CENTRAL VALLEY REGIONAL
WATER QUALITY CONTROL BOARD

MERCURY INVENTORY IN THE CACHE CREEK CANYON
BEAR CREEK CONFLUENCE TO RUMSEY

Staff Report

March 2011

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REGIONAL WATER QUALITY CONTROL BOARD
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EXECUTIVE SUMMARY

Methyl mercury is a developmental toxin for both humans and wildlife. The primary route of exposure is through consumption of fish. Advisories have been issued for Cache Creek and the Sacramento-San Joaquin Delta Estuary recommending limited human consumption of sport fish because of elevated methyl mercury levels. Methyl mercury in fish is produced by sulfate reducing bacteria in sediment. The inorganic mercury concentration of sediment is an important factor controlling methyl mercury production by sulfate reducing bacteria. The Cache Creek watershed is about two percent of the landmass of the Central Valley but exports about sixty percent of the mercury. Half of the mercury from Cache Creek is trapped in the Cache Creek Settling Basin and the remainder is exported to the Delta. Therefore, understanding the sources and distribution patterns of mercury in Cache Creek and developing control programs to reduce exports is a high priority for the State of California.

The purpose of this study was to conduct a survey of tributaries and flood plains in the Cache Creek canyon from Bear Creek to Rumsey to ascertain the spatial distribution of mercury in sediment. The information gathered from the sampling and laboratory results was used to identify the source(s) of mercury and to estimate the mercury mass load stored in this section of the canyon and available for downstream transport to the Cache Creek Settling Basin and the Delta. This study is complementary to two earlier studies that measured mercury concentrations and estimated mercury sediment mass loads in the Cache Creek canyon between Harley Gulch and Bear Creek, and in Bear Creek from the upper watershed to its confluence with Cache Creek.

The strategy for determining mercury sources was to identify tributaries with both elevated sediment mercury levels and higher concentrations downstream of their confluence with Cache Creek than above. In 2006 and 2008, 264 sediment samples were collected and analyzed for mercury in the 5-mile section from Bear Creek to Rumsey in the Cache Creek watershed. Samples were also collected from Fiske Creek, Pole Bridge Canyon above Highway 16, Rumsey Canyon, and three unnamed tributaries.

The average mercury concentration in sediment in this section of Cache Creek was 1.84, 0.68, and 0.034 parts per million (ppm or mg/kg) in silt, sand, and gravel sized material, respectively. The average mercury concentration in the 36 sediment samples collected in the tributaries to this section of Cache Creek was 0.032, 0.035 and 0.028 ppm in silt, sand, and gravel sized material, respectively.

The mass of mercury in this section of the Cache Creek canyon was calculated by multiplying the estimated volume of sediment in depositional areas by its surface mercury concentration. Four-hundred and thirteen kilograms (kg) of mercury are calculated to be present and potentially available for transport in sediment in the 5 miles of canyon between the Bear Creek confluence and Rumsey.

INTRODUCTION

Methyl mercury is a developmental toxin for humans and wildlife. The life stage most at risk is developing fetuses and young. The primary route of exposure is through consumption of methylmercury contaminated fish. A fish advisory has been issued for Cache Creek and the downstream Sacramento San Joaquin River Bay-Delta Estuary recommending limited human consumption of sport fish because of elevated mercury levels (California Office of Environmental Health Hazard Assessment, 2005; 2007). The advisories led the State of California to place Cache Creek and the Bay-Delta Estuary on the Federal Clean Water Act 303(d) list for impaired waters and prepare Total Maximum Daily Load (TMDL) reports to the U.S. EPA as required by federal statute (Wood *et al*., 2006; Cooke *et al*., 2004). A Basin Plan Amendment to control mercury has also been adopted by the Central Valley Regional Water Quality Control Board for Cache Creek as required by the State of California Porter-Cologne Water Quality Control Act (Cooke and Morris, 2005). The Basin Plan Amendment commits Regional Board staff to complete "*assessments…to determine whether responsible parties should be required to conduct feasibility studies to evaluate methods to control sources of mercury…Assessments are needed of stream beds and banks in…Cache Creek from Harley Gulch to Camp Haswell...".* This is the third of a series of assessment reports in fulfillment of the Basin Plan commitment.

The methylmercury in fish is produced by sulfate reducing bacteria in sediment (Compeau and Bartha, 1985; Gilmour *et al*., 1992). All the factors controlling methylmercury production by sulfate reducing bacteria are not known. However, the inorganic mercury content of the sediment is an important factor. The evidence is threefold. First, positive correlations exist between methyl and inorganic mercury concentrations in freshwater sediments, including the Bay-Delta Estuary (Heim, 2003). Inorganic mercury concentrations account for 19 percent of the variation in sediment methylmercury concentrations in the Bay-Delta Estuary. More inorganic mercury results in more methylmercury. While small, the positive correlation is statistically significant. The predictive ability of the relationship improves when comparisons are restricted to similar types of aquatic habitats and the total mercury concentration of the sediment is less than one ppm. Second, increasing concentrations of inorganic mercury have been added in the laboratory to sediment cores and increasing concentrations of methylmercury measured in the overlying water (Bloom, 2003; Rudd *et al*., 1983; Kimball, 2005). These studies include mercury contaminated sediment from the Cache Creek drainage amended back into sediment from both Cache Creek and the Yolo Bypass (Bloom, 2003; Kimball, 2005). The experiments confirm that the inorganic mercury content of sediment is one factor controlling the rate of methylmercury production by sulfate reducing bacteria. Finally, the methylmercury concentration in fish at contaminated sites has declined after control measures were instituted to reduce incoming inorganic mercury loads (reviewed in Cooke *et al*., 2004). Together, the above three lines of evidence demonstrate that one method of reducing methylmercury levels in fish is to reduce incoming loads of inorganic mercury and thereby reduce mercury concentrations in sediment where bacteria reside.

The Cache Creek watershed is responsible for a disproportionate amount of all the mercury entering the Bay-Delta Estuary. A twenty-year mercury mass balance[1] has been calculated for the estuary (Wood *et al*., 2006). The Cache Creek watershed represents about two percent of the landmass of the Central Valley but exports about sixty percent of the mercury. Half of the mercury from the Cache Creek watershed is trapped in the Cache Creek Settling Basin and the rest exported to the Yolo Bypass[2]. Mass balance calculations suggest that a significant part of the mercury transported by Cache Creek originates in the canyon between the confluence of the Bear Creek confluence and the town of Rumsey (Foe and Croyle, 1998).

Inorganic mercury exported from Cache Creek contributes to methylmercury production in wetlands in the Yolo Bypass. Wetlands are known to be efficient sites for the production of methylmercury (as reviewed in Wiener *et al*., 2003). Several environmental organizations and the State of California have purchased land in the Yolo Bypass for wetland restorations. Recent purchases include the Vic Fazio Wildlife Refuge (16,000 acres), Liberty Island (10,000 acres) and Little Holland Tract (4,000 acres).

Ongoing studies have confirmed that the Yolo Bypass is a major source of methylmercury when flooded. Mass balance calculations indicate that the Bypass produced about 40 percent of all the methylmercury discharged from the Sacramento watershed when flooded in the winter and spring of 2005/2006 (Foe *et al*., 2007). This is surprising as the Sacramento watershed is much larger than the Bypass[3]. Monitoring of small fish in the flooded Bypass demonstrated that they acquired some of the highest methylmercury concentrations in the Central Valley and confirmed that the methyl mercury was biologically available and being incorporated into the aquatic food chain (Slotton *et al*., 2007). The findings suggest that mercury contamination from upstream sources, such as Cache Creek, may complicate downstream wetland restoration. Therefore, controlling inorganic mercury loads from the Cache Creek watershed should be addressed.

The purpose of this study was to survey tributaries and flood plains in the Cache Creek canyon between Bear Creek and Rumsey to ascertain the spatial distribution of mercury in sediment, use this information to identify source(s), and

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[1] Mercury loads to the estuary are a function of water year (WY) type. More mercury is transported into the estuary in wet than dry years. WY 1984-2003 were selected for the mass balance calculation as the 20-year time period includes a mix of wet and dry years that are statistically similar to what has occurred in the Sacramento Basin since accurate water records began to be collected 100 years ago.

[2] Portions of the Yolo Bypass are within the legal boundary of the Sacramento-San Joaquin River Bay-Delta Estuary.

[3] The Yolo Bypass and Sacramento Basin are 59,000 and 16,765,000 acres, respectively. So, the Bypass is 0.4 percent of the landmass of the Sacramento Basin.

then estimate the amount of mercury stored in the Canyon and available for downstream transport.

SETTING AND HISTORY OF THE AREA

Cache Creek is an eleven hundred square mile watershed in the California coast range. The basin is divided into three sub watersheds: the north fork of Cache Creek, the main fork of Cache Creek, and Bear Creek. All three water bodies flow year round. The north and main forks are regulated by dams at Indian Valley reservoir and Clear Lake, respectively. The reservoirs trap winter runoff for release in summer for agriculture. Bear Creek has no dams. Almost all the summer flow is diverted out of Cache Creek at Capay Dam. Controlled summer flows likely mobilize fine grain material from the creek bed and transport it to Capay dam where the material is diverted out of the channel and deposited on local farm land. During non-irrigation season (September to March) the inflatable dam at Capay is removed and larger more turbulent winter storm flows can scour contaminated sediment from the creek bed and transport it downstream to the Cache Creek Settling Basin and the Yolo Bypass.

The Cache Creek watershed includes portions of three historic mercury mining districts: (1) the Clear Lake Mercury Mining District, (2) the Sulphur Creek Mining District, and (3) the Knoxville Mercury Mining District.

- The Clear Lake Mercury Mining District contains the Sulphur Bank Mine which is the largest mercury mine in the watershed and is now a USEPA superfund site. Sulphur Bank Mine operated from 1875 to 1957 and is thought to have produced 4.7 million kg of mercury (Suchanek *et al*., 1997). Clear Lake contains about 0.1 million kg of mercury mine waste in sediment (Suchanek *et al*., 1995).

- The Sulfur Creek Mining District consists of the Abbott-Turkey Run, Wide Awake, Manzanita, Empire, Central, Elgin, Clyde, and Rathburn-Petray mercury mines. The Abbott-Turkey Run mine is in the Harley Gulch drainage while the Rathburn-Petray complex discharges to Bear Creek. The other mines drain to Sulfur Creek, which is tributary to Bear Creek. The Abbott-Turkey Run complex was the largest mining operation in the Sulfur Creek district and is estimated to have produced about 1.8 million kg of mercury (Churchill and Clinkenbeard, 2003). Production for the entire Sulfur Creek district is about 2 million kg.

- The Knoxville Mercury Mining District includes the Reed, Harrison, and Manhattan mercury mines in the Davis Creek watershed. These mines operated from 1860 to 1978 and produced between 2.4 and 2.8 million kg of mercury (Lehrman, 1985). In 1984, the Homestake Mining Company purchased the site and impounded Davis Creek to create the Davis Creek reservoir to provide water for gold production. Homestake Mining Company also reclaimed mine waste and plugged the Reed mine adit.

These actions should have significantly reduced the off-site movement of mercury. Nonetheless, annual monitoring of reservoir sediment demonstrates that Davis Creek Reservoir trapped an average of 72 kg of mercury per year for the 9 year period between 1993 and 2002 from the three upstream mines (Slotton et al., 2002). Off-site movement of mercury down Davis Creek prior to remediation and construction of the reservoir by Homestake may have been higher.

METHODS AND MATERIALS

During the winter of 2006 and again in 2008 Regional Board staff walked the Cache Creek canyon section between the Bear Creek confluence and Rumsey collecting sediment samples from major point bars and flood plains and from the mouth of tributary creeks to ascertain the distribution and mass of mercury in the canyon (Appendix A, Figure A1). Floodplains and creeks were identified *a priori* from an aerial photograph of the canyon provided by the California Department of Conservation.

In 2006, one sample in each depositional area was collected. In 2008, field observation and sample collection was conducted again so that at least three samples could be collected from each depositional area. Areas of significant sediment deposition along the creek were identified using aerial photos in GIS and then investigated in the field. The shape and height of the depositional piles was estimated and then a minimum of three sediment samples collected for mercury analysis. The three sample locations were as evenly distributed as possible throughout the depositional area to represent the mercury concentration of the sediment as accurately as possible.

