0	0	0	0	23.25					3189	1783.9	213.2	1146.1
30	LG-08-30	296	DG-H-01-296	R	3.1	1	0	0	0	0	0	3.1					3193	1783.9	213.2	1149.2
30	LG-08-30	297	DG-H-01-297	SC	6.9	1.5	0	0	0	0	0	10.35		0.05	0.24	0.19	3199	1790.8	213.2	1149.2
31	LG-08-31	298	DG-H-01-298	R	7.8	1	0	0	0	0	0	7.8					3207	1790.8	213.2	1157.0
31	LG-08-31	299	DG-H-01-299	MC	16.2	5	0	0	0	0	0	81		0.04	0.65	0.61	3223	1807.0	213.2	1157.0
31	LG-08-31	300	DG-H-01-300	culv	7.6		0	0	0	0	0						3231	1807.0	213.2	1157.0
31	LG-08-31	301	DG-H-01-301	R	6.7	0.5	0	0	0	0	0	3.35					3238	1807.0	213.2	1163.7
31	LG-08-31	302	DG-H-01-302	SC	6.2	1	0	0	0	0	0	6.2					3244	1813.2	213.2	1163.7
31	LG-08-31	303	DG-H-01-303	R	3.7	0.25	0	0	0	0	0	0.925					3248	1813.2	213.2	1167.4
31	LG-08-31	304	DG-H-01-304	MC	4.7	0.5	0	0	0	0	0	2.35		0.04	0.15	0.11	3252	1817.9	213.2	1167.4
31	LG-08-31	305	DG-H-01-305	R	13	1.5	0	0	0	0	0	19.5					3265	1817.9	213.2	1180.4
31	LG-08-31	306	DG-H-01-306	DR	3.9			0	0	0	0						3269	1817.9	213.2	1180.4
31	LG-08-31	307	DG-H-01-307	SC	15.5	1	4	1.1	1.1	1.9	0.5	15.5	17.83	0.04	0.31	0.27	3285	1833.4	213.2	1180.4
31	LG-08-31	308	DG-H-01-308	R	3	0.25	0	0	0	0	0	0.75					3288	1833.4	213.2	1183.4
31	LG-08-31	309	DG-H-01-309	MC	3.1	1	0	0	0	0	0	3.1					3291	1836.5	213.2	1183.4
31	LG-08-31	310	DG-H-01-310	R	5.5	1	0	0	0	0	0	5.5					3296	1836.5	213.2	1188.9
31	LG-08-31	311	DG-H-01-311	SC	7.5	1	0	0	0	0	0	7.5		0.02	0.18	0.16	3304	1844.0	213.2	1188.9
31	LG-08-31	312	DG-H-01-312	R	4.7	0.25	0	0	0	0	0	1.175					3309	1844.0	213.2	1193.6
31	LG-08-31	313	DG-H-01-313	SC	3.5	2	0	0	0	0	0	7					3312	1847.5	213.2	1193.6
31	LG-08-31	314	DG-H-01-314	MC	7.9	2	0	0	0	0	0	15.8		0.1	0.42	0.32	3320	1855.4	213.2	1193.6