

# Septic System/Water Quality Study Final Report

Groveland Community Services District  
Groveland, California

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## **1.0 Introduction**

Groveland Community Services District (GCSD) owns and operates a wastewater collection and treatment system that provides service in southern Tuolumne County, located in the central Sierra Nevada Mountains. Specifically, the communities being serviced include Groveland, Big Oak Flat, and Pine Mountain Lake (PML). The GCSD has selected RBF Consulting to assist in performing a study of the septic systems and water quality in the area.

### **1.1 Purpose of Study**

Within the tributary watersheds to the Pine Mountain Lake and its surrounding creeks, over 2,300 lots currently utilize or have proposed to utilize septic systems. Many of these systems were installed during the 1970's, at the initial development of the area. It is believed that many of these systems were not "engineered" and were instead installed off-the-shelf with little regard for site-specific considerations.

It is suspected that inadequate initial design and poor maintenance of these systems may be contributing to the deterioration of the local groundwater and surface water quality. The purpose of this study is to isolate the local watersheds and take a macroscopic look at the septic systems to determine if a relationship exists between the area's water quality and the septic systems.

### **1.2 Scope of Work**

This report contains the analysis, recommendations, and conclusions based on the study that was performed. The septic system water quality study was broken down into six specific tasks, each of which will be addressed within this report. The tasks that were to be performed for this study include:

- 1) Area Septic System Reconnaissance
- 2) Area Well Reconnaissance
- 3) District Sampling Plan
- 4) Site Sampling
- 5) Geographic Analysis
- 6) Final Report


A detailed description of each of the tasks, along with a description of the findings for each task is provided within Section 2.0 below.

### **1.3 Study Area**



The area to be analyzed in this study consists of the Pine Mountain Lake area of the GCSD. The study area can be seen in Exhibit 1.



















**Suspected Septic Parcels  
within Conversion Candidate  
100-ft of Drainage Protector  
Areas (DPA's)**

*Legend*

-  Stream
-  River
-  Minor Collector Roads
-  Major Collector Roads
-  Highway
-  Township Range
-  Sections

 Lakes

Septic  
 Currently Septic  
 Suspected Septic Parcels within DPA

- Lift Stations
-  Lift Station 1
  -  Lift Station 2
  -  Lift Station 3
  -  Lift Station 4
  -  Lift Station 5
  -  Lift Station 6
  -  Lift Station 7
  -  Lift Station 8
  -  Lift Station 9
  -  Lift Station 10
  -  Lift Station 11
  -  Lift Station 12
  -  Lift Station 13
  -  Lift Station 14
  -  Lift Station 15
  -  Big Oak Flats Lift Station
  -  Groveland - No lift
  -  Unsewered

 District Boundary



750 0 750 1500 2250 Feet

## 2.0 Summary of Tasks

This Septic System Water Quality Study was broken up into six separate tasks. The objectives of each task are identified in italics within the corresponding section. Additionally, the associated analysis and conclusions for each task are described below.

### 2.1 Task 1- Area Septic System Reconnaissance

Objectives: *Various septic systems within the District will be investigated with the County Health Inspector and local septic pumpers to provide information such as:*

- *General condition of systems in the area*
- *Analysis of septic failure rates, including type of system (conventional or engineered)*
- *Identification of septic lots within the Drainage Protection Areas (DPA) – areas adjacent to regional creeks that are required to be sewered*
- *Recognition of areas of “high risk” where septic failures would be more adverse to water quality*
- *Identification of natural drainage areas, to be used in combination with past lake sampling data to identify potential trends*
- *Identification of likely existing problem areas*
- *Existing surface water and groundwater quality data available from the County and other sources will be incorporated. For example, existing recreation water quality testing of Pine Mountain Lake (PML) will be obtained and included for analysis.*

The information obtained under this task is listed below.

#### 2.1.1 General Condition Of Systems In The Area

Lou West of Cedar Septic in Big Oak Flat performs the majority of septic tank inspections in the area. He was contacted to determine his perception of the condition of the septic tanks within the study area. According to Mr. West, the general conditions of the septic systems in the area include:

- The number of septic failures increase each year
- Increased number of leach field extension projects each year
- Failures are typically discovered as a result of real estate transactions
- Most systems within the study area are less than 25 years old
- Tree roots are breaking leach lines and choking leach fields
- Increased occurrences of leaking or collapsed tanks
- Most homes have garbage disposals
- Many improper installations have been discovered
- More than 75% of the on-site systems are NOT “engineered”

### **2.1.2 Identification of Lots within the Drainage Protection Areas (DPA) with On-site Systems, Identification of “High Risk” Areas**

On-site systems located adjacent to natural drainage courses represent the greatest threat to local surface waters, namely Pine Mountain Lake. In the since rescinded Order No. 71-298, dated 25 June 1971, the California Regional Water Quality Control Board – Central Valley Region prohibited on-site systems to be located within 1,000 feet of the lake or within 100 feet of any natural watercourse (termed drainage protection area or DPA). Further, the original tract maps (circa 1969) creating the Pine Mountain Lake subdivision had specific DPA’s designated on said maps. These DPA’s prohibited both septic tanks and leach fields.

It has been acknowledged that the Uniform Plumbing Code and Tuolumne County Code specifies expected safe minimum horizontal distances from drainages and streams as 25 to 100 feet (depending upon duration of flows). However, this report considers that there was (pursuant to the original tract map and CRWQCB requirements and continues to be a recognition as to the unique relationship that tributary development may have as an influence on water quality of both the lake and it’s down stream water courses.

This order specifically identified lots within 1,000 feet of the lake; however, parcels within the DPA were not listed. A site inspection of First and Second Garrotte Creeks, Big Creek, and various other water courses within the area, indicated that a number of lots adjacent to the creeks employ septic systems. These lots were determined to be a logical starting point for evaluating potential “at risk” areas for septic contamination.

Using the District’s sewer map, sewer and unsewered homes were identified. A Geographic Information System (GIS) model was developed to buffer the major drainage courses and identify all parcels suspected of having on-site systems within the DPA. Exhibit 1 shows a map of these lots, and Appendix A specifically identifies the parcels.

### **2.1.3 Septic Failure Rate Analysis**

The County Health Department was contacted in order to obtain records of the locations of septic system failures within the DPA. The type of system that failed whether conventional or engineered was not available from the Department’s records. This information is presented in Appendix B.

### **2.1.4 Identification Of Natural Drainage Areas/Past Water Quality Sampling**

In order to identify the area’s natural drainage patterns, the various watersheds within the vicinity of Pine Mountain Lake were mapped. The watershed areas can be seen in Exhibit 2. This mapping will be used in combination with past lake sampling data to identify potential trends.

The PML Association periodically samples swimming areas within the lake for bacteria. Each sampled area has been identified in Exhibit 2. Table 1, lists the results of recent total coliform sampling from these areas. This sample data was provided by the PML Association for this study.

**Table 1 Total Coliform Sampling Results (MPN)**

Swim Area	5-19-99	8-9-00	8-23-00	9-13-00	10-4-00	11-1-00	5-9-01	6-6-01	7-11-01
Marina	2	13	8	30	17	130	7	8	8
Dunn Ct.	2	7	<2	<2	8	50	4	17	8
Lake Lodge	4	4	8	8	11	130	2	8	2
Campground	130	-	-	-	-	-	-	300	-

Pine Mountain Lake Watershed

Legend

- Stream
- River
- Minor Collector Roads
- Highway
- Township Range
- Sections

Flow Direction

Lakes

Septic  
 Currently Septic

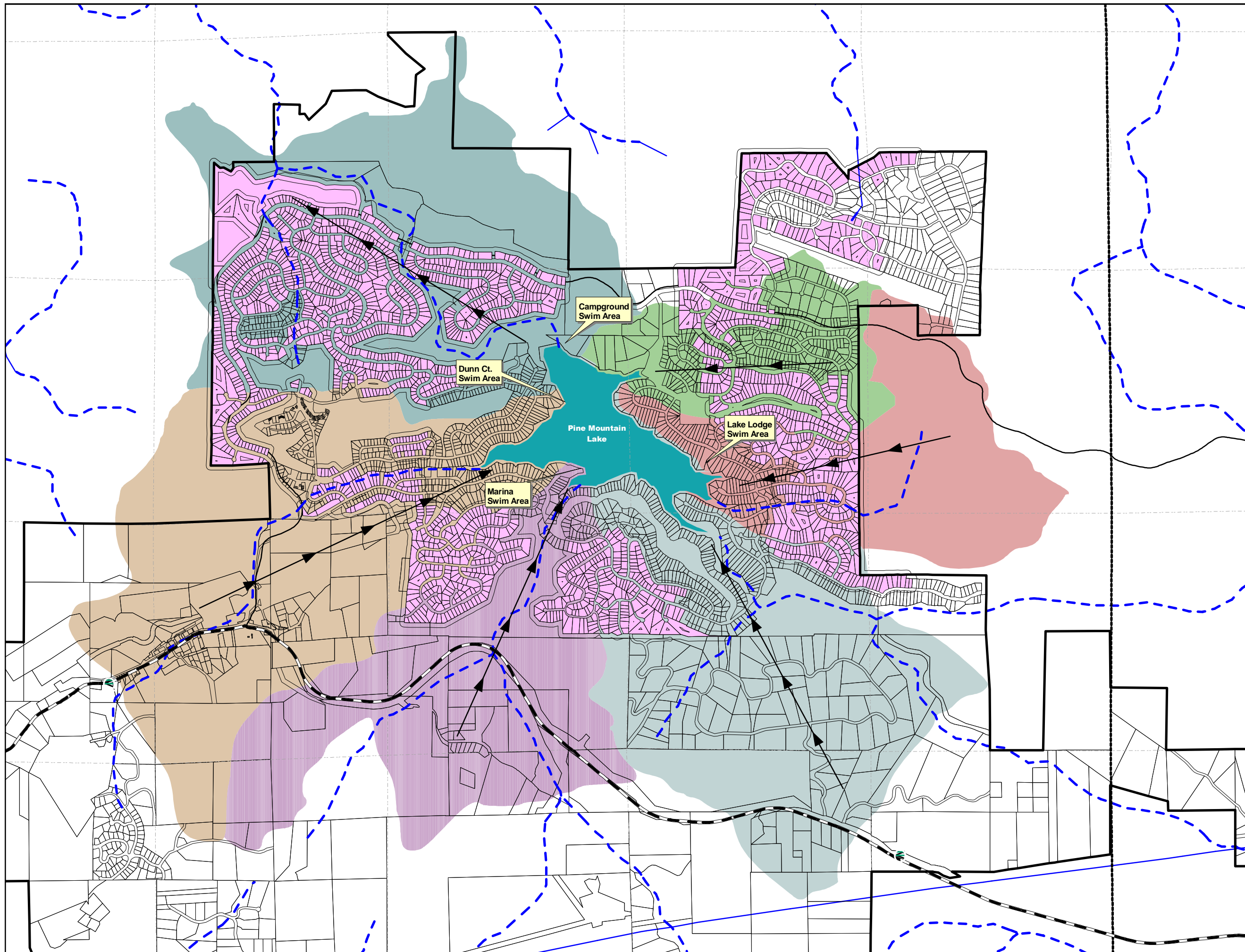
- Watersheds
- Big Creek Inflow
  - Big Creek Outflow
  - First Garrotte Creek
  - PML East
  - PML Northeast
  - Second Garrotte Creek

Parcels

District Boundary



2000 0 2000 Feet





Based on the sampling locations and the results obtained, few conclusions can be drawn from this data. The data does show that the water quality at the Campground swim area, near the dam, typically has the poorest quality.

## 2.2 Task 2- Areas Well Reconnaissance

**Objectives:** *Existing wells within the watershed will be identified (i.e. PML wells drilled within the Boise Cascade development, outlying developments and local ranches) and characterized by type of use (irrigation, potable). Certain wells will be targeted as sources for groundwater quality data - either as an ambient, baseline water quality well or as a well that potentially has been influenced by nearby septic systems.*

The objective of this task was to identify various wells that could be used to establish ambient groundwater quality data, as well as those wells that had been influenced by nearby septic systems. The County Health Department was contacted in order to determine the availability of well data within the study area. According to the County Health Department, no information exists that indicates there are any wells located in the PML study area. Therefore, the focus of this study was changed to a surface water quality evaluation exclusively.

## 2.3 Task 3- District Sampling Plan Development

**Objectives:** *A plan for sampling wells and drainage courses within GCSD will be developed. The following sampling factors will be addressed to best characterize water quality: (a) location, (b) parameters (physical properties, coliforms, TDS, nitrates, ammonia, etc.), and (c) methods (surface, subsurface). Site selection will be determined following completion of the field reconnaissance and well data analysis.*




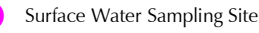
A sampling plan was developed for the GCSD in order to identify the location and mechanism of potential bacteriological pollution sources. Sampling locations were isolated based on the watershed and potential pollutant source (septic system, treatment plant, local fauna, etc.). Twelve sampling locations were identified, that would provide a representation of the water quality in the area. The locations of the sampling stations are listed in Table 2, and can be seen in Exhibit 3.