Regional Board staff focused on depositional areas that were within the flood plain and not inundated throughout the year. These areas were targeted because these ‘dry’ areas would be subject to erosion and sediment transport when winter flows were high. These major depositional areas are the final twenty depositional areas CC001 to CC028 identified in Appendix B Table B1. Because some of the areas were not possible to access safely, their mercury concentration was determined by averaging concentrations of the nearest two upstream and downstream depositional areas where data was collected. Consequently, the samples from some depositional areas are averaged to estimate the mercury concentrations and loadings for areas with the Final Deposition Codes CC003, CC004, and CC007 (i.e. data from CC002 and CC005 were averaged to determine values for inaccessible areas CC003 and CC004, and data from CC006 and CC009 were averaged to determine values for inaccessible area CC007). Please reference Appendix A, Figures A2 – A4 for an aerial map for clarity regarding the depositional areas and sampling locations.

The sediment samples in the 2006 results were separated by grain size into four different fractions and then analyzed for mercury concentration. The highest concentrations of mercury in these samples was found in the two smallest grain size fractions (<63 um and 63-1000 um). Due to budget constraints in 2008, only the two smallest fractions were analyzed in those samples. The mercury inventory in these areas was determined from the depositional weight calculated for each of the 20 depositional areas based on the estimated surface area and heights of the areas. Then the mercury concentrations of three sediment samples for each depositional area were averaged separately for each grain size fraction. These averages along with the percent grain size analyses (which represent the percent by weight of each grain size fraction to the total weight of the sample) were used to estimate the mercury weights in each the two smallest fractions. The total mercury weights in each depositional area were then calculated.

Each of the three composite samples collected from the depositional areas was composed of 5 to 10 subsamples of about equal volume. Subsamples were collected with a trowel from the surface to a depth of about four inches over a 25 square meter area. Care was taken to collect the composite samples from different elevations in each deposit to insure that the entire pile was characterized as accurately as possible. To ensure sediment samples were representative of mercury conditions in the tributaries, sediment samples from the tributaries were collected upstream of the high water mark from Cache Creek.

The weight of sediment in each deposit was estimated from equation 1:

(1) **Weight (kg) = Elevation (m) x Surface Area (m^2) x 1530 (kg/m^3)**

Where: Elevation is the average height of the deposit above water level as estimated during the field surveys. Surface area is computed from the aerial photograph using ArcView GIS software. A conversion factor of 1530 kg/m^3 was used to translate volumes of loosely mixed sand to weight (Dunn et al., 1981).

The locations, dimensions, and weights of sediment in each depositional pile are provided in Tables A1 and A2 of Appendix A. Similar information for each tributary is in Table B1and B2 of Appendix B.

All composite samples were dried, homogenized and a known weight of material sequentially sieved through 63, 1,000, and 3,800-µm mesh screen. The size fractions were reweighed after sieving to estimate the fraction of the total weight each represented. A subsample from each fraction was also submitted for mercury analysis. Size fractions less than 63, between 63 and 1,000, and, between 1,000 and 3,800 (and greater than 3,800) µm are referred to respectively as silt, sand, and gravel in this report[4].

The mercury content of each depositional pile was determined by summing the mercury content of the three size fractions (equation 2):

(2) $\sum$ **(Total Weight (kg) x Weight of Fraction$_i$ x Mercury Concentration of Fraction$_i$ (mg/kg))**

[4] Technically, silt are all particles less than 64-µm, sand between 64 and 2,000 µm and gravel greater than 2,000µm (Knighton, 1984)

i=3 size fractions

Where: Total Weight is the estimated weight of the flood plain deposit from equation (1), and Weight of Fraction$_i$ and Mercury Concentration of Fraction$_i$ are the proportion of the total weight and the mercury concentration of each size fraction, respectively.

The mass of mercury in each deposit was estimated by summing the mercury mass of each fraction and averaging the values for the three composites. The inventory of mercury in each depositional pile in the Cache Creek Canyon is summarized in Appendix B Table B1.

Knowledge about the mercury content of each size fraction may be helpful in understanding the fate of the material (Knighten, 1992). Fine grained material, like silt, is readily transported by laminar flow such as occurs in Cache Creek in summer. In contrast, larger sand and gravel type material can only be moved up into the water column by more turbulent flow and usually must be broken down into smaller particles by physical and chemical weathering before being transported downstream.

Mercury Analysis

The mercury concentrations of sediment samples were analyzed by Moss Landing Marine Laboratories (MLML) using a flow injection mercury system (CALFED, 2000). Standard reference material and duplicate field samples were analyzed by each laboratory to estimate accuracy and precision. All results are reported as mg mercury per kg dry weight sediment (mg/kg or ppm).

RESULTS AND DISCUSSION

Quality Assurance/Quality Control Program

The program assessed the accuracy and precision of laboratory measurements. Accuracy was measured by both the analysis of standard reference material with a certified mercury content and by amending a known amount of mercury into Cache Creek sediment and measuring the percent recovery. Precision was measured by repeated analyses of laboratory and field duplicates. The accuracy and precision of MLML was satisfactory and the results adequate for estimating mercury concentrations and loads in the Cache Creek canyon.

Source and Distribution of Mercury

The primary source(s) of mercury in Cache Creek were identified by measuring concentrations in sediment deposits in the Cache Creek canyon and in all tributaries. The strategy for determining if tributaries were mercury sources was to identify tributaries with both elevated sediment mercury levels and an increase in sediment concentration downstream of their confluence with Cache Creek compared to upstream.

In addition to the main stem of Cache Creek within the canyon, samples were collected to determine mercury concentrations in sediment from Fiske Creek, Pocket Gulch, Polebridge Canyon above Highway 16, Rumsey Canyon, and two unnamed tributaries, (see Appendix B, Table B2 for sampling locations and concentrations by grain size). Sediment samples were also collected and their mercury concentrations measured in nine instream locations and one erosional area (also Appendix B, Tables B2 and B3 for the raw sampling data). These instream deposition areas and the erosional area were much smaller in size and with almost no elevation in profile compared to the other depositional piles and the mercury mass contained at these locations were not calculated and included in the overall mercury mass. For statistical purposes, it can be assumed that mercury contained in these sediment locations is accounted for in the margin of error discussed in the following section.

The average mercury concentration in sediment from the Cache Creek canyon was 1.84, 0.68, and 0.034 ppm in silt, sand and gravel sized material, respectively. The average mercury concentrations in the 36 sediment samples collected in the tributaries were 0.032, 0.035 and 0.028 ppm in silt, sand, and gravel sized material, respectively. There were no mercury mines identified in tributaries to the Cache Creek canyon in this section. Upstream Harley Gulch, Davis Creek, and Bear Creek contain the historical mining sites in the canyon and appear to be the major sources of mercury to Cache Creek. Upstream of Harley Gulch, the mercury concentrations in Cache Creek were 0.06, 0.10, and 0.09 ppm (Foe and Bosworth, 2008) and may be considered background concentrations (see below). The mercury concentrations in the tributaries between Bear Creek and Rumsey are well below these background concentrations and do not appear to be sources of mercury to Cache Creek.

Mercury Inventory

This study estimates that about 413 kg of mercury are present in the approximately 5 miles of canyon between Bear Creek confluence and the town of Rumsey (Appendix B, Table B1).

Uncertainty about the 413 kg estimated mercury inventory for the Canyon may range between -50 percent to +100 percent to account for margin of error. The lower value (206 kg) is estimated from observations that, perhaps, up to half the sediment in depositional areas is cobble and larger sized material and has little or no associated mercury. The upper value (826 kg) results from the fact that almost none of the smaller depositional piles have been sampled. These likely have mercury concentrations similar to adjoining larger deposits that were sampled, but their combined mass has not been estimated and therefore their mercury mass load not included in the 413 kg estimate.

Comparison with Upstream Cache Creek and Bear Creek

The sampling efforts conducted in 2008 established background mercury concentrations in the Cache Creek canyon. Samples were collected in Cache

Creek above the confluence of Harley Gulch, and also from both the North Fork of Cache Creek and the main stem of Cache Creek (from Clear Lake). The average concentration in 14 samples collected from the watershed above the confluence of Harley Gulch was 0.06, 0.10, and 0.09 ppm mercury in silt, sand, and gravel sized material, respectively (Foe and Bosworth, 2008). These are considered to be background levels for the upper watershed.

The 2008 staff report on the mercury inventory in the Cache Creek canyon between the North Fork and Bear Creek confluence estimated a mercury mass of 2,200 kg (Foe and Bosworth, 2008). Average mercury concentrations in this 15 mile stretch were 0.98, 0.77 and 0.89-ppm in silt, sand and gravel sized material, respectively. These values represent a 16, 8, and 10-fold increase for each of the three size fractions compared with background levels for the watershed above Harley Gulch.

In comparison, the 413 kg of mercury mass estimated in the lower 5 mile stretch is almost 5½ times less than the 2,200 kg inventoried in the upstream 15 mile section. The lower stretch accounts for about 44 percent less mercury mass per mile than the upper reach (83 kg/mile versus 147 kg/mile). The 2009 staff report on the mercury inventory in Bear Creek estimated a mass of 91 kg (5.7 kg/mile). This is about 26 times less than the upper 15 mile stretch of Cache Creek, and about 14½ times less than the lower 5 mile stretch of Cache Creek (Table 1 and Table 2).

Table 1: Mercury masses contained in the three creek segments of Cache Creek (2 segments) and Bear Creek

	Sediment volume (m^3)	**Mercury mass by grain size (kg)**			**Total mercury mass (kg)**
		Silt	Sand	Gravel	
16-mile stretch Bear Creek	75,000	46	37	8	91
15-mile stretch Cache Creek between Harley Gulch and Bear Creek	1,600,000	340	1,700	160	2,200
5-mile stretch Cache Creek between bear Creek and Rumsey	308,000	133	280	0	413

Table 2: Mercury mass per mile of stream bed

	Total mercury mass (kg)	**Unit mass of mercury (kg/mile)**
16-mile stretch Bear Creek	91	5.69
15-mile stretch Cache Creek between Harley Gulch and Bear Creek	2,200	147
5-mile stretch Cache Creek between bear Creek and Rumsey	413	82.6

The average mercury concentration in sediment in the 15 mile section of the canyon was 0.98, 0.77, and 0.89 ppm in silt, sand, and gravel sized material, respectively, compared to 1.84, 0.68, and 0.034 ppm in the 5 mile section, respectively. The silt had almost twice the concentration, while the concentration contained in sand was about 12 percent less. The concentration in gravel was only about 4½ percent of the concentration in the gravel upstream.

The average sediment mercury concentration in Bear Creek was distinguished upstream and downstream of the Sulphur Creek tributary input. The Sulphur Creek watershed contains geothermal springs which are very high in mercury concentration. The concentration in Bear Creek upstream of the confluence was 1.92, 1.40, and 0.17 ppm in silt, sand, and gravel, respectively and the downstream concentration was 16.7, 6.17, and 0.82 ppm in the respective grain size categories. Average downstream concentrations increased by 9, 4, and 5 fold in comparison. The upstream concentrations in Bear Creek more closely resemble the concentrations in both Cache Creek stretches (Table 3).

Table 3: Comparison of mercury concentrations in the three creek segments and upstream of Harley Gulch and Cache Creek confluence

	Average mercury concentrations (ppm)		
	Silt	**Sand**	**Gravel**
Cache Creek upstream of Harley Gulch	0.06	0.10	0.09
15-mile stretch Cache Creek between Harley Gulch and Bear Creek	0.98	0.77	0.89
Bear Creek upstream of Sulphur Creek tributary input	1.92	1.40	0.17
Bear Creek downstream of Sulphur Creek tributary input	16.67	6.17	0.82
5-mile stretch Cache Creek between bear Creek and Rumsey	1.84	0.68	0.03

Based on grain size analysis, 92.7 percent of the mercury in the 15 mile stretch between Harley Gulch and Bear Creek was contained in silt (15.4%) and sand (77.3%). Bear Creek is similar with 91.7% contained in silt (50.6%) and sand (41.1%). Almost all (99.8%) of the mercury by weight in the 5 mile section of Cache Creek canyon between Bear Creek and Rumsey is contained in the silt (32.1%) and sand (67.7%) material (Table 4). This smaller grain size material is transported continuously since the creek flows on a year-round basis. There is significantly more gravel sized material in the 15 mile stretch (7% versus 0.2% by weight), probably due to the steeper terrain and the presence of the mercury mines, where there is more deposits of mercury ore in the waste piles. This material is only mobilized and transported in the wash load during higher, more turbulent flow (Knighton, 1992).

