

SJC WATER QUALITY LABORATORY

METHOD APPROVAL FORM

Method Number N/A

Method Name Sample Collection Methods for Acute and Chronic Bioassay Testing

Version 10.1.0

Date December 28, 2010

*Reasons for
Method Revision* Annual Review

SIGNATURE

DATE

Revisions by:

Stefan Szalkowski
Laboratory Technician I
SJCWQL-Biology

Written by:

Misty Brown
Biologist II
SJCWQL Biology

Approved by:

Jay P. Bottomley
Laboratory Supervisor
SJCWQL Biology

Final Approval:

Shawn Thompson
Laboratory Supervisor
Biological Sciences
SJCWQL

INTRODUCTION

The Biology Department of the San Jose Creek Laboratory is responsible for collecting effluent samples from the San Jose Creek, Pomona, Whittier Narrows, Los Coyotes, Long Beach, Saugus, Valencia, Lancaster and JWPCP Water Reclamation Plants, as well as from receiving waters at monitoring stations along the San Gabriel River, Coyote Creek, San Jose Creek, Rio Hondo River, Santa Clara River, and Lancaster holding ponds for use in bioassay testing. At the time of sample collection, physical and chemical analyses are also conducted. Samples collected for bioassays are transported back to the laboratory in an appropriate manner to accurately represent the integrity of the effluent and receiving water. The sample is meant to represent the effluent or receiving water as a whole.

1 Scope and Application

- 1.1 Effluent, receiving water, and dilution water samples are collected for use in chronic, acute, and toxicity identification evaluation (TIE) bioassays and organism culturing.
- 1.2 Collection of receiving water samples also includes various physical observations and chemical analyses to be taken at the time of sampling.

2 Summary of Procedure

- 2.1 Obtain sampling equipment based on sampling needs (refer to Sections 5 & 6).
- 2.2 Obtain appropriate sample containers from the Sample Receiving Section of SJCWQL or storage shed.
- 2.3 Samples are collected at water reclamation plants or receiving water sites. Some samples may require chemical preservation (refer to section 7.6).
- 2.4 Samples must be checked for residual chlorine after collection. If chlorine is present, samples must be quantified immediately following collection. Total residual chlorine concentration and time of analysis will be documented on the chain of custody (COC).
- 2.5 Samples are preserved on ice and transported back to the laboratory for analysis.

3 Handling & Preservation

- 3.1 Latex gloves must be worn when working with acids. Some samples require chemical preservation. Samples are acidified at a ratio of 5 ml of acid per liter of sample (i.e. ammonia samples are preserved with 1.25 ml H_2SO_4 for a 250 ml sample and hardness samples are preserved with 1.25 ml HNO_3 for a 250 ml sample).
- 3.2 All samples and subsamples are placed in coolers containing ice slurry. Upon returning to SJCWQL, temperatures should not exceed 4.0°C for all samples stored longer than one hour.
- 3.3 Upon return to the SJCWQL, samples are stored in a 4.0°C cooler until they are ready for use.

4 Interferences

- 4.1 Unsafe conditions may result in the cancellation of sample collection.
- 4.2 Receiving water samples are not collected until 48 hours after a rain event, which is intended to minimize influence from runoff sources. If storm runoff is present, sampling is not conducted.
- 4.3 Used or tampered containers may result in contamination of a sample.

5 Apparatus & Equipment

5.1 Obtain the following equipment and supplies as necessary for the receiving water location or WRP to be sampled (refer to Appendix 2 in the *River Monitoring Methods and Procedures* SOP for the sampling checklist):

- 5.1.1 Fultz pump and hose reel (pump head, batteries, connector hose)
- 5.1.2 Stainless steel bucket
- 5.1.3 Safety Vest
- 5.1.4 Hard hat
- 5.1.5 Rope
- 5.1.6 60-Φm filter funnel (For marine dilution water sampling)
- 5.1.7 Digital thermometer
- 5.1.8 Phone
- 5.1.9 Coolers with ice/water slurry
- 5.1.10 Safety glasses
- 5.1.11 Waders (Refer to SOP on *Treatment Methods to Prevent the Spread of Aquatic Invasive Species*)
- 5.1.12 Compass
- 5.1.13 Boat, oars, flotation vest, safety line, and anchor
- 5.1.14 Boat pump
- 5.1.15 Funnel
- 5.1.16 Gate keys
- 5.1.17 Newhall Permit
- 5.1.18 Digital camera
- 5.1.19 Cell phone
- 5.1.20 SIGMA sampler (for WRP diazinon samples)
- 5.1.21 GPS