Sampling Sites

Legend

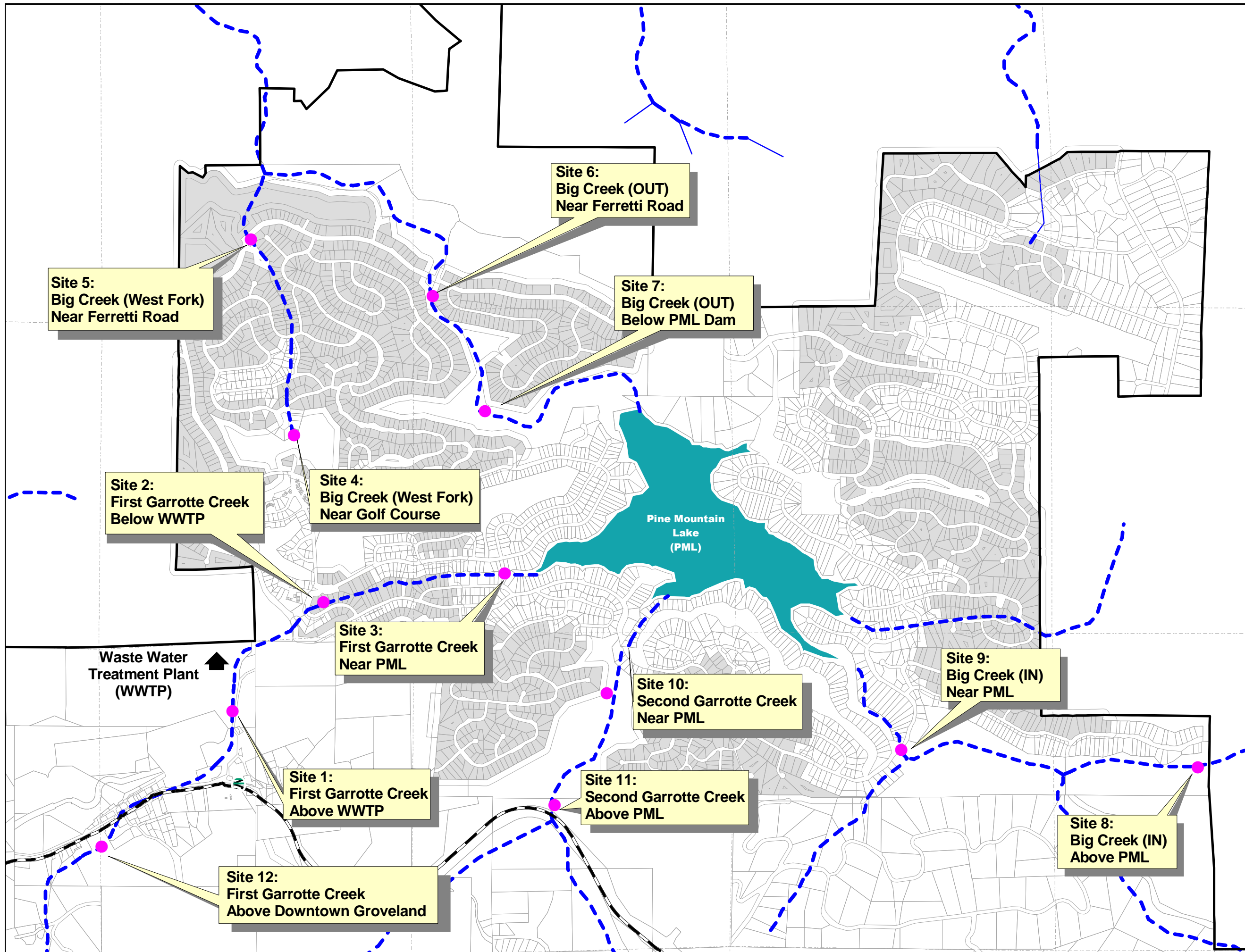
-  Stream
-  River
-  Minor Collector Roads
-  Major Collector Roads
-  Highway
-  Township Range
-  Sections
-  Lakes

Septic

-  Currently Septic
-  Suspected Septic Parcels within DPA
-  District Boundary
-  Surface Water Sampling Site

NOTE:

LOCATIONS AND NUMBER OF SAMPLING SITES MAY BE MODIFIED AS FIELD DATA IS GATHERED.



**Table 2 Sampling Site Locations**

Site	Location
1	First Garrotte Creek Above WWTP
2	First Garrotte Creek Below WWTP
3	First Garrotte Creek Near PML
4	Big Creek (West Fork) Near Golf Course
5	Big Creek (West Fork) Near Ferretti Road
6	Big Creek (OUT) Near ferretti Road
7	Big Creek (OUT) Below PML Dam
8	Big Creek (IN) Above PML
9	Big Creek (IN) Near PML
10	Second Garrotte Creek Near PML
11	Second Garrotte Creek Above PML
12	First Garrotte Creek Above downtown Groveland

In order to satisfy this objective, the sampling location, lab analysis parameters, and sampling times were specified as follows:

- **Location**  
Exhibit 1 illustrates the four major areas of concern. These areas contain numerous septic systems and are located within the DPA. The four areas include First Garrotte Creek, Second Garrotte Creek, and two locations along Big Creek below Pine Mountain Lake Dam. Samples were taken above and below each of these sites.

Sites were also selected above and below the existing wastewater treatment plant in First Garrotte Creek, as well as below the on-site systems along the creek near Pine Mountain Lake. This same method was used in selecting sites in Big Creek entering PML (unaffected by development), Big Creek leaving PML, Second Garrotte Creek, and the West Fork of Big Creek leaving PML.

Exhibit 3 shows the initial sampling locations.

- **Lab Analysis Parameters**  
The testing parameters were limited in order to maximize the number of samples that could be taken. Coliform testing was determined to be the best indicator of water pollution for this study. The constituents that were analyzed include:
  - Total Coliforms
  - Fecal Coliforms
  - Nitrates
  - TDS
  - Ammonia

- Time  
To obtain the most representative data possible, samples were taken at all sites approximately every two weeks for a 16-week period after the start of the rainy season.

## 2.4 Task 4- Site Sampling

Objectives: *Sampling sites will be determined in collaboration with the Regional Board as described in Task No. 3. Sampling will then be completed quarterly over a one year period to possibly detect seasonal variations. The initial sampling will be completed to coincide with the end of the peak occupancy period. This is to be followed by additional sampling in the late fall, winter and spring. Actual sample intervals will be determined in response to the seasonal climate conditions. For example, in the event of an exceptionally wet winter, the Spring 2002 sampling cycle would be delayed until more normal background flows return.*

Samples were collected from the selected sites for a five-month period from November 15, 2001 to March 27, 2002. During this time period, a total of eleven sample sets were obtained. The samples were collected by the GCSD and taken to the laboratory for analysis. Each of the samples was analyzed for the four constituents listed above, with the addition of fecal coliform. The results of each sample can be seen in Appendix C, and are discussed in greater detail in the following sections.

### 2.4.1 Total and Fecal Coliform Results

Total coliform bacteria exists in the intestines of warm and cold blooded animals. Fecal coliform is a specific group of coliform bacteria that exists exclusively in warm-blooded animals. The presence of fecal coliform bacteria indicates that either human or animal fecal matter has contaminated a water body. As part of this study, both total coliform and fecal coliform were tested. The results indicate that coliform bacteria were present at each of the sampling locations.

Further study of these results also indicates that the greatest quantity of coliform bacteria was present during the first flush, and then the quantity drops significantly. This is to be expected however, since sources of coliform bacteria will accumulate during dry periods, or over the winter months when little or no rainfall is received. The results of the total coliform and fecal coliform tests at each of the sampling sites can be seen in Exhibit 4 and Exhibit 5 respectively.

Based on the results of the water sampling analysis, it is inconclusive as to whether or not the septic systems are contributing to the coliform loads detected in the area. The sampling indicates that fecal coliform is present, however the source of this bacteria whether human or animal was not determined from the

Legend

- Stream
- River
- Minor Collector Roads
- Major Collector Roads
- Highway
- Township Range
- Sections
- Lakes

Septic

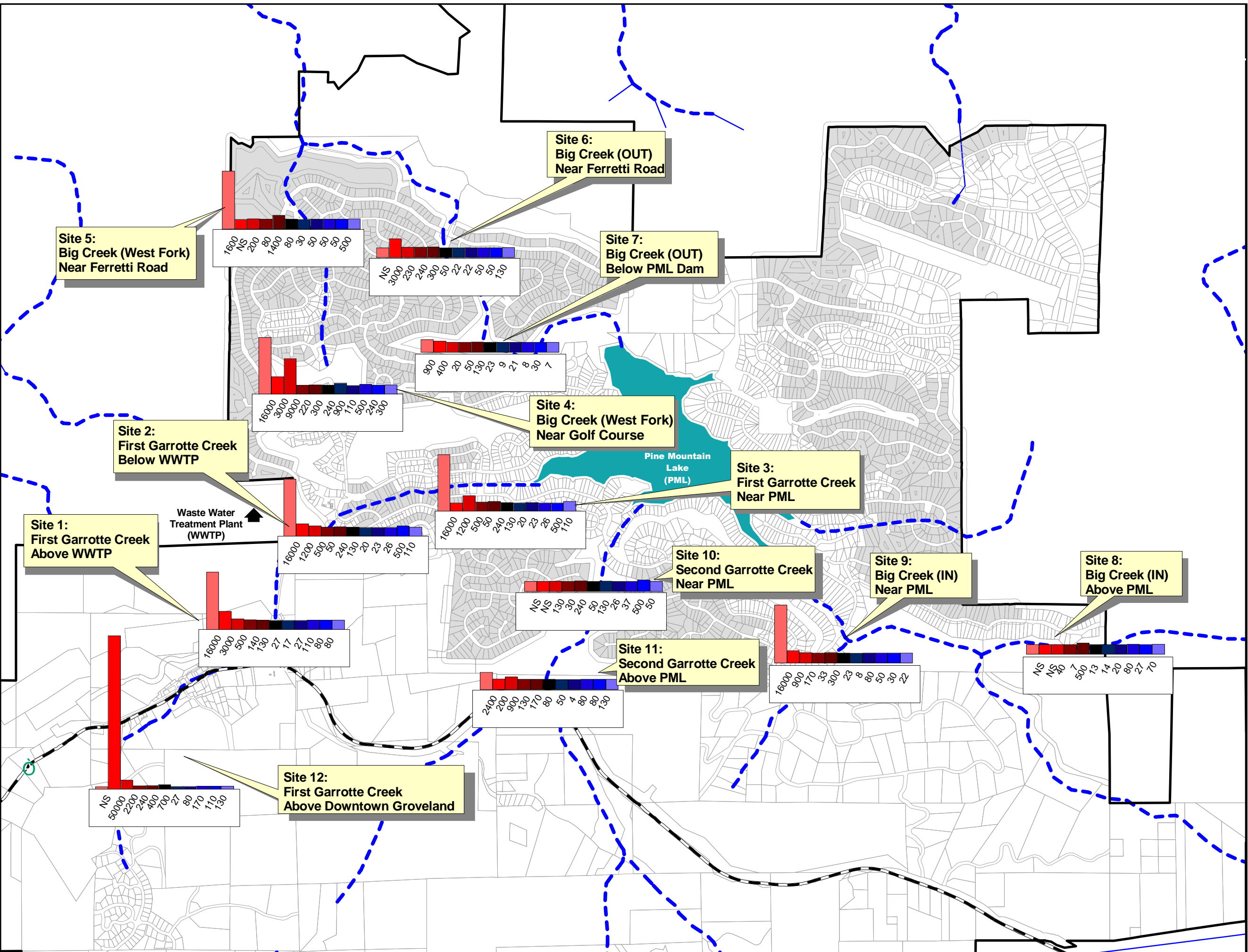
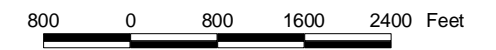
- Currently Septic
- Suspected Septic Parcels within DPA
- District Boundary

Coliform Data

- 10/31/2001
- 11/15/2001
- 12/5/2001
- 12/19/2001
- 1/7/2002
- 1/16/2002
- 1/30/2002
- 2/13/2002
- 2/27/2002
- 3/13/2002
- 3/27/2002

NS- Indicates no sample was taken

**NOTE:**  
 LOCATIONS AND NUMBER OF SAMPLING SITES MAY BE MODIFIED AS FIELD DATA IS GATHERED.



Legend

- Stream
- River
- Minor Collector Roads
- Major Collector Roads
- Highway
- Township Range
- Sections
- Lakes

Septic

- Currently Septic
- Suspected Septic Parcels within DPA
- District Boundary

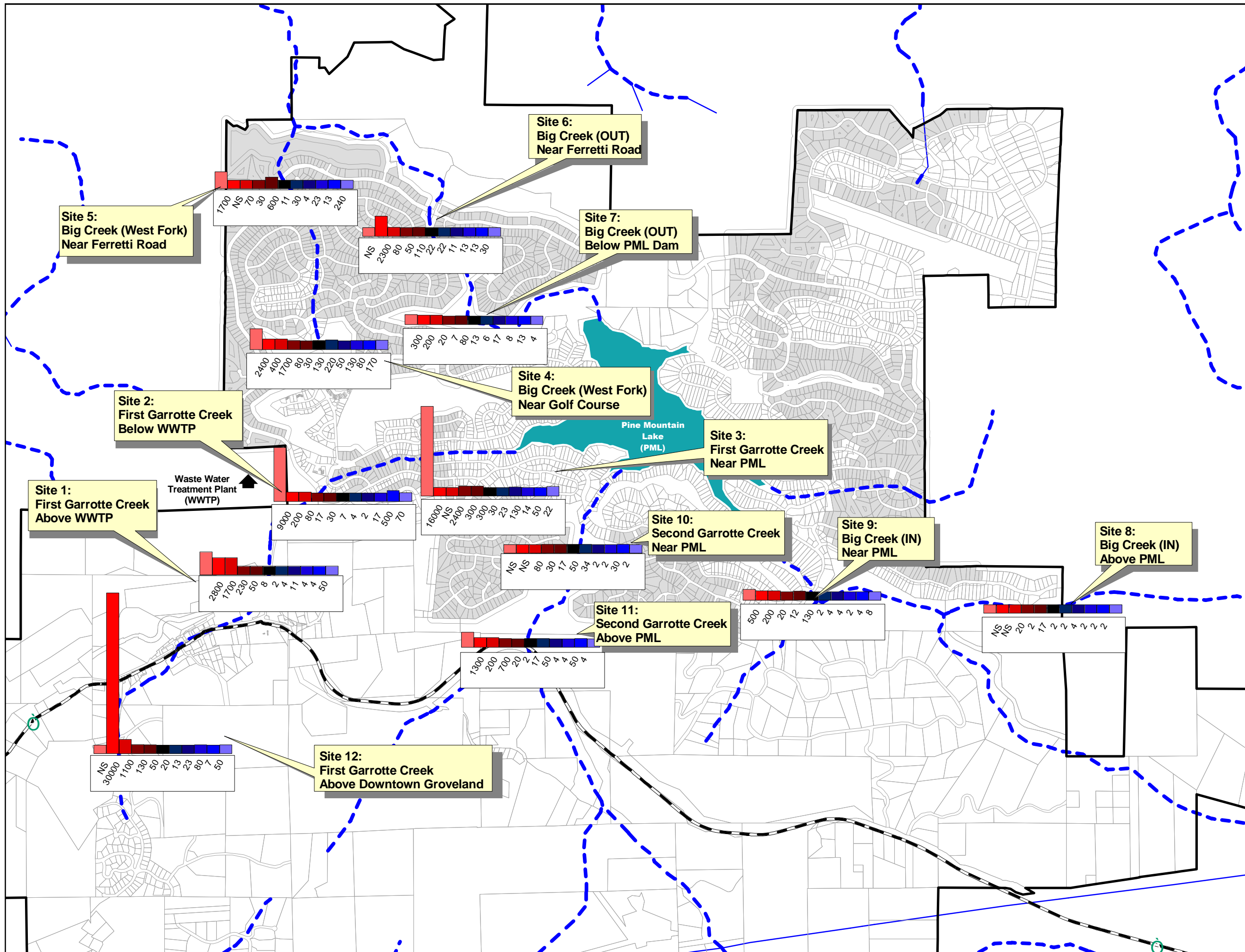
Coliform Data

- 10/31/2001
- 11/15/2001
- 12/5/2001
- 12/19/2001
- 1/7/2002
- 1/16/2002
- 1/30/2002
- 2/13/2002
- 2/27/2002
- 3/13/2002
- 3/27/2002
- NS- Indicates no sample was taken

**NOTE:**  
 LOCATIONS AND NUMBER OF SAMPLING SITES MAY BE MODIFIED AS FIELD DATA IS GATHERED.



800 0 800 1600 2400 Feet



tests conducted. It is recommended that additional testing be performed to determine the origin of the fecal coliform bacteria. If it is found that the fecal coliform is primarily of human origin, this would indicate possible septic system pollution.