Table 4: Comparison of distribution of mercury by percentage fraction of weight in the three creek segments

	Percent mercury by weight in sediment samples		
	Silt	**Sand**	**Gravel**
15-mile stretch Cache Creek between Harley Gulch and Bear Creek	15.4	77.3	7.3
Bear Creek	50.6	41.1	8.3
5-mile stretch Cache Creek between bear Creek and Rumsey	32.1	67.7	0.2

Conclusion

The mercury inventory in the Cache Creek canyon can be compared with the amount of mercury produced and lost in the watershed during mining. Historically, mercury mining was inefficient and up to 25 percent of the processed material may have been lost to the environment (Churchill, 1999). Major losses occurred in retort furnaces and calcine waste piles. Not all the lost material was transported to local creeks. Sulphur Bank mine in Clear Lake may be considered as an example. The mine is estimated to have produced about 4.7 million kg of mercury and about 0.1 million kg is now sequestered in lake sediment (Suchanek *et al*., 1995, 1997). If it is assumed that all the mercury lost to water now resides in Clear Lake, then about two percent of the total production was lost to the aquatic environment[5].

Mercury production from the Harley Gulch and Davis Creek watersheds is estimated to between 4.2 to 4.6 million kg (Lehrman, 1985; Churchill and Clinkenbeard, 2003). If one to two percent of their production was lost to the aquatic environment, then losses to Cache Creek would be between 42,000 and 84,000 kg of mercury. The inventory of mercury in the Bear Creek to Rumsey section of Cache Creek is 413 kg or 0.5 - 1 percent of this amount. Churchill and Clinkenbeard (2003) estimate that 51,000 to 53,000 kg of mercury remain in calcine piles in the Sulfur Creek mining district. The U.S. EPA CERCLA action is reported to have stabilized 400,000 cubic yards of mine waste at the Abbott Turkey Run mine complex in the Sulfur Creek mining district (USEPA Region 9, 2007). This may have prevented eventual off site movement of between 68,000 and 110,000 kg of mercury[6]. No estimate is available for the amount of mine waste at the Davis Creek mining complex. By comparison, the TMDL for the Bay-Delta estuary estimates that 240 kg per year are exported from the Cache Creek watershed (Wood *et al.,* 2006). While these calculations are estimates, they place the Cache Creek canyon mercury inventory in perspective.

[5] (100,000 kg lost/4,700,000 kg produced) x 100

[6] Average mercury content of Abbott and Turkey Run waste rock and mining tailing piles are between 143 and 238 ppm mercury (27 June 2006 letter from Iain Baker to Janet Yocum). This translates to between 68,000 and 110,000 kg of mercury in the 400,000 cubic yards of stabilized mine waste.

Cache Creek continues for approximately 43 miles after the town of Rumsey before discharging into the Cache Creek Settling Basin and the Yolo Bypass. Average sediment mercury concentrations in the Settling Basin range between 0.32 and 0.34 mg/L. This is 2 to 6 times less than the average concentration in mobile sediment (silt and sand) in the 5 mile stretch of the Cache Creek canyon between bear Creek and Rumsey. The decrease is attributed to influx of sediment with low mercury concentrations in creeks and sloughs on the Capay Valley floor (Foe and Croyle, 1998). These dilute sediment with higher mercury levels from the Cache Creek Canyon. Nonetheless, the concentrations in the Settling Basin are 3 to 5 times higher than occur in background material above the confluence of Harley Gulch.

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APPENDIX A

Figure A1: Map of Cache Creek showing sample locations and depositional areas

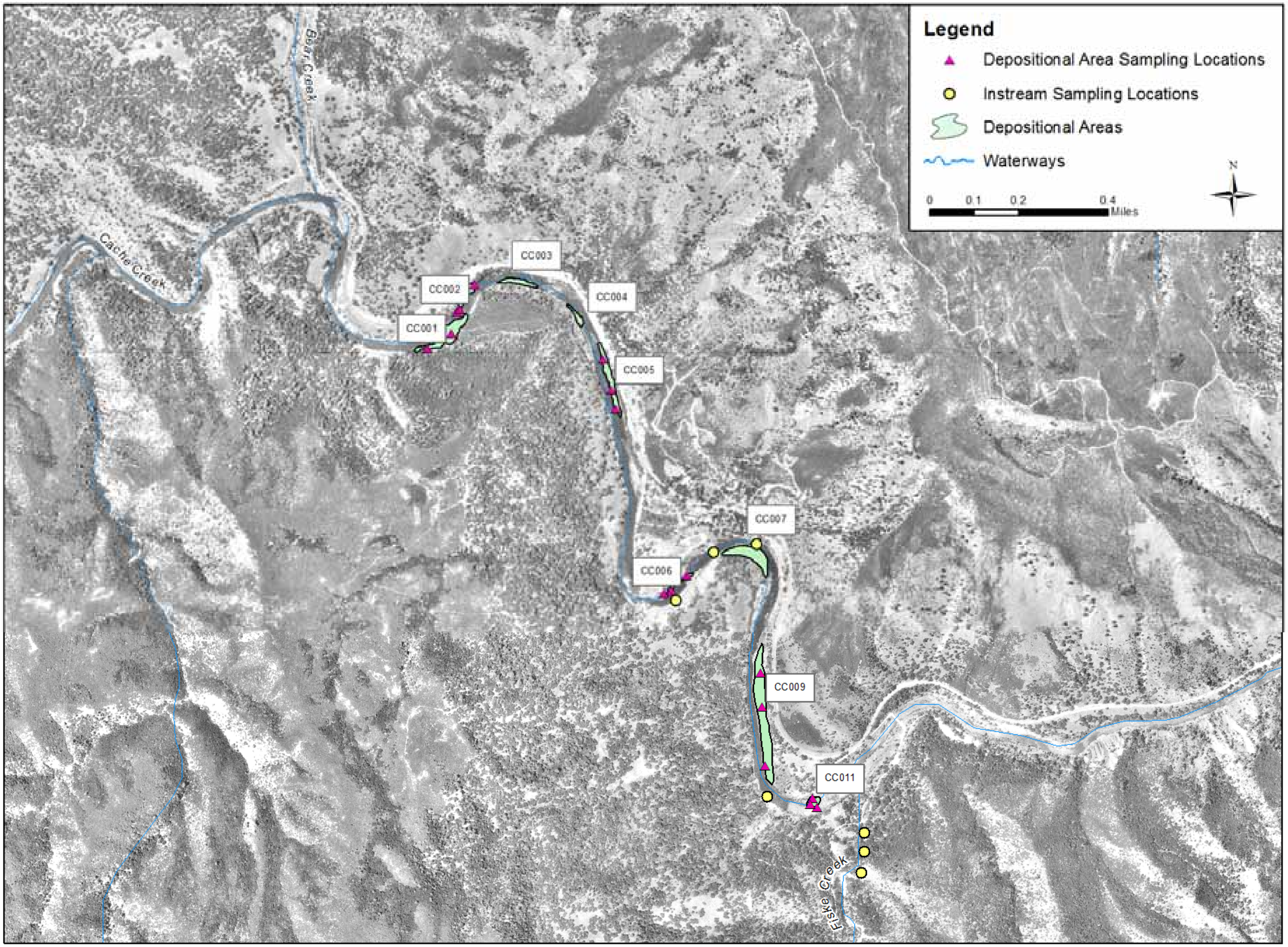
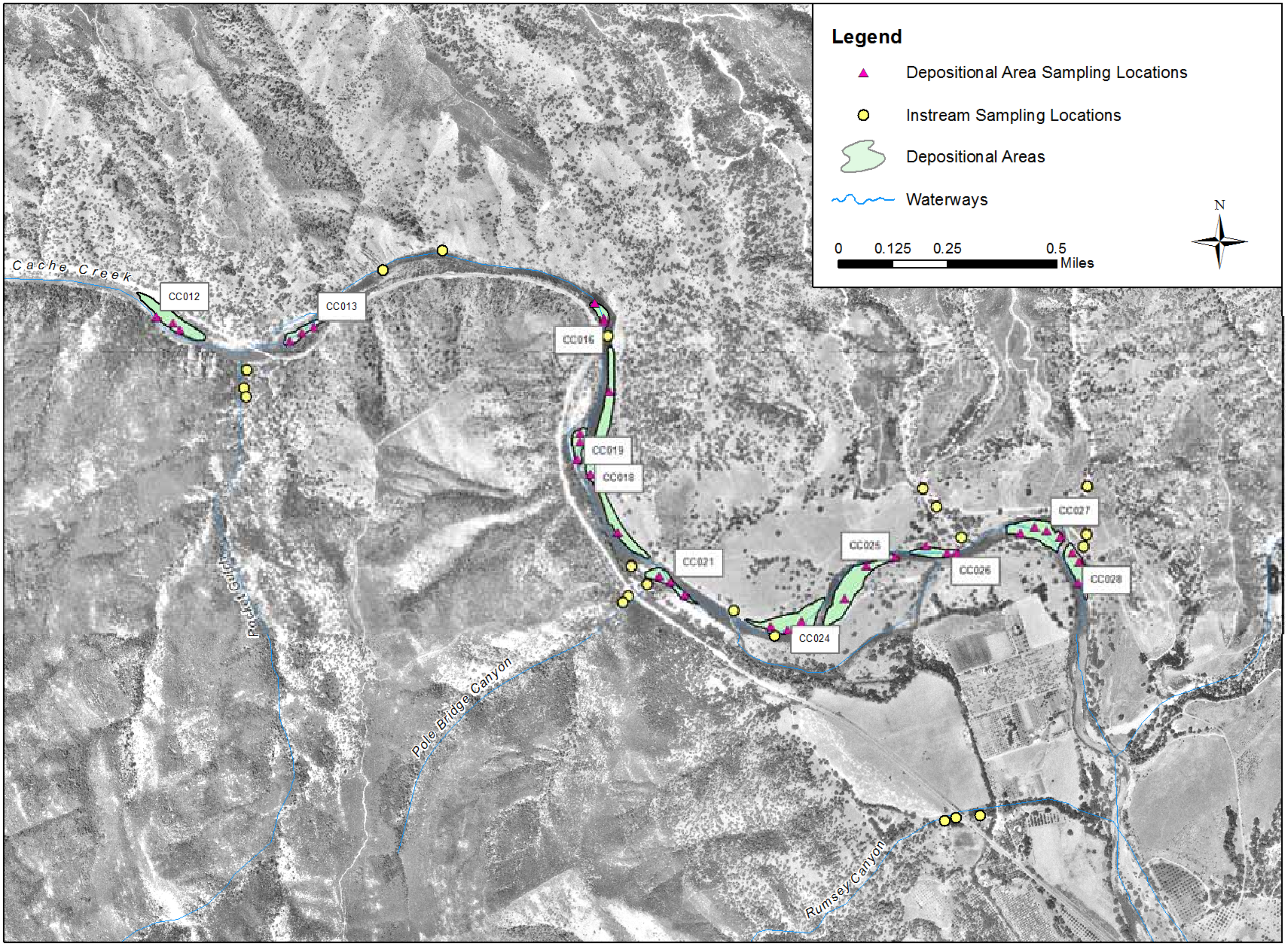


Figure A1: (continued)



APPENDIX B

Table B1: Inventory of mercury in sediment deposits in Cache Creek between confluence with Bear Creek and the town of Rumsey