6 Reagents & Consumable Materials

6.1 Sample containers

6.1.1 Receiving water samples

- 6.1.1.1 250 ml plastic container for AOK-Nitrogen
- 6.1.1.2 500 ml plastic container for Wet Chem
- 6.1.1.3 250 ml plastic container for Hardness
- 6.1.1.4 4 L cubitainers for sample collection (refer to monthly sampling schedule to determine sample volume)
- 6.1.1.5 1 L glass amber bottle for diazinon/chlorpyrifos

6.1.2 Effluent samples

- 6.1.2.1 500 ml plastic container for Wet Chem
- 6.1.2.2 250 ml plastic container for Hardness

6.1.2.3 250 ml plastic container for AOK-Nitrogen (only collected for Lancaster and JWPCP – acute and chronic samples)

6.2 Data sheets (refer to Appendix 2)

6.2.1 Chain of Custody (COC)

6.2.2 Sample Log-in form (for receiving water locations & SJC-E/W WRP bioassay samples)

6.2.3 Ambient Observation sheet

6.3 Labels

6.4 1:1 Sulfuric acid vials

6.5 1:1 Nitric acid vials

6.6 Chlorine residual kit (pH 4 buffer, starch, potassium iodide)

6.7 Pens/Markers (waterproof)

6.8 Disposable latex gloves

7 Sampling Procedure

7.1 Label all containers, with a minimum of sample location, date and time of collection, sample type (grab or composite), initials of the sampler(s), and put LIMS labels on the containers. Print out LIMS paperwork to accompany samples for login.

7.1.1 Labels are generated using LIMS for all receiving waters. To generate labels, log into LIMS and select *Samples*→*Labels*. Close “Advanced Find” and “Labels” windows and then click “Auto Create” on the right hand side of the menu button bar.

7.1.1.1 Select **Pre-Login** and enter your Biology profile number (Refer to “Biology Group LIMS Profiles” form in Appendix 3). Enter in your scheduled collect date in the “Sch Collected Date From” and “To” fields. Make sure “Labels for Each Container” is selected and that the printer number is referenced to Biology’s label maker (105). Press “OK.”

7.1.1.2 Click “Print” to print the labels.

7.1.2 To print out required paperwork for receiving water locations and river runs from LIMS: select **Systems**; select **Run Reports**; enter “Login Form (Condensed)” (or use “list of values” button) into the field and click “OK”; enter the collect date and Biology profile number (Refer to “Biology Group LIMS Profiles” form in Appendix 3) into the Parameters tab of the new window. Set “Group by Collect Time” to “True” and click submit. Download and print the required login forms. Refer to section 7.7.4 for details. Refer to Appendix 2 for examples of WRP and receiving water login sheets.

7.1.2.1 The TPL staff will create the LIMS COC/login forms and print the labels (for the sample bottles and cubitainers) for all plant effluent

bioassay samples. The LIMS labels for the plant samples should be zip tied to the top of the cubitainers. Biology will provide the bottles for the water chemistry samples.

7.1.2.1.1 SJCWRP is an exception in regards to paperwork. Biology staff will print the login/COC form for SJC-East and SJC-West WRP effluent samples. This should be done prior to the day of sample collection. The TPL staff ONLY prints out LIMS labels for sample bottles and cubitainers. Refer to Appendix 2 for an example.

7.2 Use clean, non-contaminated waders for each sample event to eliminate the possibility of transferring the non-native, invasive New Zealand mud snail. Only one pair of waders can be exposed to a river system. For example, waders used in San Jose Creek cannot be worn again to sample in the San Gabriel River. After each outing, rinse waders and place in the -25 degree freezer that is located to the left of the bottle barn or leave out for 48 hours before re-use. Refer to the *Treatment Methods to Prevent the Spread of Aquatic Invasive Species SOP*.

7.3 Collect the sample using the appropriate sampling method.

7.3.1 Grab: Receiving water samples are collected using one of the following grab techniques. Note: Grab sampling time should not exceed 20 minutes from start to finish.

7.3.1.1 Immersion grab: Facing upstream, immerse suitable container in receiving water and lift out when filled.

7.3.1.2 Field submersible sampling pump: Completely submerge pump head into sample water and purge sampler tubing for approximately one minute or until the sampler has been sufficiently purged of the previous sample prior to sample collection.

7.3.1.3 Stainless steel bucket: Rinse bucket at least three times prior to filling bucket with sample. Face upstream and partially immerse the bucket in the stream and lift out when filled. Pour sample in container.

7.3.2 Composite (TPL): All effluent chronic toxicity test samples are flow proportioned, composite samples. Three samples are usually collected during a testing period. Samples are pulled by Treatment Plant Laboratory (TPL) personnel.