#### **2.4.2 Nitrate Results**

In addition to sampling for coliform, nitrates were also studied. Faulty septic systems can lead to a high induction of nitrates into the water in an area. Each of the samples taken was tested for nitrates. The results of the nitrate tests can be seen in Exhibit 6.

The results indicate that the presence of nitrates was detected in some of the watercourses. The area where nitrates consistently increased was between Site 1 (First Garrotte Creek Above WWTP) & Site 2 (First Garrotte Creek Below WWTP). For each of the 11 samples taken at these sites, nitrates always increased after the treatment plant.

One location indicated the possibility of nitrates being introduced into the water from the septic systems. Site 6 (Big Creek –OUT) shows that on multiple occasions nitrates were introduced into the system. Site 6 is also located within a DPA. The increase in nitrates at this sampling site indicates that the septic systems may be the source of the contamination.

Another area for potential study is Site 5 (Big Creek- West Fork). At this location the nitrate load increased significantly, on certain occasions, when compared to the upstream sampling site. At other times however, the nitrate load decreased. It was therefore inconclusive as to whether or not the septic systems in the area were the likely source of the nitrate contamination.

#### **2.4.3 TDS Results**

Due to the high quantities of TDS (Total Dissolved Solids) within septic systems, it is believed that high TDS in the watercourses may be an indication of failing septic systems. TDS is a measure of inorganic salts and organic material that has completely dissolved within the water. TDS was tested for each of the sampling sites and the results were analyzed. The results of the TDS tests can be seen in Exhibit 7.

While TDS was sampled at each of the sites, the results do not provide any indication as to whether or not failing septic systems in the area are contributing to a decrease in water quality. The results of the TDS tests do not show any significant increase at the sites where septic systems are located within the DPAs. The only site that shows a small consistent increase in TDS, is Site 2 (First Garrotte Creek Below WWTP) this site consistently measures slightly higher for TDS than the upstream site.

Legend

- Stream
- River
- Minor Collector Roads
- Major Collector Roads
- Highway
- Township Range
- Sections
- Lakes

Septic

- Currently Septic
- Suspected Septic Parcels within DPA
- District Boundary

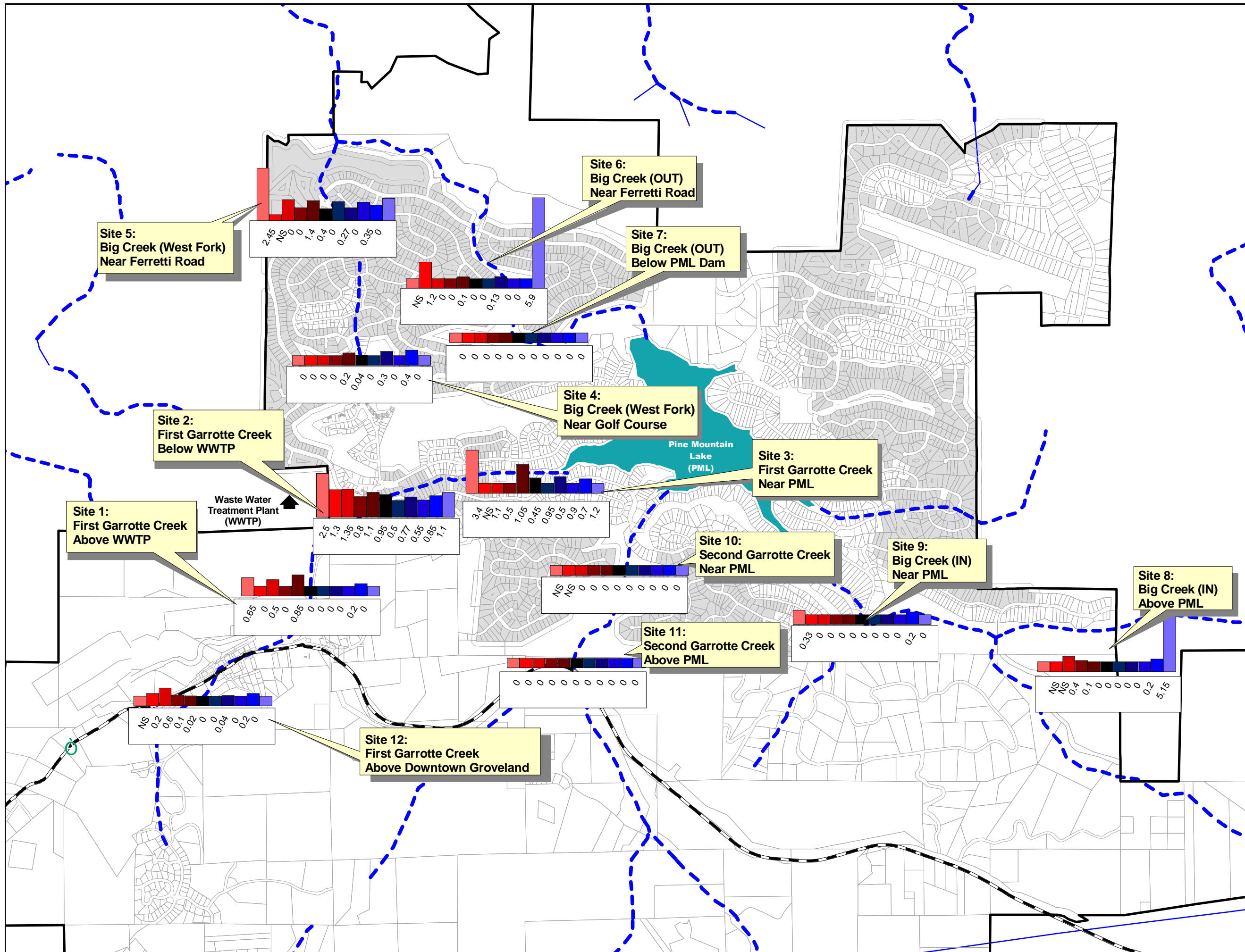
Nitrate Data

- 10/31/2001
  - 11/15/2001
  - 12/5/2001
  - 12/19/2001
  - 1/7/2002
  - 1/16/2002
  - 1/30/2002
  - 2/13/2002
  - 2/27/2002
  - 3/13/2002
  - 3/27/2002
- NS- Indicates no sample was taken

**NOTE:**  
LOCATIONS AND NUMBER OF SAMPLING SITES MAY BE MODIFIED AS FIELD DATA IS GATHERED.



800 0 800 1600 2400 Feet





Legend

- Stream
- River
- Minor Collector Roads
- Major Collector Roads
- Highway
- Township Range
- Sections
- Lakes

Septic

- Currently Septic
- Suspected Septic Parcels within DPA
- District Boundary

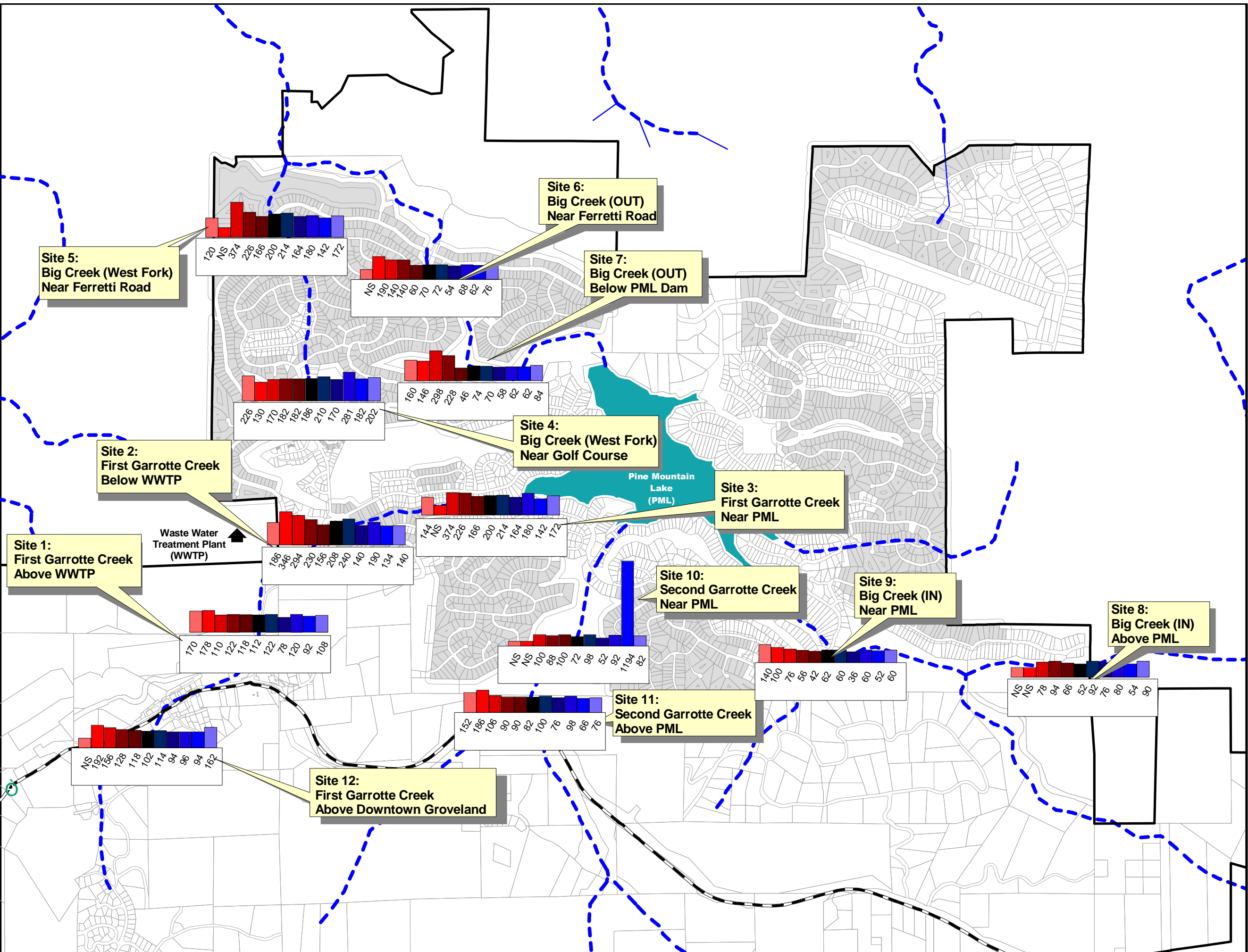
TDS Data

- 10/31/2001
- 11/15/2001
- 12/5/2001
- 12/19/2001
- 1/7/2002
- 1/16/2002
- 1/30/2002
- 2/13/2002
- 2/27/2002
- 3/13/2002
- 3/27/2002
- NS- Indicates no sample was taken

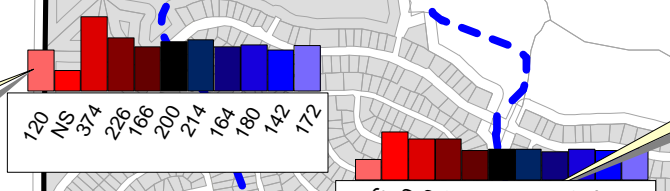
NOTE:  
LOCATIONS AND NUMBER OF SAMPLING SITES MAY BE MODIFIED AS FIELD DATA IS GATHERED.



800 0 800 1600 2400 Feet



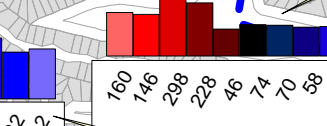
Site 5:  
Big Creek (West Fork)  
Near Ferretti Road



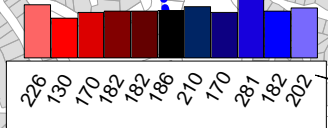
Site 6:  
Big Creek (OUT)  
Near Ferretti Road



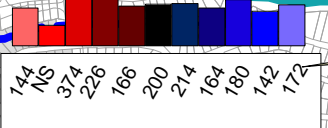
Site 7:  
Big Creek (OUT)  
Below PML Dam



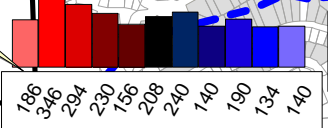
Site 4:  
Big Creek (West Fork)  
Near Golf Course



Site 3:  
First Garrotte Creek  
Near PML



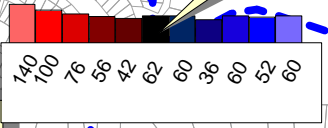
Site 2:  
First Garrotte Creek  
Below WWTP



Site 10:  
Second Garrotte Creek  
Near PML



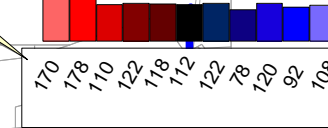
Site 9:  
Big Creek (IN)  
Near PML



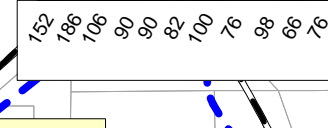
Site 8:  
Big Creek (IN)  
Above PML



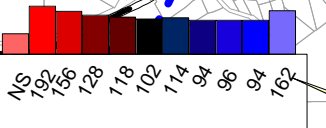
Site 1:  
First Garrotte Creek  
Above WWTP



Site 11:  
Second Garrotte Creek  
Above PML



Site 12:  
First Garrotte Creek  
Above Downtown Groveland



#### 2.4.4 Ammonia Results

The final constituent sampled was ammonia. When ammonia is introduced to a water body, it can be toxic to fish and aquatic life. The samples taken from each of the sites were tested for ammonia to determine if failing septic systems could be introducing ammonia into the water.

Each of the samples taken was tested for ammonia. In the majority of the samples ammonia was not detected. There were only two sample sets where ammonia was detected, October 31, 2001 and February 27, 2002. Two of the samples taken on October 31, 2001 indicated a small presence of ammonia (Site 1 and Site 2), while the samples taken on February 27, 2002 indicated the presence of ammonia at all 12 sites. The results from these tests are shown in Table 3 below.

**Table 3 Ammonia Sampling Results**

Sample Site	1	2	3	4	5	6	7	8	9	10	11	12
10/31/01	0.12	0.28	-	-	-	-	-	-	-	-	-	-
2/27/02	6.60	5.70	3.70	2.90	8.30	5.20	6.30	3.60	2.40	9.30	10.20	10.70

Due to the infrequent occurrence of ammonia in the water samples, no conclusive results could be obtained from this information. There is no clear indication as to why the levels of ammonia indicated in the results would be present at all sites on February 27, 2002. Therefore, it is not possible to determine whether these results are caused by the septic systems, natural phenomena, or an analysis error.

#### 2.5 Task 5- Geographic Analysis

Objectives: *A Geographic Information System (GIS) model will be developed that compares septic lots to the affected watershed. Coupled with surface runoff and well sampling results, areas of heightened concern will be identified. This evaluation will be used to predict the potential long-term effect of increased septic system failures. Maps will be produced detailing drainage areas, sampling locations and results and their relationship to septic and sewer lots within the District.*

The GIS analysis was performed as part of this study. The exhibits that were prepared for this study and are referenced in the previous sections, were developed from the GIS model that was created for this study. The areas of concern have been identified, along with the sampling locations and their associated results.