Final depositional zone code	Upstream to downstream order	Depositional volume (m^3)	Depositional weight (kg)	Avg Hg concentration <63 µm (ppm)	Avg Hg concentration 63-1000 µm (ppm)	Avg Hg concentration 1000-3800 µm (ppm)	Avg Hg concentration >3800 µm (ppm)	Avg percent of total <63µm	Avg percent of total 63-1000µm	Avg percent of total 1000-3800µm	Avg percent of total >3800µm	THg weight <63µm (kg)	THg weight 63-1000µm (kg)	THg weight 1000-3800µm (kg)	THg weight >3800µm (kg)	Total Hg weight (kg)
CC001	1	15,250	23,331,751	1.46	0.07	0.04	0.02	7.90%	54.88%	17.70%	19.50%	2.696	0.858	0.153	0.071	**3.777**
CC002	2	8,615	13,180,403	2.02	0.21	0.04	0.04	7.32%	80.21%	8.10%	2.90%	1.952	2.252	0.038	0.015	**4.258**
CC003	3	4,279	6,546,549	1.77	0.62	0.04	0.09	10.23%	73.25%	13.85%	14.50%	1.183	2.977	0.035	0.082	**4.276**
CC004	4	2,423	3,706,565	1.77	0.62	0.04	0.09	10.23%	73.25%	13.85%	14.50%	0.670	1.686	0.020	0.046	**2.421**
CC005	5	4,623	7,072,556	1.51	1.03	0.04	0.13	13.13%	66.30%	19.60%	26.10%	1.402	4.823	0.057	0.244	**6.526**
CC006	6	1,943	2,972,727	4.10	0.31	0.00	0.00	7.53%	88.16%	0.00%	0.00%	0.917	0.825	0.000	0.000	**1.742**
CC007	7	13,803	21,117,840	2.93	1.62	0.00	0.00	12.49%	81.22%	0.00%	0.00%	7.743	27.750	0.000	0.000	**35.493**
CC009	8	19,428	29,724,536	1.77	2.92	0.66	0.00	17.46%	74.29%	0.00%	0.00%	9.197	64.501	0.000	0.000	**73.698**
CC011	9	2,236	3,421,055	4.89	0.33	0.01	0.02	7.61%	76.43%	24.20%	17.50%	1.273	0.860	0.009	0.010	**2.152**
CC012	10	21,469	32,846,948	0.88	0.56	0.07	0.00	34.53%	63.69%	0.50%	1.20%	10.001	11.638	0.012	0.000	**21.651**
CC013	11	22,042	33,724,196	0.62	0.26	0.00	0.00	28.41%	69.55%	0.00%	0.00%	5.970	6.051	0.000	0.000	**12.021**
CC016	12	5,650	8,644,523	1.30	0.09	0.07	0.01	14.62%	71.29%	13.10%	5.00%	1.648	0.553	0.084	0.004	**2.288**
CC018	13	41,411	63,358,884	1.82	1.02	0.00	0.00	31.35%	64.56%	0.00%	0.00%	36.235	41.531	0.000	0.000	**77.766**
CC019	14	8,417	12,877,421	1.72	0.09	0.00	0.00	18.30%	75.96%	0.20%	0.00%	4.056	0.880	0.000	0.000	**4.936**
CC021	15	9,234	14,128,730	1.98	1.28	0.00	0.00	13.97%	83.96%	0.00%	0.00%	3.901	15.153	0.000	0.000	**19.054**
CC024	16	28,230	43,192,279	1.99	0.25	0.00	0.00	15.66%	81.35%	0.00%	0.00%	13.450	8.726	0.000	0.000	**22.175**
CC025	17	35,368	54,113,098	0.73	0.28	0.00	0.00	28.83%	69.49%	0.00%	0.00%	11.363	10.429	0.000	0.000	**21.793**
CC026	18	8,905	13,624,343	2.28	0.26	0.01	0.01	15.80%	77.90%	8.20%	6.60%	4.900	2.756	0.015	0.012	**7.682**
CC027	19	35,838	54,832,452	1.15	1.80	0.00	0.00	17.77%	72.60%	0.00%	0.00%	11.180	71.551	0.000	0.000	**82.731**
CC028	20	19,094	29,214,138	1.18	0.18	0.00	0.00	8.30%	70.73%	0.00%	0.00%	2.860	3.816	0.000	0.000	**6.675**
Totals:												**132.6**	**279.6**	**0.4**	**0.5**	**413.1**

Table B2: Locations and concentrations of mercury in depositional piles

Upstream to downstream order	Sample code	Final sample code	Final depositional zone code	Description	Date	Latitude	Longitude	Hg concentration bulk (ppm)	Hg concentration <63µm (ppm)	Hg concentration 63 - 1000µm (ppm)	Hg concentration 1000 - 3800µm (ppm)	Hg concentration >3800µm (ppm)	Percent total <63µm	Percent total 63 - 1000µm	Percent total 1000 - 3800µm	Percent total >3800µm
1	CC001	CC001-A	CC001	Cache Ck Cyn Rumsey to Bear Ck	11/28/2006	38.92163	-122.32851		2.43	0.079	0.006	0.029	3.7%	23.5%	34.7%	38.1%
1	CC002	CC001-B	CC001	Cache Ck Cyn Rumsey to Bear Ck	11/28/2006	38.9221	-122.32749		0.493	0.055	0.068	0.002	12.2%	86.2%	0.7%	0.9%
2	CC003-A	CC002-A	CC002	Cache Ck Cyn Rumsey to Bear Ck	11/28/2006	38.92284	-122.32726		1.99	0.056	0.036	0.04	11.7%	77.3%	8.1%	2.9%
2	CC003-B	CC002-B	CC002	Cache Ck Cyn Rumsey to Bear Ck	3/20/2008	38.92374	-122.32662	0.763	2.06	0.31			5.7%	75.7%		
2	CC003-C	CC002-C	CC002	Cache Ck Cyn Rumsey to Bear Ck	3/20/2008	38.92288	-122.32719	1.04	2.02	0.273			4.6%	87.6%		
3	CC004-A	CC005-A	CC005	Cache Ck Cyn Rumsey to Bear Ck	11/28/2006	38.91982	-122.3206		2.37	0.068	0.041	0.132	10.4%	43.8%	19.6%	26.1%
3	CC004-B	CC005-B	CC005	Cache Ck Cyn Rumsey to Bear Ck	3/20/2008	38.92139	-122.32117	0.595	1.2	2.7			18.9%	68.0%		
3	CC004-C	CC005-C	CC005	Cache Ck Cyn Rumsey to Bear Ck	3/20/2008	38.92041	-122.32081	0.588	0.959	0.318			10.0%	87.0%		
4	CC111-A	CC006-A	CC006	Cache Ck Cyn Rumsey to Bear Ck	4/3/2008	38.91376	-122.31837	0.728	6.51	0.111			3.3%	91.0%		
4	CC111-B	CC006-B	CC006	Cache Ck Cyn Rumsey to Bear Ck	4/3/2008	38.91391	-122.31807	6.62	4.58	0.302			6.7%	89.8%		
4	CC111-C	CC006-C	CC006	Cache Ck Cyn Rumsey to Bear Ck	4/3/2008	38.91441	-122.31748	1.94	1.2	0.531			12.6%	83.7%		
5	CC005	CC007	na	Instream Sediment	11/28/2006	38.91516	-122.31635		3.47	0.049	0.026	0.002	8.2%	83.1%	7.0%	1.7%
6	CC006	CC008	na	Instream Sediment	11/28/2006	38.91546	-122.31457		0.083	0.054	1.29	0.002	10.5%	79.3%	5.0%	5.2%
7	CC103-B	CC009-B	CC009	Cache Ck Cyn Rumsey to Bear Ck	4/3/2008	38.90830	-122.31402	1.09	2.57	7.98			13.1%	73.5%		
7	CC103-C	CC009-C	CC009	Cache Ck Cyn Rumsey to Bear Ck	4/3/2008	38.91016	-122.31416	3.74	0.747	0.565			27.2%	63.9%		
7	CC103-D	CC009-D	CC009	Cache Ck Cyn Rumsey to Bear Ck	4/3/2008	38.91128	-122.31429	0.38	2	0.218			12.1%	85.5%		
8	CC008	CC010	na	Instream Sediment	11/28/2006	38.90733	-122.31387		0.528	0.14	0.027	0.005	18.6%	44.5%	5.9%	30.9%
9	CC009-A	CC009-A	CC011	Cache Ck Cyn Rumsey to Bear Ck	11/28/2006	38.90703	-122.31184		0.464	0.046	0.011	0.017	17.6%	40.8%	24.2%	17.5%
9	CC009-B	CC009-B	CC011	Cache Ck Cyn Rumsey to Bear Ck	3/20/2008	38.90727	-122.31201	0.288	5.05	0.799			3.5%	92.2%		
9	CC009-C	CC009-C	CC011	Cache Ck Cyn Rumsey to Bear Ck	3/20/2008	38.90712	-122.31213	0.534	9.16	0.142			1.7%	96.4%		
10	CC011-A	CC011-A	CC012	Cache Ck Cyn Rumsey to Bear Ck	11/28/2006	38.91079	-122.28249		0.105	0.098	0.071	ISM	59.5%	38.8%	0.5%	1.2%
10	CC011-D	CC011-D	CC012	Cache Ck Cyn Rumsey to Bear Ck	3/20/2008	38.91122	-122.28346	0.475	1.45	0.421			22.1%	75.7%		
10	CC011-F	CC011-F	CC012	Cache Ck Cyn Rumsey to Bear Ck	3/20/2008	38.91101	-122.28275	0.609	1.09	1.15			22.0%	76.6%		
11	CC104-A	CC104-A	CC013	Cache Ck Cyn Rumsey to Bear Ck	3/20/2008	38.91046	-122.27780	0.026	0.676	0.134			14.7%	83.0%		
11	CC104-B	CC104-B	CC013	Cache Ck Cyn Rumsey to Bear Ck	3/20/2008	38.91097	-122.27684	0.422	0.432	0.277			32.6%	64.3%		
11	CC104-C	CC104-C	CC013	Cache Ck Cyn Rumsey to Bear Ck	3/20/2008	38.91078	-122.27734	0.538	0.761	0.363			37.9%	61.3%		
12	CC014	CC014	na	Instream Sediment	11/28/2006	38.91293	-122.2739		0.701	0.068	0.021	0.002	14.2%	28.0%	32.8%	24.9%

Table B2: (continued)

Upstream to downstream order	Sample code	Final sample code	Final depositional zone code	Description	Date	Latitude	Longitude	Hg concentration bulk (ppm)	Hg concentration <63µm (ppm)	Hg concentration 63 - 1000µm (ppm)	Hg concentration 1000 - 3800µm (ppm)	Hg concentration >3800µm (ppm)	Percent total <63µm	Percent total 63 - 1000µm	Percent total 1000 - 3800µm	Percent total >3800µm
13	CC013	CC015	na	Instream Sediment	11/28/2006	38.91356	-122.27142		2.72	0.06	0.027	0.01	16.0%	43.9%	16.0%	24.1%
14	CC015-A	CC015-A	CC016	Cache Ck Cyn Rumsey to Bear Ck	11/28/2006	38.91147	-122.26454		0.221	0.069	0.074	0.01	31.6%	50.3%	13.1%	5.0%
14	CC015-B	CC015-B	CC016	Cache Ck Cyn Rumsey to Bear Ck	3/20/2008	38.91144	-122.26447	0.173	2.37	0.115			6.2%	89.8%		
14	CC015-C	CC015-C	CC016	Cache Ck Cyn Rumsey to Bear Ck	3/20/2008	38.91198	-122.26486	0.069	1.32	0.085			6.0%	73.8%		
15	CC016	CC017	na	Instream Sediment	11/28/2006	38.91087	-122.26431		1.76	0.056	0.084	0.012	4.7%	24.7%	29.0%	41.6%
16	CC105-C	CC105-C	CC018	Cache Ck Cyn Rumsey to Bear Ck	3/20/2008	38.90437	-122.26368	0.448	0.582	0.144			15.1%	78.4%		
16	CC105-E	CC105-E	CC018	Cache Ck Cyn Rumsey to Bear Ck	3/20/2008	38.90631	-122.26485	0.761	1.86	0.462			50.4%	46.0%		
16	CC105-G	CC105-G	CC018	Cache Ck Cyn Rumsey to Bear Ck	3/20/2008	38.90912	-122.26424	0.658	3.03	2.44			28.6%	69.3%		
17	CC017-A	CC017-A	CC019	Cache Ck Cyn Rumsey to Bear Ck	11/29/2006	38.90767	-122.26536		0.083	0.052	ISM	ISM	38.4%	61.4%	0.2%	0.0%
17	CC017-B	CC017-B	CC019	Cache Ck Cyn Rumsey to Bear Ck	3/18/2008	38.90743	-122.26543	0.628	3.35	0.068			5.4%	79.6%		
17	CC017-C	CC017-C	CC019	Cache Ck Cyn Rumsey to Bear Ck	3/18/2008	38.90678	-122.26552	0.323	1.73	0.15			11.1%	86.8%		
18	CC018	CC020	na	Instream Sediment	11/29/2006	38.90328	-122.2631		1.18	0.05	0.035	0.01	25.6%	62.7%	7.7%	4.0%
19	CC109-A	CC109-A	CC021	Cache Ck Cyn Rumsey to Bear Ck	3/18/2008	38.90244	-122.26083	0.656	3.2	0.415			4.0%	94.9%		
19	CC109-B	CC109-B	CC021	Cache Ck Cyn Rumsey to Bear Ck	3/18/2008	38.90278	-122.26137	0.764	1.24	0.247			15.8%	82.2%		
19	CC109-C	CC109-C	CC021	Cache Ck Cyn Rumsey to Bear Ck	3/18/2008	38.90300	-122.26194	0.343	1.49	3.17			22.2%	74.8%		
20	CC020	CC022	na	Instream Sediment	11/29/2006	38.90189	-122.25874		1.824	0.077	1.35	0.001	13.4%	73.6%	8.1%	4.9%
21	CC021	CC023	na	Instream Sediment	11/29/2006	38.90111	-122.2569		0.154	0.049	0.021	0.017	6.9%	31.4%	18.3%	43.4%
22	CC106-B	CC106-B	CC024	Cache Ck Cyn Rumsey to Bear Ck	3/18/2008	38.90141	-122.2571	0.192	2.51	0.081			5.6%	92.2%		
22	CC106-C	CC106-C	CC024	Cache Ck Cyn Rumsey to Bear Ck	3/18/2008	38.90129	-122.25639	3.74	0.855	0.389			29.8%	68.0%		
22	CC106-D	CC106-D	CC024	Cache Ck Cyn Rumsey to Bear Ck	3/18/2008	38.90161	-122.25578	0.296	2.6	0.275			11.6%	83.8%		
23	CC107-A	CC107-A	CC025	Cache Ck Cyn Rumsey to Bear Ck	3/18/2008	38.90377	-122.25189	0.139	1.3	0.183			4.4%	95.7%		
23	CC107-C	CC107-C	CC025	Cache Ck Cyn Rumsey to Bear Ck	3/18/2008	38.90353	-122.25314	0.638	0.73	0.27			39.3%	58.3%		
23	CC107-F	CC107-F	CC025	Cache Ck Cyn Rumsey to Bear Ck	3/18/2008	38.90244	-122.25395	0.479	0.155	0.379			42.8%	54.5%		
24	CC026-A	CC026-A	CC026	Cache Ck Cyn Rumsey to Bear Ck	11/29/2006	38.90399	-122.24931		2.39	0.057	0.013	0.013	22.5%	62.7%	8.2%	6.6%
24	CC026-E	CC026-E	CC026	Cache Ck Cyn Rumsey to Bear Ck	3/18/2008	38.90398	-122.24973	0.585	2.34	0.085			8.2%	88.6%		
24	CC026-F	CC026-F	CC026	Cache Ck Cyn Rumsey to Bear Ck	3/18/2008	38.90415	-122.25057	0.151	2.1	0.637			16.7%	82.3%		
25	CC024	CC025-B	CC027	Cache Ck Cyn Rumsey to Bear Ck	11/29/2006	38.90464	-122.24492		0.325	0.086	0.008	0.006	14.8%	53.1%	18.8%	13.3%

Table B2: (continued)

Upstream to downstream order	Sample code	Final sample code	Final depositional zone code	Description	Date	Latitude	Longitude	Hg concentration bulk (ppm)	Hg concentration <63µm (ppm)	Hg concentration 63 - 1000µm (ppm)	Hg concentration 1000 - 3800µm (ppm)	Hg concentration >3800µm (ppm)	Percent total <63µm	Percent total 63 - 1000µm	Percent total 1000 - 3800µm	Percent total >3800µm
25	CC025-A	CC025-A	CC027	Cache Ck Cyn Rumsey to Bear Ck	11/29/2006	38.90485	-122.24596		0.694	0.209	ISM	ISM	41.2%	58.8%		
25	CC025-D	CC025-D	CC027	Cache Ck Cyn Rumsey to Bear Ck	3/18/2008	38.90483	-122.24554	0.479	1.68	0.125			6.8%	90.0%		
25	CC025-G	CC025-G	CC027	Cache Ck Cyn Rumsey to Bear Ck	3/18/2008	38.90473	-122.24657	0.281	1.89	6.77			8.3%	88.4%		
26	CC108-B	CC108-B	CC028	Cache Ck Cyn Rumsey to Bear Ck	3/18/2008	38.90408	-122.24441	0.862	1.09	0.15			12.3%	61.3%		
26	CC108-C	CC108-C	CC028	Cache Ck Cyn Rumsey to Bear Ck	3/18/2008	38.90314	-122.24413	0.385	1.04	0.087			6.3%	89.5%		
26	CC108-D	CC108-D	CC028	Cache Ck Cyn Rumsey to Bear Ck	3/18/2008	38.90375	-122.24407	0.422	1.41	0.317			6.3%	61.4%		
erosion	CC007		na	Erosional Area	11/28/2006	38.91364	-122.31794		0.844	0.856	0.039	0.002	6.5%	54.6%	22.2%	16.7%
Trib	CC010-A	FC-01	na	Fiske Ck	11/28/2006	38.90616	-122.30981		0.051	0.06	0.058	0.053	32.6%	35.5%	16.6%	15.4%
Trib	CC010-B	FC-02	na	Fiske Ck	4/3/2008	38.90564	-122.30984	0.054	0.057	0.065			12.7%	60.1%		
Trib	CC010-C	FC-03	na	Fiske Ck	4/3/2008	38.90492	-122.30988	0.054	0.036	0.063			2.3%	42.8%		
Trib	CC012-A	PG-01	na	Pocket Gulch	11/28/2006	38.90948	-122.27959		0.036	0.04	0.047	0.024	28.1%	43.5%	11.6%	16.9%
Trib	CC012-B	PG-02	na	Pocket Gulch	4/3/2008	38.90886	-122.27967	0.06	0.026	0.021			4.6%	67.6%		
Trib	CC012-C	PG-03	na	Pocket Gulch	4/3/2008	38.90861	-122.27957	0.053	0.027	0.021			6.0%	84.4%		
Trib	CC019-A	PB-01	na	Pole Bridge Canyon	11/29/2006	38.90273	-122.26243		0.048	0.008	0.016	0.02	17.7%	58.1%	7.4%	16.8%
Trib	CC019-B	PB-02	na	Pole Bridge Canyon above Hwy 16	4/3/2008	38.90227	-122.26322	0.034	0.011	0.002			3.4%	87.3%		
Trib	CC019-C	PB-03	na	Pole Bridge Canyon above Hwy 16	4/3/2008	38.90214	-122.26340	0.037	0.015	0.002			5.3%	87.4%		
Trib	CC022-A	RC-01	na	Rumsey Canyon	11/29/2006	38.89522	-122.24901		0.043	0.023	0.036	0.022	15.1%	44.0%	17.7%	23.1%
Trib	CC022-B	RC-02	na	Rumsey Canyon	4/3/2008	38.89511	-122.24946	0.026	0.032	0.019			2.9%	79.5%		
Trib	CC022-C	RC-03	na	Rumsey Canyon	4/3/2008	38.89534	-122.24804	0.023	0.038	0.024			2.9%	72.3%		
Trib	CC023-A	T1-A	na	unnamed tributary	11/29/2006	38.90429	-122.24389		0.024	0.046	0.026	0.016	38.3%	35.0%	19.5%	28.0%
Trib	CC023-B	T1-B	na	unnamed tributary	4/3/2008	38.90474	-122.24377	0.038	0.033	0.046			5.4%	80.6%		
Trib	CC023-C	T1-C	na	unnamed tributary	4/3/2008	38.90630	-122.24382	0.036	0.029	0.044			7.9%	76.3%		
Trib	CC027-A	T2-A	na	unnamed tributary	11/29/2006	38.90445	-122.24911		0.025	0.035	0.012	0.002	43.3%	44.4%	4.7%	7.6%
Trib	CC027-B	T2-B	na	unnamed tributary	4/3/2008	38.90545	-122.25024	0.027	0.018	0.035			8.0%	82.0%		
Trib	CC027-C	T2-C	na	unnamed tributary	4/3/2008	38.90611	-122.25077	0.046	0.029	0.068			6.2%	66.9%		
				Main stem Cache Creek					1.8412	0.6767	0.0339					

Table B3: Year 2006 raw data Cache Creek canyon

Lab Number	Station Code	Station Name	Grainsize Fraction	Sample Type	Data Collected	Data Received	Batch Number	Hg dry wt (µg/g)*	Flag*
2007-5209	CC001	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	s	11/28/2006	12/11/2007	08 Dig 03 / f080130	2.43	
2007-5209	CC001	Cache Ck Cyn btw Rumsey and Bear Ck	>3800µm	s	11/28/2006	12/11/2007	08 Dig 03 / f080130	0.029	
2007-5209	CC001	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	s	11/28/2006	12/11/2007	08 Dig 03 / f080130	0.079	
2007-5209	CC001	Cache Ck Cyn btw Rumsey and Bear Ck	3800-1000µm	s	11/28/2006	12/11/2007	08 Dig 03 / f080130	**0.006**	**DNQ**
2007-5210	CC002	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	s	11/28/2006	12/11/2007	08 Dig 03 / f080130	0.493	
2007-5210	CC002	Cache Ck Cyn btw Rumsey and Bear Ck	>3800µm	s	11/28/2006	12/11/2007	08 Dig 03 / f080130	**<MDL**	**U**
2007-5210	CC002	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	s	11/28/2006	12/11/2007	08 Dig 03 / f080130	0.055	
2007-5210	CC002	Cache Ck Cyn btw Rumsey and Bear Ck	3800-1000µm	s	11/28/2006	12/11/2007	08 Dig 03 / f080130	0.068	
2007-5211	CC003	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	s	11/28/2006	12/11/2007	08 Dig 02 / f080130	1.99	
2007-5211	CC003	Cache Ck Cyn btw Rumsey and Bear Ck	>3800µm	s	11/28/2006	12/11/2007	08 Dig 02 / f080130	0.040	
2007-5211	CC003	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	s	11/28/2006	12/11/2007	08 Dig 02 / f080130	0.056	
2007-5211	CC003	Cache Ck Cyn btw Rumsey and Bear Ck	3800-1000µm	s	11/28/2006	12/11/2007	08 Dig 02 / f080130	0.036	
2007-5212	CC004	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	s	11/28/2006	12/11/2007	08 Dig 02 / f080130	2.37	
2007-5212	CC004	Cache Ck Cyn btw Rumsey and Bear Ck	>3800µm	s	11/28/2006	12/11/2007	08 Dig 02 / f080130	0.132	
2007-5212	CC004	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	s	11/28/2006	12/11/2007	08 Dig 02 / f080130	0.068	
2007-5212	CC004	Cache Ck Cyn btw Rumsey and Bear Ck	3800-1000µm	s	11/28/2006	12/11/2007	08 Dig 02 / f080130	0.041	
2007-5213	CC005	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	s	11/28/2006	12/11/2007	08 Dig 03 / f080130	3.47	
2007-5213	CC005	Cache Ck Cyn btw Rumsey and Bear Ck	>3800µm	s	11/28/2006	12/11/2007	08 Dig 03 / f080130	**<MDL**	**U**
2007-5213	CC005	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	s	11/28/2006	12/11/2007	08 Dig 03 / f080130	0.049	
2007-5213	CC005	Cache Ck Cyn btw Rumsey and Bear Ck	3800-1000µm	s	11/28/2006	12/11/2007	08 Dig 03 / f080130	0.026	
2007-5214	CC006	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	s	11/28/2006	12/11/2007	08 Dig 02 / f080130	0.083	
2007-5214	CC006	Cache Ck Cyn btw Rumsey and Bear Ck	>3800µm	s	11/28/2006	12/11/2007	08 Dig 02 / f080130	**<MDL**	**U**
2007-5214	CC006	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	s	11/28/2006	12/11/2007	08 Dig 02 / f080130	0.054	
2007-5214	CC006	Cache Ck Cyn btw Rumsey and Bear Ck	3800-1000µm	s	11/28/2006	12/11/2007	08 Dig 02 / f080130	1.29	
2007-5215	CC007	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	s	11/28/2006	12/11/2007	08 Dig 03 / f080130	0.844	
2007-5215	CC007	Cache Ck Cyn btw Rumsey and Bear Ck	>3800µm	s	11/28/2006	12/11/2007	08 Dig 03 / f080130	**<MDL**	**U**
2007-5215	CC007	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	s	11/28/2006	12/11/2007	08 Dig 03 / f080130	0.856	
2007-5215	CC007	Cache Ck Cyn btw Rumsey and Bear Ck	3800-1000µm	s	11/28/2006	12/11/2007	08 Dig 03 / f080130	0.039	
2007-5216	CC008	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	s	11/28/2006	12/11/2007	08 Dig 01 / f080130	0.528	
2007-5216	CC008	Cache Ck Cyn btw Rumsey and Bear Ck	>3800µm	s	11/28/2006	12/11/2007	08 Dig 01 / f080124	**0.005**	**DNQ**
2007-5216	CC008	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	s	11/28/2006	12/11/2007	08 Dig 01 / f080124	0.140	
2007-5216	CC008	Cache Ck Cyn btw Rumsey and Bear Ck	3800-1000µm	s	11/28/2006	12/11/2007	08 Dig 01 / f080124	0.027	