## 2.6 Task 6- Final Report

**Objectives:** *The final report will identify future tasks necessary to support further decisions in the District's effort to maintain water quality stability and will document the analysis, assumptions and findings of each task of this Study. Included will be a discussion of the suitability of continuing current practices, procedures and regulations regarding individual wastewater systems within the study area. Suggestions will be included to provide reasonable mitigation and environmental benefit taking into account economic considerations and capacity of the District to provide additional service. This may include identification of any limiting conditions determined as a result of the study, the extent of regulatory compliance, and the need to require connection to existing sewer facilities.*

This report is intended to fulfill the requirements of Task 6.

## 3.0 Conclusions and Recommendations

The purpose of this study was to isolate local watersheds and take a macroscopic look at the septic systems to determine if a relationship exists between water quality, and the design, condition, or location of the septic systems. As part of this study, the locations and conditions of the septic systems in the area were evaluated as well as the water quality throughout the watersheds. The conclusions of this study, along with the recommendations are outlined below.

Based on the research performed for this study, it has been determined that many of the septic systems within the area are either poorly installed or in poor condition. Additionally, many of the septic systems were originally installed near various tributaries to the PML.

Water quality testing was performed to determine if a correlation exists between the failing septic systems, and decreases in the areas water quality. While many of the tests were inconclusive, the results indicate that the DPAs around Site 5 and Site 6 may be experiencing water quality deterioration due to the septic systems in the area.

Based on the study that was performed, it is recommended that the GCSD investigate further the fecal coliform bacteria that were detected at the sampling sites. This investigation should be performed to determine if the fecal matter has a primarily human or animal origin. If the origin is primarily human, this will strongly indicate the possibility of septic system pollution.

It is also recommended that continued monitoring be performed in the area in order to analyze sample data throughout the entire year. This will provide further information regarding the possible presence of ammonia within the water bodies.

**APPENDIX A**

Unsewered Parcels Potentially Located within the DPA

APN	MAIL_ADDRE	MAIL_CITYS	MAIL_ZIP	LEGAL_DESC
900400400	PO BOX 277	BIG OAK FLAT, CA	95305	PINE MOUNTAIN LAKE 1 L342
900400500	528 FATHOM DR	SAN MATEO, CA	94404	PINE MOUNTAIN LAKE 1 L341
900400800	1163 SHORELINE DR	SAN MATEO, CA	94404	PINE MOUNTAIN LAKE 1 L338
900400900	20665 OAK CREEK LN	SARATOGA, CA	95070	PINE MOUNTAIN LAKE 1 L337
900401000	19314 PINE MOUNTAIN DR	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 1 L359
900401100	19304 PINE MOUNTAIN DR	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 1 L358
900401200	720 BRANDYWINE DR	LODI, CA	95240	PINE MOUNTAIN LAKE 1 L357
900401400	12401 TANNAHILL DR	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 1 L355
900401500	12405 TANNAHILL DR	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 1 L354
900401600	7170 HARVARD PL	GILROY, CA	95020	PINE MOUNTAIN LAKE 1 L353
900401700	4800 N 10TH ST	SAN JOSE, CA	95112	PINE MOUNTAIN LAKE 1 L352
900401800	21555 LAKE CHABOT RD	CASTRO VALLEY, CA	94546	PINE MOUNTAIN LAKE 1 L351
900401900	PO BOX 1034	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 1 L350
900402000	3195 CORTE CABRILLO	APTOS, CA	95003	PINE MOUNTAIN LAKE 1 L349
900402100	2506 WOODLAND AVE	MODESTO, CA	95358	PINE MOUNTAIN LAKE 1 L348
900402300	21383 N DES MOINES RD	ACAMPO, CA	95220	PINE MOUNTAIN LAKE 1 L347
900402400	37958 BRIGHT COMMON	FREMONT, CA	94536	PINE MOUNTAIN LAKE 1 L346
900402700	112 CRATER PEAK PLACE	FOLSOM, CA	95630	PINE MOUNTAIN LAKE 1 L343
900404800	3534 CHABLIS CIR	SAN JOSE, CA	95132	PAR 354 PM 31-100
900405000	19285 PLEASANT VIEW DR	GROVELAND, CA	95321	PAR 339 PM 37-76
900505300	1649 TRONA WAY	SAN JOSE, CA	95125	PINE MOUNTAIN LAKE 1 L336
900600100	19324 PINE MOUNTAIN DR	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 1 L360
900600400	19354 PINE MOUNTAIN DR	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 1 L363
900600500	19364 PINE MOUNTAIN DR	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 1 L364
900600600	140 RANCHERIA	KENTFIELD, CA	94904	PINE MOUNTAIN LAKE 1 L365
900600800	2626 BRYANT	PALO ALTO, CA	94306	PINE MOUNTAIN LAKE 1 L367
900600900	335 BUCKINGHAM WAY # 303	SAN FRANCISCO, CA	94132	PINE MOUNTAIN LAKE 1 L368
900601100	PO BOX 165	HOLLISTER, CA	95024	PINE MOUNTAIN LAKE 1 L370
900601200	PO BOX 1104	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 1 L371
900601300	144 S 3RD ST #537	SAN JOSE, CA	95112	PINE MOUNTAIN LAKE 1 L372
900601400	38800 FLORENCE WAY	FREMONT, CA	94536	PINE MOUNTAIN LAKE 1 L373
900601500	38800 FLORENCE WAY	FREMONT, CA	94536	PINE MOUNTAIN LAKE 1 L374
900601600	22685 SAN VINCENTE AVE	SAN JOSE, CA	95120	PINE MOUNTAIN LAKE 1 L375
900601700	301 HACKBERRY AVE	MODESTO, CA	95353	PINE MOUNTAIN LAKE 1 L376
900601800	16305 MATILJA DR	MONTE SERENO, CA	95030	PINE MOUNTAIN LAKE 1 L377
900605500	3191 ADAMS WOOD DR	SAN JOSE, CA	95148	PAR 361 PM 40-14
901701700	19228 PINE MOUNTAIN DR	GROVELAND, CA	95321	PAR 23-B PM 5-60 .76AC
910703000	19101 JIMMIE BELL	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 2 L39
910800100	20136 PINE MOUNTAIN DR	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 2 L103
910800200	15 LAGUNITA RD	SALINAS, CA	93906	PINE MOUNTAIN LAKE 2 L104
910803000	327 DALE CT	BENICIA, CA	94510	PINE MOUNTAIN LAKE 2 L101
910900100	673 PESTANA DR	GALT, CA	95632	PINE MOUNTAIN LAKE 2 L147
910900200	348 N 8TH ST	SAN JOSE, CA	95112	PINE MOUNTAIN LAKE 2 L146
910900300	20136 PINE MOUNTAIN DR	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 2 L113

APN	MAIL_ADDRE	MAIL_CITYS	MAIL_ZIP	LEGAL_DESC
910900400	4919 SILVER CREEK RD	SUISON CITY, CA	94585	PINE MOUNTAIN LAKE 2 L112
910900500	713 APPLE HILL DR	BRENTWOOD, CA	94513	PINE MOUNTAIN LAKE 2 L111
910900600	PO BOX 1063	RUNNING SPRINGS, CA	92382	PINE MOUNTAIN LAKE 2 L110
910900700	PO BOX 1063	RUNNING SPRINGS, CA	92382	PINE MOUNTAIN LAKE 2 L109
910900800	58 PARK MANOR DR	DALY CITY, CA	94015	PINE MOUNTAIN LAKE 2 L108
910900900	19710 MERRITT DR	CUPERTINO, CA	95014	PINE MOUNTAIN LAKE 2 L107
910901000	13215 CLEMENTS RD	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 2 L106
910901100	13130 MOHRMANN ST	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 2 L105
911000400	PO BOX 2209	NEWPORT BEACH, CA	92659	PINE MOUNTAIN LAKE 2 L152
911000700	18481 CARLWYN DR	CASTRO VALLEY, CA	94546	PINE MOUNTAIN LAKE 2 L149
911000800	673 PESTANA DR	GALT, CA	95632	PINE MOUNTAIN LAKE 2 L148
911004900	13156 MUELLER DR	GROVELAND, CA	95321	PAR 153 PM 26-16
911005400	13136 MUELLER DR	GROVELAND, CA	95321	LOT 150-A PM 34-58
911100100	716 CALERO AVE	SAN JOSE, CA	95123	PINE MOUNTAIN LAKE 2 L280
911102900	715 HARRISON ST	SAN JOSE, CA	95125	PINE MOUNTAIN LAKE 2 L274
911103000	330 TAMPA CT	FOSTER CITY, CA	94404	PINE MOUNTAIN LAKE 2 L275
911103100	1075 ROSEMONT	LOS ALTOS, CA	94022	PINE MOUNTAIN LAKE 2 L276
911103200	19228 PINE MOUNTAIN DR	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 2 L277
911103300	120 MAPLE RD	KLAMATH, CA	95548	PINE MOUNTAIN LAKE 2 L278
911106200	1752 GINGERSNAP LN	LINCOLN, CA	95648	PAR 272 PM 36-80
911304300	3631 DEEP HARBOR CT	SAN JOSE, CA	95111	PINE MOUNTAIN LAKE 2 L387
911304400	13133 WELLS FARGO	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 2 L386
911304500	15248 CAMINO DEL PARQUE	SONORA, CA	95370	PINE MOUNTAIN LAKE 2 L385
911304600	15122 CHARMERAN AVE	SAN JOSE, CA	95124	PINE MOUNTAIN LAKE 2 L384
911304700	PO BOX 235	CLAYTON, CA	94517	PINE MOUNTAIN LAKE 2 L383
911502800	22330 REGNART RD	CUPERTINO, CA	95014	PINE MOUNTAIN LAKE 2 L417
911502900	13069 WELLS FARGO DR	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 2 L416
911503000	PO BOX 496	JAMESTOWN, CA	95327	PINE MOUNTAIN LAKE 2 L415
911503100	5126 EL ENCINO RD	LA GRANGE, CA	95329	PINE MOUNTAIN LAKE 2 L414
911503200	246 MAIN ST	LOS GATOS, CA	95030	PINE MOUNTAIN LAKE 2 L413
911503300	13107 WELLS FARGO DR	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 2 L389
911902700	19228 PINE MOUNTAIN DR	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 6 L22
911902800	20136 PINE MOUNTAIN DR	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 6 L21
911902900	PO BOX 2209	NEWPORT BEACH, CA	92659	PINE MOUNTAIN LAKE 6 L20
911903000	22104 CLEARWOOD CT	CUPERTINO, CA	95014	PINE MOUNTAIN LAKE 6 L19
911903300	19415 PINE MTN DR	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 6 L16
911903400	984 LOS PADRES BLVD	SANTA CLARA, CA	95050	PINE MOUNTAIN LAKE 6 L15
911903500	19557 COTTONWOOD ST	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 6 L14
911903600	15912 VIA CORDOBA	SAN LORENZO, CA	94580	PINE MOUNTAIN LAKE 6 L13
911904000	1562 PURDUE ST	SAN LEANDRO, CA	94579	PAR 17A PM 34-97
912100200	19228 PML DR	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 6 L55
912100300	19228 PML DR	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 6 L54
912100400	19705 COTTONWOOD ST	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 6 L53
912700500	235 STONERIDGE LANE	SAN FRANCISCO, CA	94134	PINE MOUNTAIN LAKE 7 L132
912700600	4824 MANCINI DR	CASTRO VALLEY, CA	94546	PINE MOUNTAIN LAKE 7 L131

APN	MAIL_ADDRE	MAIL_CITYS	MAIL_ZIP	LEGAL_DESC
912700700	3015 TODD CT	CASTRO VALLEY, CA	94546	PINE MOUNTAIN LAKE 7 L130
912702800	203 ALAMEDA DE LAS	BELMONT, CA	94002	PAR 121 PM 34-72
912804000	1416 SHOSHONE PL	MODESTO, CA	95358	PINE MOUNTAIN LAKE 7 L158
912804100	12917 JACKSON MILL RD	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 7 L157
912804200	12917 JACKSON MILL DR	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 7 L156
913002900	110 MONTEREY RD #7	PACIFICA, CA	94044	PINE MOUNTAIN LAKE 7 L268
913003000	1624 PARKWOOD DR	SAN MATEO, CA	94403	PINE MOUNTAIN LAKE 7 L267
913003100	115 BUCKINGHAM WAY #201	SAN FRANCISCO, CA	94132	PINE MOUNTAIN LAKE 7 L266
913003200	5051 N LINCOLN BLVD	LIVINGSTON, CA	95334	PINE MOUNTAIN LAKE 7 L265
913003300	1739 CURTNER AVE	SAN JOSE, CA	95124	PINE MOUNTAIN LAKE 7 L264
913003400	1739 CURTNER AVE	SAN JOSE, CA	95124	PINE MOUNTAIN LAKE 7 L263
913003500	13144 JACKSON MILL DR	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 7 L262
913200800	300 HILLCREST BLVD	MILLBRAE, CA	94030	PINE MOUNTAIN LAKE 7 L277
913200900	38706 CRANE TERRACE	FREMONT, CA	94536	PINE MOUNTAIN LAKE 7 L276
913201000	548 S SPRING ST #1012	LOS ANGELES, CA	90013	PINE MOUNTAIN LAKE 7 L275
913201100	19819 WAIF MINE	SONORA, CA	95370	PINE MOUNTAIN LAKE 7 L273
913201200	3783 YERBA BUENA CT	SAN JOSE, CA	95121	PINE MOUNTAIN LAKE 7 L272
913201300	4702 MENDOZA AVE	SAN JOSE, CA	95111	PINE MOUNTAIN LAKE 7 L271
913201600	290 TOLAND AVE	SAN FRANCISCO, CA	94124	PAR 269 PM 36-51
923101400	PO BOX 155	BIG OAK FLAT, CA	95305	PINE MOUNTAIN LAKE 4 L359
923101500	3036 ROSELLE	MODESTO, CA	95355	PINE MOUNTAIN LAKE 4 L360
923101600	PO BOX 1168	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 4 L361
923101700	PO BOX 1168	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 4 L362
923101800	1122 BRACE AVE	SAN JOSE, CA	95125	PINE MOUNTAIN LAKE 4 L363
923101900	1122 BRACE AVE	SAN JOSE, CA	95125	PINE MOUNTAIN LAKE 4 L364
923102500	20239 PINE MOUNTAIN DR	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 4 L280
923102600	2924 CONGRESS RD	PEBBLE BEACH, CA	93953	PINE MOUNTAIN LAKE 4 L281
923102700	120 JONQUIL LANE	HOLLISTER, CA	95023	PINE MOUNTAIN LAKE 4 L282
923103000	13475 EMPIRE GRADE APT 4	SANTA CRUZ, CA	95060	PINE MOUNTAIN LAKE 4 L288
923103100	20729 BIG FOOT CIRCLE	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 4 L289
923103200	1125 GATETREE CT	TRACY, CA	95376	PINE MOUNTAIN LAKE 4 L290
923103500	725 WADDELL WAY	MODESTO, CA	95357	PAR 283-A PM 38-34
923201100	246 W MAIN ST	LOS GATOS, CA	95030	PINE MOUNTAIN LAKE 4 L324
923201200	318 SEVERIN AVE	MODESTO, CA	95354	PINE MOUNTAIN LAKE 4 L307
923201300	PO BOX 116	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 4 L306
923201400	39328 WILLOWVALE RD	PALMDALE, CA	93551	PINE MOUNTAIN LAKE 4 L308
923202300	49 CHURCH ST	NORTH ATTLEBORO, MA	02760	PINE MOUNTAIN LAKE 4 L317
923202400	49 CHURCH ST	NORTH ATTEBORO, MA	02760	PINE MOUNTAIN LAKE 4 L318
923202500	PO BOX 1062	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 4 L319
923202800	20771 BIG FOOT CIRCLE	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 4 L322
923202900	20784 BUTTERCUP	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 4 L323
923203100	PO BOX 363	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 4 L350
923203200	1508 HIGHWAY RD	BURLINGAME, CA	94010	PINE MOUNTAIN LAKE 4 L351
923203300	16265 CHURCH ST	MORGAN HILL, CA	95037	PINE MOUNTAIN LAKE 4 L352
923203400	377 HILLSDALE BLVD	DALY CITY, CA	94014	PINE MOUNTAIN LAKE 4 L353