Table B3: (continued)

Lab Number	Station Code	Station Name	Grainsize Fraction	Sample Type	Data Collected	Data Received	Batch Number	Hg dry wt (µg/g)*	Flag*
2007-5217	CC009	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	s	11/28/2006	12/11/2007	08 Dig 03 / f080130	0.464	
2007-5217	CC009	Cache Ck Cyn btw Rumsey and Bear Ck	>3800µm	s	11/28/2006	12/11/2007	08 Dig 03 / f080130	0.017	
2007-5217	CC009	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	s	11/28/2006	12/11/2007	08 Dig 03 / f080130	0.046	
2007-5217	CC009	Cache Ck Cyn btw Rumsey and Bear Ck	3800-1000µm	s	11/28/2006	12/11/2007	08 Dig 03 / f080130	0.011	**DNQ**
2007-5218	CC010	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	s	11/28/2006	12/11/2007	08 Dig 04 / f080131	0.051	
2007-5218	CC010	Cache Ck Cyn btw Rumsey and Bear Ck	>3800µm	s	11/28/2006	12/11/2007	08 Dig 04 / f080131	0.053	
2007-5218	CC010	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	s	11/28/2006	12/11/2007	08 Dig 04 / f080131	0.060	
2007-5218	CC010	Cache Ck Cyn btw Rumsey and Bear Ck	3800-1000µm	s	11/28/2006	12/11/2007	08 Dig 04 / f080131	0.058	
2007-5219	CC011	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	s	11/28/2006	12/11/2007	08 Dig 04 / f080131	0.105	
2007-5219	CC011	Cache Ck Cyn btw Rumsey and Bear Ck	>3800µm	s	11/28/2006	12/11/2007		**ISM**	
2007-5219	CC011	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	s	11/28/2006	12/11/2007	08 Dig 04 / f080131	0.098	
2007-5219	CC011	Cache Ck Cyn btw Rumsey and Bear Ck	3800-1000µm	s	11/28/2006	12/11/2007	08 Dig 04 / f080131	0.071	
2007-5220	CC012	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	s	11/28/2006	12/11/2007	08 Dig 04 / f080131	0.036	
2007-5220	CC012	Cache Ck Cyn btw Rumsey and Bear Ck	>3800µm	s	11/28/2006	12/11/2007	7 Dig 04 / f080131	0.024	
2007-5220	CC012	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	s	11/28/2006	12/11/2007	08 Dig 04 / f080131	0.040	
2007-5220	CC012	Cache Ck Cyn btw Rumsey and Bear Ck	3800-1000µm	s	11/28/2006	12/11/2007	08 Dig 04 / f080131	0.047	
2007-5221	CC013	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	s	11/28/2006	12/11/2007	08 Dig 01 / f080124	2.72	
2007-5221	CC013	Cache Ck Cyn btw Rumsey and Bear Ck	>3800µm	s	11/28/2006	12/11/2007	08 Dig 01 / f080124	0.010	**DNQ**
2007-5221	CC013	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	s	11/28/2006	12/11/2007	08 Dig 01 / f080124	0.060	
2007-5221	CC013	Cache Ck Cyn btw Rumsey and Bear Ck	3800-1000µm	s	11/28/2006	12/11/2007	08 Dig 01 / f080124	0.027	
2007-5222	CC014	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	s	11/28/2006	12/11/2007	08 Dig 04 / f080131	0.701	
2007-5222	CC014	Cache Ck Cyn btw Rumsey and Bear Ck	>3800µm	s	11/28/2006	12/11/2007	08 Dig 04 / f080131	**<MDL**	**U**
2007-5222	CC014	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	s	11/28/2006	12/11/2007	08 Dig 04 / f080131	0.068	
2007-5222	CC014	Cache Ck Cyn btw Rumsey and Bear Ck	3800-1000µm	s	11/28/2006	12/11/2007	08 Dig 04 / f080131	0.021	
2007-5223	CC015	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	s	11/28/2006	12/11/2007	08 Dig 02 / f080130	0.221	
2007-5223	CC015	Cache Ck Cyn btw Rumsey and Bear Ck	>3800µm	s	11/28/2006	12/11/2007	08 Dig 02 / f080130	**0.010**	**DNQ**
2007-5223	CC015	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	s	11/28/2006	12/11/2007	08 Dig 02 / f080130	0.069	
2007-5223	CC015	Cache Ck Cyn btw Rumsey and Bear Ck	3800-1000µm	s	11/28/2006	12/11/2007	08 Dig 02 / f080130	0.074	
2007-5224	CC016	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	s	11/28/2006	12/11/2007	08 Dig 02 / f080130	1.76	
2007-5224	CC016	Cache Ck Cyn btw Rumsey and Bear Ck	>3800µm	s	11/28/2006	12/11/2007	08 Dig 02 / f080130	0.012	**DNQ**
2007-5224	CC016	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	s	11/28/2006	12/11/2007	08 Dig 02 / f080130	0.056	
2007-5224	CC016	Cache Ck Cyn btw Rumsey and Bear Ck	3800-1000µm	s	11/28/2006	12/11/2007	08 Dig 02 / f080130	0.084	

Table B3: (continued)

Lab Number	Station Code	Station Name	Grainsize Fraction	Sample Type	Data Collected	Data Received	Batch Number	Hg dry wt (µg/g)*	Flag*
2007-5225	CC017	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	s	11/29/2006	12/11/2007	08 Dig 04 / f080131	0.083	
2007-5225	CC017	Cache Ck Cyn btw Rumsey and Bear Ck	>3800µm	s	11/29/2006	12/11/2007		**ISM**	
2007-5225	CC017	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	s	11/29/2006	12/11/2007	08 Dig 04 / f080131	0.052	
2007-5225	CC017	Cache Ck Cyn btw Rumsey and Bear Ck	3800-1000µm	s	11/29/2006	12/11/2007		**ISM**	
2007-5226	CC018	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	s	11/29/2006	12/11/2007	08 Dig 01 / f080124	1.18	
2007-5226	CC018	Cache Ck Cyn btw Rumsey and Bear Ck	>3800µm	s	11/29/2006	12/11/2007	08 Dig 01 / f080124	0.010	**DNQ**
2007-5226	CC018	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	s	11/29/2006	12/11/2007	08 Dig 01 / f080124	0.050	
2007-5226	CC018	Cache Ck Cyn btw Rumsey and Bear Ck	3800-1000µm	s	11/29/2006	12/11/2007	08 Dig 01 / f080124	0.035	
2007-5227	CC019	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	s	11/29/2006	12/11/2007	08 Dig 05 / f080201	0.048	
2007-5227	CC019	Cache Ck Cyn btw Rumsey and Bear Ck	>3800µm	s	11/29/2006	12/11/2007	08 Dig 05 / f080201	0.020	
2007-5227	CC019	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	s	11/29/2006	12/11/2007	08 Dig 05 / f080201	**0.008**	**DNQ**
2007-5227	CC019	Cache Ck Cyn btw Rumsey and Bear Ck	3800-1000µm	s	11/29/2006	12/11/2007	08 Dig 05 / f080201	0.016	
2007-5228	CC020	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	s	11/29/2006	12/11/2007	08 Dig 01 / f080124	1.824	
2007-5228	CC020	Cache Ck Cyn btw Rumsey and Bear Ck	>3800µm	s	11/29/2006	12/11/2007	08 Dig 01 / f080124	0.001	
2007-5228	CC020	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	s	11/29/2006	12/11/2007	08 Dig 01 / f080124	0.077	
2007-5228	CC020	Cache Ck Cyn btw Rumsey and Bear Ck	3800-1000µm	s	11/29/2006	12/11/2007	08 Dig 01 / f080130	1.35	
2007-5229	CC021	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	s	11/29/2006	12/11/2007	08 Dig 05 / f080201	0.154	
2007-5229	CC021	Cache Ck Cyn btw Rumsey and Bear Ck	>3800µm	s	11/29/2006	12/11/2007	08 Dig 05 / f080201	0.017	
2007-5229	CC021	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	s	11/29/2006	12/11/2007	08 Dig 05 / f080201	0.049	
2007-5229	CC021	Cache Ck Cyn btw Rumsey and Bear Ck	3800-1000µm	s	11/29/2006	12/11/2007	08 Dig 05 / f080201	0.021	
2007-5230	CC022	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	s	11/29/2006	12/11/2007	08 Dig 05 / f080201	0.043	
2007-5230	CC022	Cache Ck Cyn btw Rumsey and Bear Ck	>3800µm	s	11/29/2006	12/11/2007	08 Dig 05 / f080201	0.022	
2007-5230	CC022	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	s	11/29/2006	12/11/2007	08 Dig 05 / f080201	0.023	
2007-5230	CC022	Cache Ck Cyn btw Rumsey and Bear Ck	3800-1000µm	s	11/29/2006	12/11/2007	08 Dig 05 / f080201	0.036	
2007-5231	CC023	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	s	11/29/2006	12/11/2007	08 Dig 01 / f080130	0.024	
2007-5231	CC023	Cache Ck Cyn btw Rumsey and Bear Ck	>3800µm	s	11/29/2006	12/11/2007	08 Dig 01 / f080124	0.016	
2007-5231	CC023	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	s	11/29/2006	12/11/2007	08 Dig 01 / f080124	0.046	
2007-5231	CC023	Cache Ck Cyn btw Rumsey and Bear Ck	3800-1000µm	s	11/29/2006	12/11/2007	08 Dig 01 / f080124	0.026	
2007-5232	CC024	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	s	11/29/2006	12/11/2007	08 Dig 06 / f080201	0.325	
2007-5232	CC024	Cache Ck Cyn btw Rumsey and Bear Ck	>3800µm	s	11/29/2006	12/11/2007	08 Dig 06 / f080201	**0.006**	**DNQ**
2007-5232	CC024	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	s	11/29/2006	12/11/2007	08 Dig 06 / f080201	0.086	
2007-5232	CC024	Cache Ck Cyn btw Rumsey and Bear Ck	3800-1000µm	s	11/29/2006	12/11/2007	08 Dig 06 / f080201	**0.008**	**DNQ**