APN	MAIL_ADDRE	MAIL_CITYS	MAIL_ZIP	LEGAL_DESC
923203500	3150 PINEHAVEN DR	REDDING, CA	96003	PINE MOUNTAIN LAKE 4 L354
923203600	5926 CABRAL AVE	SAN JOSE, CA	95123	PINE MOUNTAIN LAKE 4 L355
923203700	930 FULTZ RIDGE RD	HARRDGATE, TN	37752	PINE MOUNTAIN LAKE 4 L356
923203800	1901 STRATTON CIR	WALNUT CREEK, CA	94598	PINE MOUNTAIN LAKE 4 L357
923203900	PO BOX 1345	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 4 L358
923204000	20739 BIG FOOT CIR	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 4 L291
923204600	631 N STEPHANIE ST #138	HENDERSON, NV	89014	PAR 348 PM 36-81
931601200	21101 JIMMERSALL LANE	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 12 L51
931601300	21107 HEMLOCK ST	GROVELAND, CA	95321	PINE MOUNTAIN LAKE 12 L50



REACT

**APPENDIX B**  
On-Site System Failures Potentially Located within the DPA

APN	MAIL_ADDRE	MAIL_CITYS	LEGAL_DESC	Repair?
900400400	PO BOX 277	BIG OAK FLAT, CA	PINE MOUNTAIN LAKE 1 L342	NO
900400500	528 FATHOM DR	SAN MATEO, CA	PINE MOUNTAIN LAKE 1 L341	NO
900400800	1163 SHORELINE DR	SAN MATEO, CA	PINE MOUNTAIN LAKE 1 L338	NO RECORD
900400900	20665 OAK CREEK LN	SARATOGA, CA	PINE MOUNTAIN LAKE 1 L337	NO
900401000	19314 PINE MOUNTAIN DR	GROVELAND, CA	PINE MOUNTAIN LAKE 1 L359	NO
900401100	19304 PINE MOUNTAIN DR	GROVELAND, CA	PINE MOUNTAIN LAKE 1 L358	NO RECORD
900401200	720 BRANDYWINE DR	LODI, CA	PINE MOUNTAIN LAKE 1 L357	NO RECORD
900401400	12401 TANNAHILL DR	GROVELAND, CA	PINE MOUNTAIN LAKE 1 L355	NO
900401500	12405 TANNAHILL DR	GROVELAND, CA	PINE MOUNTAIN LAKE 1 L354	NO
900401600	7170 HARVARD PL	GILROY, CA	PINE MOUNTAIN LAKE 1 L353	NO
900401700	4800 N 10TH ST	SAN JOSE, CA	PINE MOUNTAIN LAKE 1 L352	NO RECORD
900401800	21555 LAKE CHABOT RD	CASTRO VALLEY, CA	PINE MOUNTAIN LAKE 1 L351	NO
900401900	PO BOX 1034	GROVELAND, CA	PINE MOUNTAIN LAKE 1 L350	NO
900402000	3195 CORTE CABRILLO	APTOS, CA	PINE MOUNTAIN LAKE 1 L349	NO
900402100	2506 WOODLAND AVE	MODESTO, CA	PINE MOUNTAIN LAKE 1 L348	NO RECORD
900402300	21383 N DES MOINES RD	ACAMPO, CA	PINE MOUNTAIN LAKE 1 L347	NO RECORD
900402400	37958 BRIGHT COMMON	FREMONT, CA	PINE MOUNTAIN LAKE 1 L346	NO RECORD
900402700	112 CRATER PEAK PLACE	FOLSOM, CA	PINE MOUNTAIN LAKE 1 L343	NO
900404800	3534 CHABLIS CIR	SAN JOSE, CA	PAR 354 PM 31-100	NO RECORD
900405000	19285 PLEASANT VIEW DR	GROVELAND, CA	PAR 339 PM 37-76	NO RECORD
900505300	1649 TRONA WAY	SAN JOSE, CA	PINE MOUNTAIN LAKE 1 L336	NO RECORD
900600100	19324 PINE MOUNTAIN DR	GROVELAND, CA	PINE MOUNTAIN LAKE 1 L360	NO
900600400	19354 PINE MOUNTAIN DR	GROVELAND, CA	PINE MOUNTAIN LAKE 1 L363	NO
900600500	19364 PINE MOUNTAIN DR	GROVELAND, CA	PINE MOUNTAIN LAKE 1 L364	NO RECORD
900600600	140 RANCHERIA	KENTFIELD, CA	PINE MOUNTAIN LAKE 1 L365	NO RECORD
900600800	2626 BRYANT	PALO ALTO, CA	PINE MOUNTAIN LAKE 1 L367	NO RECORD
900600900	335 BUCKINGHAM WAY # 303	SAN FRANCISCO, CA	PINE MOUNTAIN LAKE 1 L368	NO RECORD
900601100	PO BOX 165	HOLLISTER, CA	PINE MOUNTAIN LAKE 1 L370	NO RECORD
900601200	PO BOX 1104	GROVELAND, CA	PINE MOUNTAIN LAKE 1 L371	NO
900601300	144 S 3RD ST #537	SAN JOSE, CA	PINE MOUNTAIN LAKE 1 L372	NO
900601400	38800 FLORENCE WAY	FREMONT, CA	PINE MOUNTAIN LAKE 1 L373	NO
900601500	38800 FLORENCE WAY	FREMONT, CA	PINE MOUNTAIN LAKE 1 L374	NO
900601600	22685 SAN VINCENTE AVE	SAN JOSE, CA	PINE MOUNTAIN LAKE 1 L375	YES
900601700	301 HACKBERRY AVE	MODESTO, CA	PINE MOUNTAIN LAKE 1 L376	NO
900601800	16305 MATILJA DR	MONTE SERENO, CA	PINE MOUNTAIN LAKE 1 L377	NO RECORD
900605500	3191 ADAMS WOOD DR	SAN JOSE, CA	PAR 361 PM 40-14	NO RECORD
901701700	19228 PINE MOUNTAIN DR	GROVELAND, CA	PAR 23-B PM 5-60 .76AC	NO
910703000	19101 JIMMIE BELL	GROVELAND, CA	PINE MOUNTAIN LAKE 2 L39	NO
910800100	20136 PINE MOUNTAIN DR	GROVELAND, CA	PINE MOUNTAIN LAKE 2 L103	NO RECORD
910800200	15 LAGUNITA RD	SALINAS, CA	PINE MOUNTAIN LAKE 2 L104	NO RECORD
910803000	327 DALE CT	BENICIA, CA	PINE MOUNTAIN LAKE 2 L101	NO RECORD
910900100	673 PESTANA DR	GALT, CA	PINE MOUNTAIN LAKE 2 L147	NO RECORD
910900200	348 N 8TH ST	SAN JOSE, CA	PINE MOUNTAIN LAKE 2 L146	NO
910900300	20136 PINE MOUNTAIN DR	GROVELAND, CA	PINE MOUNTAIN LAKE 2 L113	NO

APN	MAIL_ADDRE	MAIL_CITYS	LEGAL_DESC	Repair?
910900400	4919 SILVER CREEK RD	SUISON CITY, CA	PINE MOUNTAIN LAKE 2 L112	NO RECORD
910900500	713 APPLE HILL DR	BRENTWOOD, CA	PINE MOUNTAIN LAKE 2 L111	NO RECORD
910900600	PO BOX 1063	RUNNING SPRINGS, CA	PINE MOUNTAIN LAKE 2 L110	NO RECORD
910900700	PO BOX 1063	RUNNING SPRINGS, CA	PINE MOUNTAIN LAKE 2 L109	NO
910900800	58 PARK MANOR DR	DALY CITY, CA	PINE MOUNTAIN LAKE 2 L108	NO
910900900	19710 MERRITT DR	CUPERTINO, CA	PINE MOUNTAIN LAKE 2 L107	NO
910901000	13215 CLEMENTS RD	GROVELAND, CA	PINE MOUNTAIN LAKE 2 L106	NO
910901100	13130 MOHRMANN ST	GROVELAND, CA	PINE MOUNTAIN LAKE 2 L105	YES
911000400	PO BOX 2209	NEWPORT BEACH, CA	PINE MOUNTAIN LAKE 2 L152	NO
911000700	18481 CARLWYN DR	CASTRO VALLEY, CA	PINE MOUNTAIN LAKE 2 L149	NO
911000800	673 PESTANA DR	GALT, CA	PINE MOUNTAIN LAKE 2 L148	NO
911004900	13156 MUELLER DR	GROVELAND, CA	PAR 153 PM 26-16	NO RECORD
911005400	13136 MUELLER DR	GROVELAND, CA	LOT 150-A PM 34-58	NO RECORD
911100100	716 CALERO AVE	SAN JOSE, CA	PINE MOUNTAIN LAKE 2 L280	NO RECORD
911102900	715 HARRISON ST	SAN JOSE, CA	PINE MOUNTAIN LAKE 2 L274	NO
911103000	330 TAMPA CT	FOSTER CITY, CA	PINE MOUNTAIN LAKE 2 L275	NO
911103100	1075 ROSEMONT	LOS ALTOS, CA	PINE MOUNTAIN LAKE 2 L276	NO RECORD
911103200	19228 PINE MOUNTAIN DR	GROVELAND, CA	PINE MOUNTAIN LAKE 2 L277	NO
911103300	120 MAPLE RD	KLAMATH, CA	PINE MOUNTAIN LAKE 2 L278	NO
911106200	1752 GINGERSNAP LN	LINCOLN, CA	PAR 272 PM 36-80	NO RECORD
911304300	3631 DEEP HARBOR CT	SAN JOSE, CA	PINE MOUNTAIN LAKE 2 L387	NO
911304400	13133 WELLS FARGO	GROVELAND, CA	PINE MOUNTAIN LAKE 2 L386	NO RECORD
911304500	15248 CAMINO DEL PARQUE	SONORA, CA	PINE MOUNTAIN LAKE 2 L385	NO
911304600	15122 CHARMERAN AVE	SAN JOSE, CA	PINE MOUNTAIN LAKE 2 L384	NO
911304700	PO BOX 235	CLAYTON, CA	PINE MOUNTAIN LAKE 2 L383	NO
911502800	22330 REGNART RD	CUPERTINO, CA	PINE MOUNTAIN LAKE 2 L417	NO
911502900	13069 WELLS FARGO DR	GROVELAND, CA	PINE MOUNTAIN LAKE 2 L416	NO
911503000	PO BOX 496	JAMESTOWN, CA	PINE MOUNTAIN LAKE 2 L415	NO
911503100	5126 EL ENCINO RD	LA GRANGE, CA	PINE MOUNTAIN LAKE 2 L414	NO RECORD
911503200	246 MAIN ST	LOS GATOS, CA	PINE MOUNTAIN LAKE 2 L413	NO
911503300	13107 WELLS FARGO DR	GROVELAND, CA	PINE MOUNTAIN LAKE 2 L389	NO RECORD
911902700	19228 PINE MOUNTAIN DR	GROVELAND, CA	PINE MOUNTAIN LAKE 6 L22	NO
911902800	20136 PINE MOUNTAIN DR	GROVELAND, CA	PINE MOUNTAIN LAKE 6 L21	NO RECORD
911902900	PO BOX 2209	NEWPORT BEACH, CA	PINE MOUNTAIN LAKE 6 L20	NO RECORD
911903000	22104 CLEARWOOD CT	CUPERTINO, CA	PINE MOUNTAIN LAKE 6 L19	NO RECORD
911903300	19415 PINE MTN DR	GROVELAND, CA	PINE MOUNTAIN LAKE 6 L16	NO RECORD
911903400	984 LOS PADRES BLVD	SANTA CLARA, CA	PINE MOUNTAIN LAKE 6 L15	NO RECORD
911903500	19557 COTTONWOOD ST	GROVELAND, CA	PINE MOUNTAIN LAKE 6 L14	NO
911903600	15912 VIA CORDOBA	SAN LORENZO, CA	PINE MOUNTAIN LAKE 6 L13	NO
911904000	1562 PURDUE ST	SAN LEANDRO, CA	PAR 17A PM 34-97	NO RECORD
912100200	19228 PML DR	GROVELAND, CA	PINE MOUNTAIN LAKE 6 L55	NO RECORD
912100300	19228 PML DR	GROVELAND, CA	PINE MOUNTAIN LAKE 6 L54	NO
912100400	19705 COTTONWOOD ST	GROVELAND, CA	PINE MOUNTAIN LAKE 6 L53	NO
912700500	235 STONERIDGE LANE	SAN FRANCISCO, CA	PINE MOUNTAIN LAKE 7 L132	NO
912700600	4824 MANCINI DR	CASTRO VALLEY, CA	PINE MOUNTAIN LAKE 7 L131	NO RECORD