Table B3: (continued)

Lab Number	Station Code	Station Name	Grainsize Fraction	Sample Type	Data Collected	Data Received	Batch Number	Hg dry wt (µg/g)*	Flag*
2007-5233	CC025	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	s	11/29/2006	12/11/2007	08 Dig 06 / f080201	0.694	
2007-5233	CC025	Cache Ck Cyn btw Rumsey and Bear Ck	>3800µm	s	11/29/2006	12/11/2007		**ISM**	
2007-5233	CC025	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	s	11/29/2006	12/11/2007	08 Dig 06 / f080201	0.209	
2007-5233	CC025	Cache Ck Cyn btw Rumsey and Bear Ck	3800-1000µm	s	11/29/2006	12/11/2007		**ISM**	
2007-5234	CC026	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	s	11/29/2006	12/11/2007	08 Dig 05 / f080201	2.39	
2007-5234	CC026	Cache Ck Cyn btw Rumsey and Bear Ck	>3800µm	s	11/29/2006	12/11/2007	08 Dig 05 / f080201	**0.013**	**DNQ**
2007-5234	CC026	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	s	11/29/2006	12/11/2007	08 Dig 05 / f080201	0.057	
2007-5234	CC026	Cache Ck Cyn btw Rumsey and Bear Ck	3800-1000µm	s	11/29/2006	12/11/2007	08 Dig 05 / f080201	**0.013**	**DNQ**
2007-5235	CC027	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	s	11/29/2006	12/11/2007	08 Dig 05 / f080201	0.025	
2007-5235	CC027	Cache Ck Cyn btw Rumsey and Bear Ck	>3800µm	s	11/29/2006	12/11/2007	08 Dig 05 / f080201	**<MDL**	**U**
2007-5235	CC027	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	s	11/29/2006	12/11/2007	08 Dig 05 / f080201	0.035	
2007-5235	CC027	Cache Ck Cyn btw Rumsey and Bear Ck	3800-1000µm	s	11/29/2006	12/11/2007	08 Dig 05 / f080201	**0.012**	**DNQ**

* **MDL:** 0.004 µg/g; **RL:** 0.013 µg/g; **U:** sample less than MDL; **DNQ:** sample detected, but not quatifiable, less than RL; **ISM:** insufficient mass for analysis

Table B4: Year 2008 raw data Cache Creek canyon and tributaries

Lab Number	Station Name	Grain Size	Station Number	Sample Type	Date Collected	Date Received	Batch Number	Percent Moisture	Hg dry wt (µg/g)*
2008-2408	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC003-B	Sediment	3/18/2008	7/3/2008	09Dig3/ f090205	n/a	2.06
2008-2408	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC003-B	Sediment	3/20/2008	7/3/2008	09Dig6/ f090211	n/a	0.310
2008-2408	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC003-B	Sediment	3/20/2008	7/3/2008	08Dig41/ f081020	5.42	0.763
2008-2409	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC003-C	Sediment	3/18/2008	7/3/2008	09Dig3/ f090205	n/a	2.02
2008-2409	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC003-C	Sediment	3/20/2008	7/3/2008	09Dig6/ f090211	n/a	0.273
2008-2409	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC003-C	Sediment	3/20/2008	7/3/2008	08Dig41/ f081020	n/a	1.04
2008-2410	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC004-B	Sediment	3/20/2008	7/3/2008	09Dig4/ f090205	n/a	1.20
2008-2410	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC004-B	Sediment	3/20/2008	7/3/2008	09Dig7/ f090227	n/a	2.70
2008-2410	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC004-B	Sediment	3/20/2008	7/3/2008	08Dig42/ f081021	n/a	0.595
2008-2411	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC004-C	Sediment	3/20/2008	7/3/2008	09Dig4/ f090205	n/a	0.959
2008-2411	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC004-C	Sediment	3/20/2008	7/3/2008	09Dig7/ f090227	n/a	0.318
2008-2411	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC004-C	Sediment	3/20/2008	7/3/2008	08Dig42/ f081021	11.76	0.588
2008-2412	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC009-B	Sediment	3/20/2008	7/3/2008	09Dig4/ f090205	n/a	5.05
2008-2412	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC009-B	Sediment	3/20/2008	7/3/2008	09Dig7/ f090211	n/a	0.799
2008-2412	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC009-B	Sediment	3/20/2008	7/3/2008	08Dig42/ f081021	n/a	0.288
2008-2413	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC009-C	Sediment	3/20/2008	7/3/2008	09Dig4/ f090205	n/a	9.16
2008-2413	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC009-C	Sediment	3/20/2008	7/3/2008	09Dig7/ f090211	n/a	0.142
2008-2413	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC009-C	Sediment	3/20/2008	7/3/2008	08Dig42/ f081021	n/a	0.534
2008-2424	Fiske Ck	<63µm	CC010-B	Sediment	4/3/2008	7/3/2008	09Dig4/ f090205	n/a	0.057
2008-2424	Fiske Ck	1000-63µm	CC010-B	Sediment	4/3/2008	7/3/2008	09Dig7/ f090211	n/a	0.065
2008-2424	Fiske Ck	bulk	CC010-B	Sediment	4/3/2008	7/3/2008	08Dig42/ f081021	20.23	0.054
2008-2425	Fiske Ck	<63µm	CC010-C	Sediment	4/3/2008	7/3/2008	09Dig4/ f090205	n/a	0.036
2008-2425	Fiske Ck	1000-63µm	CC010-C	Sediment	4/3/2008	7/3/2008	09Dig7/ f090211	n/a	0.063
2008-2425	Fiske Ck	bulk	CC010-C	Sediment	4/3/2008	7/3/2008	08Dig42/ f081021	n/a	0.054
2008-2414	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC011-D	Sediment	3/20/2008	7/3/2008	09Dig4/ f090205	n/a	1.45
2008-2414	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC011-D	Sediment	3/20/2008	7/3/2008	09Dig7/ f090211	n/a	0.421
2008-2414	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC011-D	Sediment	3/20/2008	7/3/2008	08Dig42/ f081021	n/a	0.475
2008-2415	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC011-F	Sediment	3/20/2008	7/3/2008	09Dig4/ f090205	n/a	1.09
2008-2415	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC011-F	Sediment	3/20/2008	7/3/2008	09Dig7/ f090211	n/a	1.15
2008-2415	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC011-F	Sediment	3/20/2008	7/3/2008	08Dig42/ f081021	n/a	0.609

Table B4: (continued)

Lab Number	Station Name	Grain Size	Station Number	Sample Type	Date Collected	Date Received	Batch Number	Percent Moisture	Hg dry wt (µg/g)*
2008-2426	unnamed tributary	<63µm	CC012-B	Sediment	4/3/2008	7/3/2008	09Dig4/ f090205	n/a	0.026
2008-2426	unnamed tributary	1000-63µm	CC012-B	Sediment	4/3/2008	7/3/2008	09Dig7/ f090211	n/a	0.021
2008-2426	unnamed tributary	bulk	CC012-B	Sediment	4/3/2008	7/3/2008	08Dig42/ f081021	12.65	0.060
2008-2427	unnamed tributary	<63µm	CC012-C	Sediment	4/3/2008	7/3/2008	09Dig4/ f090205	n/a	0.027
2008-2427	unnamed tributary	1000-63µm	CC012-C	Sediment	4/3/2008	7/3/2008	09Dig7/ f090211	n/a	0.021
2008-2427	unnamed tributary	bulk	CC012-C	Sediment	4/3/2008	7/3/2008	08Dig42/ f081021	21.82	0.053
2008-2416	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC015-B	Sediment	3/20/2008	7/3/2008	09Dig4/ f090205	n/a	2.37
2008-2416	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC015-B	Sediment	3/20/2008	7/3/2008	09Dig7/ f090211	n/a	0.115
2008-2416	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC015-B	Sediment	3/20/2008	7/3/2008	08Dig42/ f081021	n/a	0.173
2008-2417	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC015-C	Sediment	3/20/2008	7/3/2008	09Dig4/ f090205	n/a	1.32
2008-2417	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC015-C	Sediment	3/20/2008	7/3/2008	09Dig7/ f090211	n/a	0.085
2008-2417	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC015-C	Sediment	3/20/2008	7/3/2008	08Dig42/ f081021	n/a	0.069
2008-2390	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC017-B	Sediment	3/18/2008	7/3/2008	09Dig6/ f090211	n/a	0.068
2008-2390	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC017-B	Sediment	3/18/2008	7/3/2008	09Dig3/ f090205	n/a	3.35
2008-2390	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC017-B	Sediment	3/18/2008	7/3/2008	08Dig41/ f081020	n/a	0.628
2008-2391	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC017-C	Sediment	3/18/2008	7/3/2008	09Dig3/ f090205	n/a	1.73
2008-2391	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC017-C	Sediment	3/18/2008	7/3/2008	09Dig6/ f090211	n/a	0.150
2008-2391	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC017-C	Sediment	3/18/2008	7/3/2008	08Dig41/ f081020	n/a	0.323
2008-2428	Pole Bridge Canyon above Hwy 16	<63µm	CC019-B	Sediment	4/3/2008	7/3/2008	09Dig4/ f090205	n/a	0.011
2008-2428	Pole Bridge Canyon above HWY 16	1000-63µm	CC019-B	Sediment	4/3/2008	7/3/2008	09Dig7/ f090211	n/a	<MDL
2008-2428	Pole Bridge Canyon above Hwy 16	bulk	CC019-B	Sediment	4/3/2008	7/3/2008	08Dig42/ f081021	n/a	0.034
2008-2429	Pole Bridge Canyon above Hwy 16	<63µm	CC019-C	Sediment	4/3/2008	7/3/2008	09Dig4/ f090205	n/a	0.015
2008-2429	Pole Bridge Canyon above HWY 16	1000-63µm	CC019-C	Sediment	4/3/2008	7/3/2008	09Dig7/ f090211	n/a	<MDL
2008-2429	Pole Bridge Canyon above Hwy 16	bulk	CC019-C	Sediment	4/3/2008	7/3/2008	08Dig42/ f081021	n/a	0.037
2008-2430	Rumsey Canyon	<63µm	CC022-B	Sediment	4/3/2008	7/3/2008	09Dig5/ f090206	n/a	0.032
2008-2430	Rumsey Canyon	1000-63µm	CC022-B	Sediment	4/3/2008	7/3/2008	09Dig5/ f090211	n/a	0.019
2008-2430	Rumsey Canyon	bulk	CC022-B	Sediment	4/3/2008	7/3/2008	08Dig43/ f081022	n/a	0.026
2008-2431	Rumsey Canyon	<63µm	CC022-C	Sediment	4/3/2008	7/3/2008	09Dig5/ f090206	n/a	0.038
2008-2431	Rumsey Canyon	1000-63µm	CC022-C	Sediment	4/3/2008	7/3/2008	09Dig5/ f090211	n/a	0.024
2008-2431	Rumsey Canyon	bulk	CC022-C	Sediment	4/3/2008	7/3/2008	08Dig43/ f081022	n/a	0.023

Table B4: (continued)