APN	MAIL_ADDRE	MAIL_CITYS	LEGAL_DESC	Repair?
912700700	3015 TODD CT	CASTRO VALLEY, CA	PINE MOUNTAIN LAKE 7 L130	NO
912702800	203 ALAMEDA DE LAS	BELMONT, CA	PAR 121 PM 34-72	NO RECORD
912804000	1416 SHOSHONE PL	MODESTO, CA	PINE MOUNTAIN LAKE 7 L158	NO RECORD
912804100	12917 JACKSON MILL RD	GROVELAND, CA	PINE MOUNTAIN LAKE 7 L157	NO
912804200	12917 JACKSON MILL DR	GROVELAND, CA	PINE MOUNTAIN LAKE 7 L156	NO RECORD
913002900	110 MONTEREY RD #7	PACIFICA, CA	PINE MOUNTAIN LAKE 7 L268	NO RECORD
913003000	1624 PARKWOOD DR	SAN MATEO, CA	PINE MOUNTAIN LAKE 7 L267	NO RECORD
913003100	115 BUCKINGHAM WAY #201	SAN FRANCISCO, CA	PINE MOUNTAIN LAKE 7 L266	NO RECORD
913003200	5051 N LINCOLN BLVD	LIVINGSTON, CA	PINE MOUNTAIN LAKE 7 L265	NO RECORD
913003300	1739 CURTNER AVE	SAN JOSE, CA	PINE MOUNTAIN LAKE 7 L264	NO
913003400	1739 CURTNER AVE	SAN JOSE, CA	PINE MOUNTAIN LAKE 7 L263	NO RECORD
913003500	13144 JACKSON MILL DR	GROVELAND, CA	PINE MOUNTAIN LAKE 7 L262	NO
913200800	300 HILLCREST BLVD	MILLBRAE, CA	PINE MOUNTAIN LAKE 7 L277	NO RECORD
913200900	38706 CRANE TERRACE	FREMONT, CA	PINE MOUNTAIN LAKE 7 L276	NO
913201000	548 S SPRING ST #1012	LOS ANGELES, CA	PINE MOUNTAIN LAKE 7 L275	NO RECORD
913201100	19819 WAIF MINE	SONORA, CA	PINE MOUNTAIN LAKE 7 L273	NO
913201200	3783 YERBA BUENA CT	SAN JOSE, CA	PINE MOUNTAIN LAKE 7 L272	NO RECORD
913201300	4702 MENDOZA AVE	SAN JOSE, CA	PINE MOUNTAIN LAKE 7 L271	NO RECORD
913201600	290 TOLAND AVE	SAN FRANCISCO, CA	PAR 269 PM 36-51	NO RECORD
923101400	PO BOX 155	BIG OAK FLAT, CA	PINE MOUNTAIN LAKE 4 L359	NO
923101500	3036 ROSELLE	MODESTO, CA	PINE MOUNTAIN LAKE 4 L360	NO
923101600	PO BOX 1168	GROVELAND, CA	PINE MOUNTAIN LAKE 4 L361	NO
923101700	PO BOX 1168	GROVELAND, CA	PINE MOUNTAIN LAKE 4 L362	NO RECORD
923101800	1122 BRACE AVE	SAN JOSE, CA	PINE MOUNTAIN LAKE 4 L363	NO RECORD
923101900	1122 BRACE AVE	SAN JOSE, CA	PINE MOUNTAIN LAKE 4 L364	NO RECORD
923102500	20239 PINE MOUNTAIN DR	GROVELAND, CA	PINE MOUNTAIN LAKE 4 L280	NO RECORD
923102600	2924 CONGRESS RD	PEBBLE BEACH, CA	PINE MOUNTAIN LAKE 4 L281	NO RECORD
923102700	120 JONQUIL LANE	HOLLISTER, CA	PINE MOUNTAIN LAKE 4 L282	NO
923103000	13475 EMPIRE GRADE APT 4	SANTA CRUZ, CA	PINE MOUNTAIN LAKE 4 L288	NO
923103100	20729 BIG FOOT CIRCLE	GROVELAND, CA	PINE MOUNTAIN LAKE 4 L289	NO
923103200	1125 GATETREE CT	TRACY, CA	PINE MOUNTAIN LAKE 4 L290	NO RECORD
923103500	725 WADDELL WAY	MODESTO, CA	PAR 283-A PM 38-34	NO RECORD
923201100	246 W MAIN ST	LOS GATOS, CA	PINE MOUNTAIN LAKE 4 L324	NO RECORD
923201200	318 SEVERIN AVE	MODESTO, CA	PINE MOUNTAIN LAKE 4 L307	NO RECORD
923201300	PO BOX 116	GROVELAND, CA	PINE MOUNTAIN LAKE 4 L306	NO RECORD
923201400	39328 WILLOWVALE RD	PALMDALE, CA	PINE MOUNTAIN LAKE 4 L308	NO
923202300	49 CHURCH ST	NORTH ATTLEBORO, MA	PINE MOUNTAIN LAKE 4 L317	NO RECORD
923202400	49 CHURCH ST	NORTH ATTEBORO, MA	PINE MOUNTAIN LAKE 4 L318	NO
923202500	PO BOX 1062	GROVELAND, CA	PINE MOUNTAIN LAKE 4 L319	NO
923202800	20771 BIG FOOT CIRCLE	GROVELAND, CA	PINE MOUNTAIN LAKE 4 L322	NO
923202900	20784 BUTTERCUP	GROVELAND, CA	PINE MOUNTAIN LAKE 4 L323	NO RECORD
923203100	PO BOX 363	GROVELAND, CA	PINE MOUNTAIN LAKE 4 L350	YES
923203200	1508 HIGHWAY RD	BURLINGAME, CA	PINE MOUNTAIN LAKE 4 L351	NO
923203300	16265 CHURCH ST	MORGAN HILL, CA	PINE MOUNTAIN LAKE 4 L352	NO RECORD
923203400	377 HILLSDALE BLVD	DALY CITY, CA	PINE MOUNTAIN LAKE 4 L353	NO RECORD

APN	MAIL_ADDRE	MAIL_CITYS	LEGAL_DESC	Repair?
923203500	3150 PINEHAVEN DR	REDDING, CA	PINE MOUNTAIN LAKE 4 L354	NO
923203600	5926 CABRAL AVE	SAN JOSE, CA	PINE MOUNTAIN LAKE 4 L355	NO
923203700	930 FULTZ RIDGE RD	HARRDGATE, TN	PINE MOUNTAIN LAKE 4 L356	NO RECORD
923203800	1901 STRATTON CIR	WALNUT CREEK, CA	PINE MOUNTAIN LAKE 4 L357	NO RECORD
923203900	PO BOX 1345	GROVELAND, CA	PINE MOUNTAIN LAKE 4 L358	NO
923204000	20739 BIG FOOT CIR	GROVELAND, CA	PINE MOUNTAIN LAKE 4 L291	YES
923204600	631 N STEPHANIE ST #138	HENDERSON, NV	PAR 348 PM 36-81	NO RECORD
931601200	21101 JIMMERSALL LANE	GROVELAND, CA	PINE MOUNTAIN LAKE 12 L51	NO
931601300	21107 HEMLOCK ST	GROVELAND, CA	PINE MOUNTAIN LAKE 12 L50	NO RECORD

REAR

**APPENDIX C**  
Sampling Results





Sample Date	Sample #	Location	Time	Waterway	Total Coli	Fecal Coli	Nitrate	Ammonia	Stream Depth Inches	Current Weather	Past 24 hr Rain Fall, inches	Past 48 hr Rain Fall, inches	Past 72 hr Rain Fall, inches	Past 96 hr Rain Fall, inches	Season Rain Fall Total	Special Notes.
3-27-02	1	First Garrotte Creek, Above District Driveway	7:33		80	50	ND	ND	2.75	Clear	0.0	0.0	0.02	0.61	29.56	Water, Very Turbid
3-27-02	2	First Garrotte Creek, Pleasant View Drive, Horseshoe Pits	7:41		110	70	1.10	ND	7.00	Clear	0.0	0.0	0.02	0.61	29.56	Water, Very Turbid
3-27-02	3	First Garrotte Creek, Lift Station # 5, Above Lake Water	8:49		170	22	1.20	ND	7.00	Clear	0.0	0.0	0.02	0.61	29.56	Water, Slightly Turbid
3-27-02	4	First Garrotte Circle and Jackson Mill Drive	7:49		300	170	ND	ND	2.00	Clear	0.0	0.0	0.02	0.61	29.56	Water, Turbid
3-27-02	5	Ferretti Road and Unit 2 Lot 278. Below mailboxes on Ferretti Road	7:58		500	240	ND	ND	3.50	Clear	0.0	0.0	0.02	0.61	29.56	Water, Clear
3-27-02	6	Big Creek at Ferretti Road. PML Campgrounds	8:01		130	30	5.90	ND	3.50	Clear	0.0	0.0	0.02	0.61	29.56	Water, Slightly Turbid
3-27-02	7	Big Creek at Unit 6 Lot 90, Deer Brush Court, below dam spillway	8:11		7	4	ND	ND	7.00	Clear	0.0	0.0	0.02	0.61	29.56	Water, Slightly Turbid
3-27-02	8	Big Creek at McKinley Way, Unit 10 Lot 1	8:28		70	2	5.15	ND	3.75	Clear	0.0	0.0	0.02	0.61	29.56	Water, Clear
3-27-02	9	Big Creek at Pine Mountain Drive Bridge, above Lake Water	8:37		22	8	ND	ND	7.50	Clear	0.0	0.0	0.02	0.61	29.56	Water, Clear





Sample Date	Ca Smp l #	Location waterway	Time	Waterway	Total Coli	Fecal Coli	Nitrate	TDS	Ammonia	Stream Depth Inches	Current Weather	Past 24 hr Rain Fall, inches	Past 48 hr Rain Fall, inches	Past 72 hr Rain Fall, inches	Past 96 hr Rain Fall, inches	Season Rain Fall Total	Special Notes.
3-27-02	10	Second Garrotte Creek at Pine Mountain Drive and Lower Skyridge Drive, above Lake Water	8:43		50	2	ND	82	ND	4.00	Clear	0.0	0.0	0.02	0.61	29.56	Water, Slightly Turbid
3-27-02	11	Second Garrotte Creek at Highway 120 crossing	9:03		130	4	ND	76	ND	5.50	Clear	0.0	0.0	0.02	0.61	29.56	Water, Slightly Turbid, soapy, foam
3-27-02	12	First Garrotte Creek, Greenleaf Industries, 18653 Highway 120	9:12		130	50	ND	162	ND	2.50	Clear	0.0	0.0	0.02	0.61	29.56	Water, Extremely Turbid
3-27-02	13	Merrill Road Fork of First Garrotte Creek, Van Gerpen, 18521 Hwy 120	8:23		920	5	-	-	-	-	Clear	0.0	0.0	0.02	0.61	29.56	Water, Very Turbid
3-27-02	14	Highway 120 Fork of First Garrotte Creek, 18522 Hwy 120	8:27		>1,600	49	-	-	-	-	Clear	0.0	0.0	0.02	0.61	29.56	Water, Very Turbid
3-27-02	15	Tannahill Source to First Garrotte Creek, Unit 5, PML	8:13		1,600	220	-	-	-	-	Clear	0.0	0.0	0.02	0.61	29.56	Water, Clear
3-13-02	1	First Garrotte Creek, Above District Driveway	7:20		80	4	0.20	92	ND	1.75	Clear	0.0	0.0	0.24	0.0	25.15	Water, Clear
3-13-02	2	First Garrotte Creek, Pleasant View Drive, Horseshoe Pits	7:25		500	500	0.85	134	ND	4.50	Clear	0.0	0.0	0.24	0.0	25.15	Water, Clear
3-13-02	3	First Garrotte Creek, Lift Station # 5, Above Lake Water	8:27		130	50	0.70	142	ND	6.00	Clear	0.0	0.0	0.24	0.0	25.15	Water, Clear
3-13-02	4	First Garrotte Circle and Jackson Mill Drive	7:33		240	80	0.40	182	ND	1.00	Clear	0.0	0.0	0.24	0.0	25.15	Water, Turbid





Sample Date	Ca Smp l #	Location waterway	Time	Waterway	Total Coli	Fecal Coli	Nitrate	TDS	Ammonia	Stream Depth Inches	Current Weather	Past 24 hr Rain Fall, inches	Past 48 hr Rain Fall, inches	Past 72 hr Rain Fall, inches	Past 96 hr Rain Fall, inches	Season Rain Fall Total	Special Notes.
3-13-02	I	Ferretti Road and Unit 2 Lot 278. Below mailboxes on Ferretti Road	7:41		50	13	0.35	98	ND	2.50	Clear	0.0	0.0	0.24	0.0	25.15	Water, Clear
3-13-02	K	Big Creek at Ferretti Road. PML Campgrounds	7:48		50	13	ND	62	ND	3.75	Clear	0.0	0.0	0.24	0.0	25.15	Water, Clear, algae
3-13-02	J	Big Creek at Unit 6 Lot 90, Deer Brush Court, below dam spillway	7:55		30	13	ND	62	ND	5.00	Clear	0.0	0.0	0.24	0.0	25.15	Water, Slightly Turbid
3-13-02	L	Big Creek at McKinley Way, Unit 10 Lot 1	8:08		27	2	0.20	54	ND	2.50	Clear	0.0	0.0	0.24	0.0	25.15	Water, Clear
3-13-02	M	Big Creek at Pine Mountain Drive Bridge, above Lake Water	8:18		30	4	0.20	52	ND	3.50	Clear	0.0	0.0	0.24	0.0	25.15	Water, Clear
3-13-02	O	Second Garrotte Creek at Pine Mountain Drive and Lower Skyridge Drive, above Lake Water	8:24		500	30	ND	1194	ND	4.00	Clear	0.0	0.0	0.24	0.0	25.15	Water, Clear
3-13-02	N	Second Garrotte Creek at Highway 120 crossing	8:42		80	50	ND	66	ND	3.00	Clear	0.0	0.0	0.24	0.0	25.15	Water, Slightly Turbid, foam
3-13-02	C	First Garrotte Creek, Greenleaf Industries, 18653 Highway 120	8:51		110	7	0.20	94	ND	1.75	Clear	0.0	0.0	0.24	0.0	25.15	Water, Turbid, milky-foam
3-13-02	A	Merrill Road Fork of First Garrotte Creek, Van Gerpen, 18521 Hwy 120	9:29		>1,600	23	-	-	-	-	Clear	0.0	0.0	0.24	0.0	25.15	Water, Slightly Turbid
3-13-02	B	Highway 120 Fork of First Garrotte Creek, 18522 Hwy 120	9:33		>1,600	23	-	-	-	-	Clear	0.0	0.0	0.24	0.0	25.15	Water, Slightly Turbid
3-13-02	E	Tannahill Source to First Garrotte Creek, Unit 5, PML	9:20		1,600	14	-	-	-	-	Clear	0.0	0.0	0.24	0.0	25.15	Water, Clear