Lab Number	Station Name	Grain Size	Station Number	Sample Type	Date Collected	Date Received	Batch Number	Percent Moisture	Hg dry wt (µg/g)*
2008-2432	unnamed tributary	<63µm	CC023-B	Sediment	4/3/2008	7/3/2008	09Dig5/ f090206	n/a	0.033
2008-2432	unnamed tributary	1000-63µm	CC023-B	Sediment	4/3/2008	7/3/2008	09Dig5/ f090211	n/a	0.046
2008-2432	unnamed tributary	bulk	CC023-B	Sediment	4/3/2008	7/3/2008	08Dig43/ f081022	n/a	0.038
2008-2433	unnamed tributary	<63µm	CC023-C	Sediment	4/3/2008	7/3/2008	09Dig5/ f090206	n/a	0.029
2008-2433	unnamed tributary	1000-63µm	CC023-C	Sediment	4/3/2008	7/3/2008	09Dig5/ f090211	n/a	0.044
2008-2433	unnamed tributary	bulk	CC023-C	Sediment	4/3/2008	7/3/2008	08Dig43/ f081021	n/a	0.036
2008-2392	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC025-D	Sediment	3/18/2008	7/3/2008	09Dig3/ f090205	n/a	1.68
2008-2392	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC025-D	Sediment	3/18/2008	7/3/2008	09Dig6/ f090211	n/a	0.125
2008-2392	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC025-D	Sediment	3/18/2008	7/3/2008	08Dig41/ f081020	n/a	0.479
2008-2393	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC025-G	Sediment	3/18/2008	7/3/2008	09Dig3/ f090205	n/a	1.89
2008-2393	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC025-G	Sediment	3/18/2008	7/3/2008	09Dig6/ f090211	n/a	6.77
2008-2393	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC025-G	Sediment	3/18/2008	7/3/2008	08Dig41/ f081020	n/a	0.281
2008-2394	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC026-E	Sediment	3/18/2008	7/3/2008	09Dig3/ f090205	n/a	2.34
2008-2394	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC026-E	Sediment	3/18/2008	7/3/2008	09Dig6/ f090211	n/a	0.085
2008-2394	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC026-E	Sediment	3/18/2008	7/3/2008	08Dig41/ f081020	n/a	0.585
2008-2395	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC026-F	Sediment	3/18/2008	7/3/2008	09Dig3/ f090205	n/a	2.10
2008-2395	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC026-F	Sediment	3/18/2008	7/3/2008	09Dig6/ f090211	n/a	0.637
2008-2395	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC026-F	Sediment	3/18/2008	7/3/2008	08Dig41/ f081020	14.94	0.151
2008-2434	unnamed tributary	<63µm	CC027-B	Sediment	4/3/2008	7/3/2008	09Dig5/ f090206	n/a	0.018
2008-2434	unnamed tributary	1000-63µm	CC027-B	Sediment	4/3/2008	7/3/2008	09Dig5/ f090211	n/a	0.035
2008-2434	unnamed tributary	bulk	CC027-B	Sediment	4/3/2008	7/3/2008	08Dig43/ f081021	n/a	0.027
2008-2435	unnamed tributary	<63µm	CC027-C	Sediment	4/3/2008	7/3/2008	09Dig5/ f090211	n/a	0.029
2008-2435	unnamed tributary	1000-63µm	CC027-C	Sediment	4/3/2008	7/3/2008	09Dig5/ f090211	n/a	0.068
2008-2435	unnamed tributary	bulk	CC027-C	Sediment	4/3/2008	7/3/2008	08Dig43/ f081022	n/a	0.046
2008-2436	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC103-B	Sediment	4/3/2008	7/3/2008	09Dig5/ f090211	n/a	2.57
2008-2436	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC103-B	Sediment	4/3/2008	7/3/2008	09Dig5/ f090211	n/a	7.98
2008-2436	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC103-B	Sediment	4/3/2008	7/3/2008	08Dig43/ f081021	n/a	1.09
2008-2437	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC103-C	Sediment	4/3/2008	7/3/2008	09Dig5/ f090206	n/a	0.747
2008-2437	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC103-C	Sediment	4/3/2008	7/3/2008	09Dig5/ f090206	n/a	0.565
2008-2437	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC103-C	Sediment	4/3/2008	7/3/2008	08Dig43/ f081022	n/a	3.74

Table B4: (continued)

Lab Number	Station Name	Grain Size	Station Number	Sample Type	Date Collected	Date Received	Batch Number	Percent Moisture	Hg dry wt (µg/g)*
2008-2438	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC103-D	Sediment	4/3/2008	7/3/2008	09Dig5/ f090206	n/a	2.00
2008-2438	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC103-D	Sediment	4/3/2008	7/3/2008	09Dig19/ f090320	n/a	0.218
2008-2438	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC103-D	Sediment	4/3/2008	7/3/2008	08Dig43/ f081021	n/a	0.380
2008-2418	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC104-A	Sediment	3/20/2008	7/3/2008	09Dig4/ f090205	n/a	0.676
2008-2418	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC104-A	Sediment	3/20/2008	7/3/2008	09Dig7/ f090211	n/a	0.134
2008-2418	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC104-A	Sediment	3/20/2008	7/3/2008	08Dig42/ f081021	n/a	0.026
2008-2419	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC104-B	Sediment	3/20/2008	7/3/2008	09Dig4/ f090205	n/a	0.432
2008-2419	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC104-B	Sediment	3/20/2008	7/3/2008	09Dig7/ f090211	n/a	0.277
2008-2419	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC104-B	Sediment	3/20/2008	7/3/2008	08Dig42/ f081021	n/a	0.422
2008-2420	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC104-C	Sediment	3/20/2008	7/3/2008	09Dig4/ f090205	n/a	0.761
2008-2420	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC104-C	Sediment	3/20/2008	7/3/2008	09Dig7/ f090211	n/a	0.363
2008-2420	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC104-C	Sediment	3/20/2008	7/3/2008	08Dig42/ f081021	n/a	0.538
2008-2421	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC105-C	Sediment	3/20/2008	7/3/2008	09Dig4/ f090205	n/a	0.582
2008-2421	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC105-C	Sediment	3/20/2008	7/3/2008	09Dig7/ f090211	n/a	0.144
2008-2421	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC105-C	Sediment	3/20/2008	7/3/2008	08Dig42/ f081021	n/a	0.448
2008-2422	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC105-E	Sediment	3/20/2008	7/3/2008	09Dig4/ f090205	n/a	1.86
2008-2422	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC105-E	Sediment	3/20/2008	7/3/2008	09Dig7/ f090211	n/a	0.462
2008-2422	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC105-E	Sediment	3/20/2008	7/3/2008	08Dig42/ f081021	n/a	0.761
2008-2423	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC105-G	Sediment	3/20/2008	7/3/2008	09Dig4/ f090205	n/a	3.03
2008-2423	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC105-G	Sediment	3/20/2008	7/3/2008	09Dig7/ f090211	n/a	2.44
2008-2423	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC105-G	Sediment	3/20/2008	7/3/2008	08Dig42/ f081021	n/a	0.658
2008-2396	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC106-B	Sediment	3/18/2008	7/3/2008	09Dig3/ f090205	n/a	2.51
2008-2396	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC106-B	Sediment	3/18/2008	7/3/2008	09Dig6/ f090211	n/a	0.081
2008-2396	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC106-B	Sediment	3/18/2008	7/3/2008	08Dig41/ f081020	n/a	0.192
2008-2397	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC106-C	Sediment	3/18/2008	7/3/2008	09Dig3/ f090204	n/a	0.855
2008-2397	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC106-C	Sediment	3/18/2008	7/3/2008	09Dig6/ f090211	n/a	0.389
2008-2397	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC106-C	Sediment	3/18/2008	7/3/2008	08Dig41/ f081020	n/a	3.74
2008-2398	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC106-D	Sediment	3/18/2008	7/3/2008	09Dig3/ f090205	n/a	2.60
2008-2398	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC106-D	Sediment	3/18/2008	7/3/2008	09Dig6/ f090211	n/a	0.275
2008-2398	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC106-D	Sediment	3/18/2008	7/3/2008	08Dig41/ f081020	n/a	0.296

Table B4: (continued)

Lab Number	Station Name	Grain Size	Station Number	Sample Type	Date Collected	Date Received	Batch Number	Percent Moisture	Hg dry wt (µg/g)*
2008-2399	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC107-A	Sediment	3/18/2008	7/3/2008	09Dig3/ f090204	n/a	1.30
2008-2399	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC107-A	Sediment	3/18/2008	7/3/2008	09Dig6/ f090211	n/a	0.183
2008-2399	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC107-A	Sediment	3/18/2008	7/3/2008	08Dig41/ f081020	n/a	0.139
2008-2400	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC107-C	Sediment	3/18/2008	7/3/2008	09Dig3/ f090204	n/a	0.730
2008-2400	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC107-C	Sediment	3/18/2008	7/3/2008	09Dig6/ f090211	n/a	0.270
2008-2400	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC107-C	Sediment	3/18/2008	7/3/2008	08Dig41/ f081020	n/a	0.638
2008-2401	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC107-F	Sediment	3/18/2008	7/3/2008	09Dig3/ f090205	n/a	0.155
2008-2401	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC107-F	Sediment	3/18/2008	7/3/2008	09Dig6/ f090211	n/a	0.379
2008-2401	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC107-F	Sediment	3/18/2008	7/3/2008	08Dig41/ f081020	n/a	0.479
2008-2402	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC108-B	Sediment	3/18/2008	7/3/2008	09Dig3/ f090204	n/a	1.09
2008-2402	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC108-B	Sediment	3/18/2008	7/3/2008	09Dig6/ f090211	n/a	0.150
2008-2402	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC108-B	Sediment	3/18/2008	7/3/2008	08Dig41/ f081020	n/a	0.862
2008-2403	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC108-C	Sediment	3/18/2008	7/3/2008	09Dig3/ f090204	n/a	1.04
2008-2403	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC108-C	Sediment	3/18/2008	7/3/2008	09Dig6/ f090211	n/a	0.087
2008-2403	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC108-C	Sediment	3/18/2008	7/3/2008	08Dig41/ f081020	n/a	0.385
2008-2404	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC108-D	Sediment	3/18/2008	7/3/2008	09Dig3/ f090204	n/a	1.41
2008-2404	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC108-D	Sediment	3/18/2008	7/3/2008	09Dig6/ f090211	n/a	0.317
2008-2404	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC108-D	Sediment	3/18/2008	7/3/2008	08Dig41/ f081020	n/a	0.422
2008-2405	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC109-A	Sediment	3/18/2008	7/3/2008	09Dig3/ f090205	n/a	3.20
2008-2405	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC109-A	Sediment	3/18/2008	7/3/2008	09Dig6/ f090211	n/a	0.415
2008-2405	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC109-A	Sediment	3/18/2008	7/3/2008	08Dig41/ f081020	n/a	0.656
2008-2406	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC109-B	Sediment	3/18/2008	7/3/2008	09Dig3/ f090205	n/a	1.24
2008-2406	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC109-B	Sediment	3/18/2008	7/3/2008	09Dig6/ f090211	n/a	0.247
2008-2406	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC109-B	Sediment	3/18/2008	7/3/2008	08Dig41/ f081020	n/a	0.764
2008-2407	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC109-C	Sediment	3/18/2008	7/3/2008	09Dig3/ f090205	n/a	1.49
2008-2407	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC109-C	Sediment	3/18/2008	7/3/2008	09Dig6/ f090211	n/a	3.17
2008-2407	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC109-C	Sediment	3/18/2008	7/3/2008	08Dig41/ f081020	n/a	0.343
2008-2439	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC111-A	Sediment	4/3/2008	7/3/2008	09Dig5/ f090211	n/a	6.51
2008-2439	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC111-A	Sediment	4/3/2008	7/3/2008	09Dig19/ f090320	n/a	0.111
2008-2439	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC111-A	Sediment	4/3/2008	7/3/2008	08Dig43/ f081021	n/a	0.728

Table B4: (continued)

Lab Number	Station Name	Grain Size	Station Number	Sample Type	Date Collected	Date Received	Batch Number	Percent Moisture	Hg dry wt (µg/g)*
2008-2440	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC111-B	Sediment	4/3/2008	7/3/2008	09Dig5/ f090211	n/a	4.58
2008-2440	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC111-B	Sediment	4/3/2008	7/3/2008	09Dig19/ f090320	n/a	0.302
2008-2440	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC111-B	Sediment	4/3/2008	7/3/2008	08Dig43/ f081022	n/a	6.62
2008-2441	Cache Ck Cyn btw Rumsey and Bear Ck	<63µm	CC111-C	Sediment	4/3/2008	7/3/2008	09Dig5/ f090206	n/a	1.20
2008-2441	Cache Ck Cyn btw Rumsey and Bear Ck	1000-63µm	CC111-C	Sediment	4/3/2008	7/3/2008	09Dig19/ f090320	n/a	0.531
2008-2441	Cache Ck Cyn btw Rumsey and Bear Ck	bulk	CC111-C	Sediment	4/3/2008	7/3/2008	08Dig43/ f081022	n/a	1.94

* **MDL:** 0.004 µg/g; **RL:** 0.013 µg/g