Sample Date	Site #	Location waterway	Time	Waterway	Total Coli	Fecal Coli	Nitrate	TDS	Ammonia	Stream Depth Inches	Current Weather	Past 24 hr Rain Fall, inches	Past 48 hr Rain Fall, inches	Past 72 hr Rain Fall, inches	Past 96 hr Rain Fall, inches	Season Rain Total	Special Notes.
2-27-02	1	First Garrotte Creek, Above District Driveway	7:15		110	4	ND	120	6.60	1.0	Clear	0.0	0.0	0.0	0.0	22.60	Water, Clear
2-27-02	2	First Garrotte Creek, Pleasant View Drive, Horseshoe Pits	7:20		26	17	0.55	190	5.70	4.0	Clear	0.0	0.0	0.0	0.0	22.60	Water, Clear
2-27-02	3	First Garrotte Creek, Lift Station # 5, Above Lake Water	8:40		50	4	0.90	180	3.70	4.0	Clear	0.0	0.0	0.0	0.0	22.60	Water, Clear
2-27-02	4	First Garrotte Circle and Jackson Mill Drive	7:35		500	130	ND	281	2.90	1.0	Clear	0.0	0.0	0.0	0.0	22.60	Water, Very Turbid
2-27-02	5	Ferretti Road and Unit 2 Lot 278. Below mailboxes on Ferretti Road	7:40		50	23	ND	178	8.30	2.0	Clear	0.0	0.0	0.0	0.0	22.60	Water, Clear, Brown foam on rocks & edges
2-27-02	6	Big Creek at Ferretti Road. PML Campgrounds	7:58		50	13	ND	68	5.20	2.75	Clear	0.0	0.0	0.0	0.0	22.60	Water, Clear, Algae
2-27-02	7	Big Creek at Unit 6 Lot 90, Deer Brush Court, below dam spillway	8:07		8	8	ND	62	6.30	4.0	Clear	0.0	0.0	0.0	0.0	22.60	Water, Clear
2-27-02	8	Big Creek at McKinley Way, Unit 10 Lot 1	8:20		80	2	ND	80	3.60	0.75	Clear	0.0	0.0	0.0	0.0	22.60	Water, Clear
2-27-02	9	Big Creek at Pine Mountain Drive Bridge, above Lake Water	8:28		50	2	ND	60	2.40	3.0	Clear	0.0	0.0	0.0	0.0	22.60	Water, Clear
2-27-02	10	Second Garrotte Creek at Pine Mountain Drive and Lower Skyridge Drive, above Lake Water	8:35		37	2	ND	92	9.30	2.0	Clear	0.0	0.0	0.0	0.0	22.60	Water, Clear, Algae





Sample Date	Sample #	Location waterway	Time	Waterway	Total Coli	Fecal Coli	Nitrate	TDS	Ammonia	Stream Depth Inches	Current Weather	Past 24 hr Rain Fall, inches	Past 48 hr Rain Fall, inches	Past 72 hr Rain Fall, inches	Past 96 hr Rain Fall, inches	Season Rain Fall Total	Special Notes.
2-27-02	N11	Second Garrotte Creek at Highway 120 crossing	9:15		80	4	ND	98	10.20	1.5	Clear	0.0	0.0	0.0	0.0	22.60	Water, Clear, Thick layer of Iron Bacteria on bottom
2-27-02	C12	First Garrotte Creek, Greenleaf Industries, 18653 Highway 120	9:28		170	80	ND	96	10.70	1.5	Clear	0.0	0.0	0.0	0.0	22.60	Water, Turbid - Milky
2-27-02	A13	Merrill Road Fork of First Garrotte Creek, Van Gerpen, 18521 Hwy 120			920	17	-	-	-	-	Clear	0.0	0.0	0.0	0.0	22.60	Water, Slightly Turbid
2-27-02	B14	Highway 120 Fork of First Garrotte Creek, 18522 Hwy 120			540	79	-	-	-	-	Clear	0.0	0.0	0.0	0.0	22.60	Water, Slightly Turbid
2-27-02	E15	Tannahill Source to First Garrotte Creek, Unit 5, PML			1,600	<2	-	-	-	-	Clear	0.0	0.0	0.0	0.0	22.60	Water, Clear
2-13-02	B1	First Garrotte Creek, Above District Driveway			27	11	ND	78	ND	2.75	Partial Clouds	0.0	0.0	0.0	0.0	21.17	Water, Clear
2-13-02	F2	First Garrotte Creek, Pleasant View Drive, Horseshoe Pits			23	2	0.77	140	ND	4.25	Partial Clouds	0.0	0.0	0.0	0.0	21.17	Water, Clear
2-13-02	C3	First Garrotte Creek, Lift Station # 5, Above Lake Water			130	130	0.50	164	ND	4.0	Partial Clouds	0.0	0.0	0.0	0.0	21.17	Water, Clear
2-13-02	H4	First Garrotte Circle and Jackson Mill Drive			110	50	0.30	170	ND	0.5	Partial Clouds	0.0	0.0	0.0	0.0	21.17	Water, Slightly Turbid
2-13-02	I5	Ferretti Road and Unit 2 Lot 278. Below mailboxes on Ferretti Road			50	4	0.27	120	ND	2.5	Partial Clouds	0.0	0.0	0.0	0.0	21.17	Water, Slightly Turbid, some foam
2-13-02	K6	Big Creek at Ferretti Road. PML Campgrounds			22	11	0.13	54	ND	2.5	Partial Clouds	0.0	0.0	0.0	0.0	21.17	Water, Clear





Sample Date	Ca Smp l #	Location waterway	Time	Waterway	Total Coli	Fecal Coli	Nitrate	TDS	Ammonia	Stream Depth Inches	Current Weather	Past 24 hr Rain Fall, inches	Past 48 hr Rain Fall, inches	Past 72 hr Rain Fall, inches	Past 96 hr Rain Fall, inches	Season Rain Fall Total	Special Notes.
2-13-02	<b>J</b>	Big Creek at Unit 6 Lot 90, Deer Brush Court, below dam spillway			21	17	ND	58	ND	5.0	Partial Clouds	0.0	0.0	0.0	0.0	21.17	Water, Clear – Fast Moving
2-13-02	<b>L</b>	Big Creek at McKinley Way, Unit 10 Lot 1			20	4	ND	76	ND	1.0	Partial Clouds	0.0	0.0	0.0	0.0	21.17	Water, Clear, some foam
2-13-02	<b>M</b>	Big Creek at Pine Mountain Drive Bridge, above Lake Water			80	4	ND	36	ND	4.0	Partial Clouds	0.0	0.0	0.0	0.0	21.17	Water, Clear
2-13-02	<b>O</b>	Second Garrotte Creek at Pine Mountain Drive and Lower Skyridge Drive, above Lake Water			26	<2	ND	52	ND	2.75	Partial Clouds	0.0	0.0	0.0	0.0	21.17	Water, Clear
2-13-02	<b>N</b>	Second Garrotte Creek at Highway 120 crossing			4	4	ND	76	ND	3.5	Partial Clouds	0.0	0.0	0.0	0.0	21.17	Water, Clear, Thick layer of Iron Bacteria on bottom
2-13-02	<b>C</b>	First Garrotte Creek, Greenleaf Industries, 18653 Highway 120			80	23	0.04	94	ND	1.5	Partial Clouds	0.0	0.0	0.0	0.0	21.17	Water, Turbid - Milky
2-13-02	<b>A</b>	Merrill Road Fork of First Garrotte Creek, Van Gerpen, 18521 Hwy 120			350	8	-	-	-	-	Partial Clouds	0.0	0.0	0.0	0.0	21.17	Water, Turbid - Milky
2-13-02	<b>B</b>	Highway 120 Fork of First Garrotte Creek, 18522 Hwy 120			1,600	33	-	-	-	-	Partial Clouds	0.0	0.0	0.0	0.0	21.17	Water, Clear
2-13-02	<b>E</b>	Tannahill Source to First Garrotte Creek, Unit 5, PML			540	2	-	-	-	-	Partial Clouds	0.0	0.0	0.0	0.0	21.17	Water, Clear
1-30-02	<b>Y</b>	First Garrotte Creek, Above District Driveway	08:00		17	4	ND	122	ND	4.0	Clear, Cold Snow on Ground	0.0	0.23	0.06	0.91	20.39	Water, Clear





Sample Date	Sample #	Location	Time	Waterway	Total Coli	Fecal Coli	Nitrate	TDS	Ammonia	Stream Depth Inches	Current Weather	Past 24 hr Rain Fall, inches	Past 48 hr Rain Fall, inches	Past 72 hr Rain Fall, inches	Past 96 hr Rain Fall, inches	Season Rain Total	Special Notes
1-30-02	2	First Garrotte Creek, Pleasant View Drive, Horseshoe Pits	08:05		20	4	0.50	240	ND	6.5	Clear, Cold Snow on Ground	0.0	0.23	0.06	0.91	20.39	Water, Clear
1-30-02	3	First Garrotte Creek, Lift Station # 5, Above Lake Water	09:40		80	23	0.95	214	ND	4.0	Clear, Cold Snow on Ground	0.0	0.23	0.06	0.91	20.39	Water, Clear
1-30-02	4	First Garrotte Circle and Jackson Mill Drive	08:18		900	220	ND	210	ND	1.75	Clear, Cold Snow on Ground	0.0	0.23	0.06	0.91	20.39	Water, Slightly Turbid, Ice on edge of water
1-30-02	5	Ferretti Road and Unit 2 Lot 278. Below mailboxes on Ferretti Road	08:32		30	30	ND	150	ND	3.0	Clear, Cold Snow on Ground	0.0	0.23	0.06	0.91	20.39	Water, Clear, Ice on Rocks
1-30-02	6	Big Creek at Ferretti Road. PML Campgrounds	08:37		22	22	ND	72	ND	3.0	Clear, Cold Snow on Ground	0.0	0.23	0.06	0.91	20.39	Water, Clear, Lots of Ice in and around water
1-30-02	7	Big Creek at Unit 6 Lot 90, Deer Brush Court, below dam spillway	08:45		9	6	ND	70	ND	6.0	Clear, Cold Snow on Ground	0.0	0.23	0.06	0.91	20.39	Water, Slightly Turbid – Fast Moving
1-30-02	8	Big Creek at McKinley Way, Unit 10 Lot 1	09:11		14	2	ND	92	ND	2.5	Clear, Cold Snow on Ground	0.0	0.23	0.06	0.91	20.39	Water, Clear, Lots of Ice in and around water
1-30-02	9	Big Creek at Pine Mountain Drive Bridge, above Lake Water	09:23		8	4	ND	60	ND	6.0	Clear, Cold Snow on Ground	0.0	0.23	0.06	0.91	20.39	Water, Clear, Lots of Ice in and around water
1-30-02	10	Second Garrotte Creek at Pine Mountain Drive and Lower Skyridge Drive, above Lake Water	09:32		130	34	ND	98	ND	3.5	Clear, Cold Snow on Ground	0.0	0.23	0.06	0.91	20.39	Water, Clear, Lots of Ice in and around water
1-30-02	11	Second Garrotte Creek at Highway 120 crossing	09:54		50	50	ND	100	ND	4.0	Clear, Cold Snow on Ground	0.0	0.23	0.06	0.91	20.39	Water, Clear – Some Foam
1-30-02	12	First Garrotte Creek, Greenleaf Industries, 18653 Highway 120	10:01		27	13	ND	114	ND	1.75	Clear, Cold Snow on Ground	0.0	0.23	0.06	0.91	20.39	Water, Turbid – Milky





Sample Date	Ca Smp l #	Location waterway	Time	Waterway	Total Coli	Fecal Coli	Nitrate	TDS	Ammonia	Stream Depth Inches	Current Weather	Past 24 hr Rain Fall, inches	Past 48 hr Rain Fall, inches	Past 72 hr Rain Fall, inches	Past 96 hr Rain Fall, inches	Season Rain Fall Total	Special Notes.
1-30-02	A	Merrill Road Fork of First Garrotte Creek, Van Gerpen, 18521 Hwy 120	10:00		920	8	-	-	-	-	Clear, Cold Snow on Ground	0.0	0.23	0.06	0.91	20.39	Water, Turbid - Milky
1-30-02	B	Highway 120 Fork of First Garrotte Creek, 18522 Hwy 120	10:04		540	79	-	-	-	-	Clear, Cold Snow on Ground	0.0	0.23	0.06	0.91	20.39	Water, Clear
1-30-02	E	Tannahill Source to First Garrotte Creek, Unit 5, PML	10:17		>1,600	2	-	-	-	-	Clear, Cold Snow on Ground	0.0	0.23	0.06	0.91	20.39	Water, Clear
1-16-02	D	First Garrotte Creek, Above District Driveway	07:10		27	<2	ND	112	ND	3.5	Clear	0.0	0.0	0.0	0.0	18.87	Water, Clear
1-16-02	F	First Garrotte Creek, Pleasant View Drive, Horseshoe Pits	07:20		130	7	0.95	208	ND	5.0	Clear	0.0	0.0	0.0	0.0	18.87	Water, Clear
1-16-02	G	First Garrotte Creek, Lift Station # 5, Above Lake Water	08:45		130	30	0.45	200	ND	4.5	Clear	0.0	0.0	0.0	0.0	18.87	Water, Clear
1-16-02	H	First Garrotte Circle and Jackson Mill Drive	07:28		240	130	0.04	186	ND	70	ND	0.0	0.0	0.0	0.0	18.87	Water, Clear
1-16-02	I	Ferretti Road and Unit 2 Lot 278. Below mailboxes on Ferretti Road	07:38		80	11	.40	144	ND	3.0	Clear	0.0	0.0	0.0	0.0	18.87	Water, Clear
1-16-02	K	Big Creek at Ferretti Road. PML Campgrounds	07:42		50	22	ND	70	ND	4.0	Clear	0.0	0.0	0.0	0.0	18.87	Water, Slightly Turbid
1-16-02	J	Big Creek at Unit 6 Lot 90, Deer Brush Court, below dam spillway	08:04		23	13	ND	74	ND	6.0	Clear	0.0	0.0	0.0	0.0	18.87	Water, Slightly Turbid – Light White foam on shore
1-16-02	L	Big Creek at McKinley Way, Unit 10 Lot 1	08:24		13	<2	ND	52	ND	1.0	Clear	0.0	0.0	0.0	0.0	18.87	Water, Clear







Sample Date	Ca Smp l #	Location waterway	Time	Waterway	Total Coli	Fecal Coli	Nitrate	TDS	Ammonia	Stream Depth Inches	Current Weather	Past 24 hr Rain Fall, inches	Past 48 hr Rain Fall, inches	Past 72 hr Rain Fall, inches	Past 96 hr Rain Fall, inches	Season Rain Total	Special Notes.
1-16-02	M9	Big Creek at Pine Mountain Drive Bridge, above Lake Water	08:30		23	2	ND	62	ND	4.5	Clear	0.0	0.0	0.0	0.0	18.87	Water, Clear
1-16-02	O10	Second Garrotte Creek at Pine Mountain Drive and Lower Skyridge Drive, above Lake Water	08:38		50	50	ND	72	ND	3.0	Clear	0.0	0.0	0.0	0.0	18.87	Water, Clear
1-16-02	N11	Second Garrotte Creek at Highway 120 crossing	09:00		80	17	ND	82	ND	3.0	Clear	0.0	0.0	0.0	0.0	18.87	Water, Clear
1-16-02	G12	First Garrotte Creek, Greenleaf Industries, 18653 Highway 120	09:12		700	20	ND	102	ND	1.0	Clear	0.0	0.0	0.0	0.0	18.87	Water, Clear
01/07/02	Y1	First Garrotte Creek, Above District Driveway	08:00		130	8	0.85	118	ND	4.0	Cloudy	0.03	trace	0.02	0.0	18.87	Water, Clear – Fast Moving
01/07/02	F2	First Garrotte Creek, Pleasant View Drive, Horseshoe Pits	08:10		240	30	1.10	156	ND	6.5	Cloudy	0.03	trace	0.02	0.0	18.87	Water, Clear
01/07/02	C3	First Garrotte Creek, Lift Station # 5, Above Lake Water	09:31		500	300	1.05	166	ND	5.0	Cloudy	0.03	trace	0.02	0.0	18.87	Water, Clear
01/07/02	P4	First Garrotte Circle and Jackson Mill Drive	08:22		300	30	0.20	182	ND	1.0	Cloudy	0.03	trace	0.02	0.0	18.87	Water, Cloudy
01/07/02	I5	Ferretti Road and Unit 2 Lot 278. Below mailboxes on Ferretti Road	08:28		1400	600	1.40	132	ND	3.0	Cloudy	0.03	trace	0.02	0.0	18.87	Water, Clear
01/07/02	K6	Big Creek at Ferretti Road. PML Campgrounds	08:35		300	110	0.10	60	ND	8.0	Cloudy	0.03	trace	0.02	0.0	18.87	Water, Clear – Fast Moving Couldn't sample at previous spot





Sample Date	Ca Smp l #	Location waterway	Time	Waterway	Total Coli	Fecal Coli	Nitrate	TDS	Ammonia	Stream Depth Inches	Current Weather	Past 24 hr Rain Fall, inches	Past 48 hr Rain Fall, inches	Past 72 hr Rain Fall, inches	Past 96 hr Rain Fall, inches	Season Rain Fall Total	Special Notes.
01/07/02	7	Big Creek at Unit 6 Lot 90, Deer Brush Court, below dam spillway	08:46		130	80	ND	46	ND	10.0	Cloudy	0.03	trace	0.02	0.0	18.87	Water, Slightly Turbid
01/07/02	8	Big Creek at McKinley Way, Unit 10 Lot 1	09:05		500	17	ND	66	ND	3.0	Cloudy	0.03	trace	0.02	0.0	18.87	Water, Clear
01/07/02	9	Big Creek at Pine Mountain Drive Bridge, above Lake Water	09:16		300	130	ND	42	ND	7.0	Cloudy	0.03	trace	0.02	0.0	18.87	Water, Clear – Fast Moving Foam on North side shoreline
01/07/02	10	Second Garrotte Creek at Pine Mountain Drive and Lower Skyridge Drive, above Lake Water	09:24		240	17	ND	100	ND	3.5	Cloudy	0.03	trace	0.02	0.0	18.87	Water, Clear – Fast Moving
01/07/02	11	Second Garrotte Creek at Highway 120 crossing	09:46		170	2	ND	90	ND	4.0	Cloudy	0.03	trace	0.02	0.0	18.87	Water, Slightly Turbid – Fast Moving
01/07/02	12	First Garrotte Creek, Greenleaf Industries, 18653 Highway 120	10:00		400	50	0.02	118	ND	1.5	Cloudy	0.03	trace	0.02	0.0	18.87	Water, Slightly Turbid - Milky
12/19/01	1	First Garrotte Creek, Above District Driveway	07:45		140	50	ND	122	ND	3.75	Clear	0.0	0.52	0.0	0.0	13.05	Water, Clear
12/19/01	2	First Garrotte Creek, Pleasant View Drive, Horseshoe Pits	07:50		50	17	0.80	230	ND	7.0	Clear	0.0	0.52	0.0	0.0	13.05	Water, Clear
12/19/01	3	First Garrotte Creek, Lift Station # 5, Above Lake Water	09:20		300	300	0.50	226	ND	6.5	Clear	0.0	0.52	0.0	0.0	13.05	Water, Clear – Fast Moving
12/19/01	4	First Garrotte Circle and Jackson Mill Drive	08:00		220	80	ND	182	ND	1.25	Clear	0.0	0.52	0.0	0.0	13.05	Water, Turbid - Muddy





Sample Date	Ca Smp l #	Location waterway	Time	Waterway	Total Coli	Fecal Coli	Nitrate	TDS	Ammonia	Stream Depth Inches	Current Weather	Past 24 hr Rain Fall, inches	Past 48 hr Rain Fall, inches	Past 72 hr Rain Fall, inches	Past 96 hr Rain Fall, inches	Season Rain Fall Total	Special Notes.
12/19/01	I 5	Ferretti Road and Unit 2 Lot 278. Below mailboxes on Ferretti Road	08:10		80	30	ND	180	ND	3	Clear	0.0	0.52	0.0	0.0	13.05	Water, Clear
12/19/01	K 6	Big Creek at Ferretti Road. PML Campgrounds	08:17		240	50	ND	140	ND	10	Clear	0.0	0.52	0.0	0.0	13.05	Water, Clear – Some Foam and Ice
12/19/01	J 7	Big Creek at Unit 6 Lot 90, Deer Brush Court, below dam spillway	08:23		50	7	ND	228	ND	2.5	Clear	0.0	0.52	0.0	0.0	13.05	Water, Somewhat Turbid - Milky
12/19/01	L 8	Big Creek at McKinley Way, Unit 10 Lot 1	08:53		7	<2	0.10	94	ND	1	Clear	0.0	0.52	0.0	0.0	13.05	Water, Clear - Slow
12/19/01	M 9	Big Creek at Pine Mountain Drive Bridge, above Lake Water	09:04		33	12	ND	56	ND	6.5	Clear	0.0	0.52	0.0	0.0	13.05	Water, Clear – Fast Moving
12/19/01	O 10	Second Garrotte Creek at Pine Mountain Drive and Lower Skyridge Drive, above Lake Water	09:12		30	30	ND	88	ND	3.75	Clear	0.0	0.52	0.0	0.0	13.05	Water, Clear – Fast Moving
12/19/01	N 11	Second Garrotte Creek at Highway 120 crossing	09:35		130	20	ND	90	ND	7.5	Clear	0.0	0.52	0.0	0.0	13.05	Water, Clear
12/19/01	C 12	First Garrotte Creek, Greenleaf Industries, 18653 Highway 120	09:43		240	130	0.10	128	ND	1	Clear	0.0	0.52	0.0	0.0	13.05	Water, Somewhat Turbid - Milky
12/05/01	Y 1	First Garrotte Creek, Above District Driveway	07:12		500	230	0.5	110	ND	2.5	Cloudy	0.01	Trace	1.91	0.98	11.00	Water, Clear
12/05/01	F 2	First Garrotte Creek, Pleasant View Drive, Horseshoe Pits	07:18		500	80	1.35	294	ND	6	Cloudy	0.01	Trace	1.91	0.98	11.00	Water, Clear





Sample Date	Ca Smp #	Location waterway	Time	Waterway	Total Coli	Fecal Coli	Nitrate	TDS	Ammonia	Stream Depth Inches	Current Weather	Past 24 hr Rain Fall, inches	Past 48 hr Rain Fall, inches	Past 72 hr Rain Fall, inches	Past 96 hr Rain Fall, inches	Season Rain Fall Total	Special Notes.
12/05/01	3	First Garrotte Creek, Lift Station # 5, Above Lake Water	08:55		2,400	2,400	1.10	374	ND	4.5	Cloudy	0.01	Trace	1.91	0.98	11.00	Water, Clear
12/05/01	4	First Garrotte Circle and Jackson Mill Drive	07:28		9,000	1,700	ND	170	ND	1.75	Cloudy	0.01	Trace	1.91	0.98	11.00	Water, Clear
12/05/01	5	Ferretti Road and Unit 2 Lot 278. Below mailboxes on Ferretti Road	07:37		200	70	ND	184	ND	2	Cloudy	0.01	Trace	1.91	0.98	11.00	Water, Clear
12/05/01	6	Big Creek at Ferretti Road. PML Campgrounds	07:43		230	80	ND	140	ND	10	Cloudy	0.01	Trace	1.91	0.98	11.00	Water, Clear
12/05/01	7	Big Creek at Unit 6 Lot 90, Deer Brush Court, below dam spillway	07:55		20	<20	ND	298	ND	2	Cloudy	0.01	Trace	1.91	0.98	11.00	White Foam - Turbid
12/05/01	8	Big Creek at McKinley Way, Unit 10 Lot 1	08:25		40	<20	0.40	78	ND	1	Cloudy	0.01	Trace	1.91	0.98	11.00	Water, Clear, First Flow
12/05/01	9	Big Creek at Pine Mountain Drive Bridge, above Lake Water	08:38		170	20	ND	76	ND	4.5	Cloudy	0.01	Trace	1.91	0.98	11.00	Water, Clear, First Flow
12/05/01	10	Second Garrotte Creek at Pine Mountain Drive and Lower Skyridge Drive, above Lake Water	08:46		130	80	ND	100	ND	3	Cloudy	0.01	Trace	1.91	0.98	11.00	Water, Clear
12/05/01	11	Second Garrotte Creek at Highway 120 crossing	09:10		900	700	ND	106	ND	3.75	Cloudy	0.01	Trace	1.91	0.98	11.00	Water, Clear
12/05/01	12	First Garrotte Creek, Greenleaf Industries, 18653 Highway 120	09:20		2,200	1,100	0.60	156	ND	1.75	Cloudy	0.01	Trace	1.91	0.98	11.00	White Foam - Turbid
11/15/01	1	First Garrotte Creek, Above District Driveway	08:10		3,000	1,700	ND	178	ND	0.75	Clear	0.0	0.0	1.91	0.28	4.87	Water, Clear





Sample Date	Sample #	Location	Time	Waterway	Total Coli	Fecal Coli	Nitrate	TDS	Ammonia	Stream Depth Inches	Current Weather	Past 24 hr Rain Fall, inches	Past 48 hr Rain Fall, inches	Past 72 hr Rain Fall, inches	Past 96 hr Rain Fall, inches	Season Rain Total	Special Notes
11/15/01	2	First Garrotte Creek, Pleasant View Drive, Horseshoe Pits	08:15		1,200	200	1.30	346	ND	2.0	Clear	0.0	0.0	1.91	0.28	4.87	Water, Clear
11/15/01	3	First Garrotte Creek, Lift Station # 5, Above Lake Water			-	-	-	-	-	-	-	-	-	-	-	-	No flow, No sample collected
11/15/01	4	First Garrotte Circle and Jackson Mill Drive	08:25		3,000	400	ND	130	ND	0.5	Clear	0.0	0.0	1.91	0.28	4.87	Water, Clear
11/15/01	5	Ferretti Road and Unit 2 Lot 278. Below mailboxes on Ferretti Road			-	-	-	-	-	-	-	-	-	-	-	-	No flow, No sample collected
11/15/01	6	Big Creek at Ferretti Road. PML Campgrounds	08:40		3,000	2,300	1.2	190	ND	0.25	Clear	0.0	0.0	1.91	0.28	4.87	Water, Yellow, Clear with suspended Particles
11/15/01	7	Big Creek at Unit 6 Lot 90, Deer Brush Court, below dam spillway	08:48		400	<200	ND	146	ND	2.5	Clear	0.0	0.0	1.91	0.28	4.87	Water, Clear
11/15/01	8	Big Creek at McKinley Way, Unit 10 Lot 1			-	-	-	-	-	-	-	-	-	-	-	-	No flow, No sample collected
11/15/01	9	Big Creek at Pine Mountain Drive Bridge, above Lake Water	09:27		900	200	ND	100	ND	1.75	Clear	0.0	0.0	1.91	0.28	4.87	Water, Green/Yellow, Clear with suspended Particles
11/15/01	10	Second Garrotte Creek at Pine Mountain Drive and Lower Skyridge Drive, above Lake Water			-	-	-	-	-	-	-	-	-	-	-	-	No flow, No sample collected
11/15/01	11	Second Garrotte Creek at Highway 120 crossing	10:04		200	<200	ND	186	ND	2.5	Clear	0.0	0.0	1.91	0.28	4.87	Water, Clear
11/15/01	12	First Garrotte Creek, Greenleaf Industries, 18653 Highway 120	09:50		50,000	30,000	0.20	192	ND	1.75	Clear	0.0	0.0	1.91	0.28	4.87	Water, Clear





Sample Date	Ca Smp l # / Site #	Location waterway	Time	Waterway	Total Coli	Fecal Coli	Nitrate	TDS	Ammonia	Stream Depth Inches	Current Weather	Past 24 hr Rain Fall, inches	Past 48 hr Rain Fall, inches	Past 72 hr Rain Fall, inches	Past 96 hr Rain Fall, inches	Season Rain Fall Total	Special Notes.
10/31/01	1	First Garrotte Creek, Above District Driveway	06:35		>16,000	2,800	0.65	170	0.12	1.5	Clear	1.15	0.23	0.0	0.0	1.15	Slow flow
10/31/01	2	First Garrotte Creek, Pleasant View Drive, Horseshoe Pits	06:45		>16,000	9,000	2.50	186	0.28	5.0	Clear	1.15	0.23	0.0	0.0	1.15	No flow, standing pool
10/31/01	3	First Garrotte Creek, Lift Station # 5, Above Lake Water	08:26		>16,000	>16,000	3.40	144	ND	1.75	Clear	1.15	0.23	0.0	0.0	1.15	No flow, standing pool
10/31/01	4	First Garrotte Circle and Jackson Mill Drive	06:55		>16,000	2,400	ND	226	ND	0.5	Clear	1.15	0.23	0.0	0.0	1.15	Collected sample upstream of coliform sample location.
10/31/01	5	Ferretti Road and Unit 2 Lot 278. Below mailboxes on Ferretti Road	07:15		>16,000	1,700	2.45	120	ND	5.0	Clear	1.15	0.23	0.0	0.0	1.15	No flow, standing pool
10/31/01	6	Big Creek at Ferretti Road. PML Campgrounds			-	-	-	-	-	-	-	-	-	-	-	-	No flow, No sample collected
10/31/01	7	Big Creek at Unit 6 Lot 90, Deer Brush Court, below dam spillway	07:35		900	300	ND	160	ND	2.0	Clear	1.15	0.23	0.0	0.0	1.15	Steady flow, Dirty foam on water
10/31/01	8	Big Creek at McKinley Way, Unit 10 Lot 1			-	-	-	-	-	-	-	-	-	-	-	-	No flow, No sample collected
10/31/01	9	Big Creek at Pine Mountain Drive Bridge, above Lake Water	08:12		16,000	500	0.33	140	ND	1.5	Clear	1.15	0.23	0.0	0.0	1.15	Steady Flow
10/31/01	10	Second Garrotte Creek at Pine Mountain Drive and Lower Skyridge Drive, above Lake Water			-	-	-	-	-	-	-	-	-	-	-	-	No flow, No sample collected
10/31/01	11	Second Garrotte Creek at Highway 120 crossing	08:47		2,400	1,300	ND	152	ND	2.5	Clear	1.15	0.23	0.0	0.0	1.15	Very low flow, foam on water edge





Sample Date	Ca/Smp #	Location	Time	Waterway	Total Coli	Fecal Coli	Nitrate	TDS	Ammonia	Stream Depth Inches	Current Weather	Past 24 hr Rain Fall, inches	Past 48 hr Rain Fall, inches	Past 72 hr Rain Fall, inches	Past 96 hr Rain Fall, inches	Season Rain Fall Total	Special Notes.
10/31/01	12	First Garrotte Creek, Greenleaf Industries, 18653 Highway 120			-	-	-	-	-	-	-	-	-	-	-	-	No flow, No sample collected



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