7.3.2.1 Once composite samples are collected, residual chlorine is measured immediately after collection, laboratory personnel dechlorinate the samples, and then they are stored in a lab refrigerator. A qualitative chlorine residual test is conducted in the

biology lab prior to being used in a bioassay to verify that the samples were dechlorinated (refer to section 7.5.2).

7.3.2.2 JWPCP composite samples are collected by the treatment plant personnel of the JWPCP Process Control Laboratory. Residual chlorine is measured immediately after collection, but JWPCP laboratory personnel do not dechlorinate the samples. Samples are dechlorinated upon return to the SJC biology laboratory prior to being used in a bioassay.

7.3.2.2.1 If samples are being collected for West Basin, the samples must be dechlorinated at JWPCP by biology personnel prior to relinquishing the samples to West Basin staff.

7.3.3 Composite (Biology): Sigma samplers are used to collect diazinon and chlorpyrifos samples at Pomona WRP (refer to section 7.2 of the “River Monitoring Methods and Procedures” SOP).

7.3.3.1 Under the Program Set-up select “POM DZ Comp” for the preset program.

7.4 Collect the appropriate sample volume based on test type and species.

7.4.1 Acute Bioassay Testing (test code, test description, and total volume)

7.4.1.1 B02 - 1985 Fathead Acute % Survival

7.4.1.1.1 60 L sample

7.4.1.2 B18 - 2002 Fathead Minnow Acute

7.4.1.2.1 4 L sample

7.4.1.3 B19 - 2002 *Menidia* Acute

7.4.1.3.1 4 L sample

7.4.1.4 B22 - Topsmelt Acute

7.4.1.4.1 4 L sample

7.4.2 Chronic Bioassay Testing (test code, test description, and sample volume)

7.4.2.1 B04 - B05: *Pimephales* Chronic Survival & Growth

7.4.2.1.1 NPDES compliance bioassays

7.4.2.1.1.1 27 L in three samples (8 L, 8 L, 11 L)

7.4.2.1.2 NPDES non-compliance bioassays

7.4.2.1.2.1 12 L in three samples (4L, 4L, 4L)

7.4.2.2 B06 - B07: *Ceriodaphnia* Chronic Survival & Reproduction

7.4.2.2.1 NPDES compliance bioassays

7.4.2.2.1.1 18 L in 3 samples (5 L, 5 L, 8 L)

7.4.2.2.2 NPDES non-compliance bioassays

7.4.2.2.2.1 12 L in 3 samples (4L, 4L, 4L)

7.4.2.3 B08 – *Psuedokirchneriella* Chronic Growth

7.4.2.3.1 4 L sample

- 7.4.2.4 B09 - B10: Kelp Chronic Germination & Growth
 - 7.4.2.4.1 10 L sample
- 7.4.2.5 B11 – *Americamysis* Chronic Survival & Growth
 - 7.4.2.5.1 32 L in three samples (9L, 14L, 9L)
- 7.4.2.6 B14 - *Menidia* Chronic Survival & Growth
 - 7.4.2.6.1 53 L in three samples (15L, 23L, 15L)
- 7.4.2.7 B20 - Topsmelt Chronic Survival & Growth
 - 7.4.2.7.1 18 L sample in three samples (5L, 8L, 5L)
- 7.4.2.8 B23 - Purple Urchin Fertilization
 - 7.4.2.8.1 1 L sample

7.4.3 Marine Dilution Water

- 7.4.3.1 Collect the required sample volume at the pier of Scripps Institute of Oceanography in San Diego, CA. Refer to section 2.4.1 in Appendix 1.
 - 7.4.3.1.1 Filter seawater using 60 µm mesh before collecting in carboys.

7.5 Make on-site observations and readings as necessary.

- 7.5.1 Take the temperature of the sample and fill out the top portion of the chain of custody (COC, see Appendix 2).
- 7.5.2 Effluent and receiving water grab samples must be tested qualitatively for residual chlorine immediately upon collection.
 - 7.5.2.1 A chlorine residual is performed on a 100 ml subsample of receiving water. In an Erlenmeyer flask containing the 100 ml subsample, add approximately 4 ml of pH 4 buffer to flask. Next, add approximately 1 g of potassium iodide crystals and mix. Add approximately 1 ml of starch. If the sample turns a blue color, chlorine is present. Be sure to collect the receiving water sample in a stainless steel bucket so that if chlorine is present, the remaining volume (in the bucket) can be submitted for quantification.
 - 7.5.2.2 If chlorine is present, the residual chlorine of the sample should be quantified immediately. Pour a sub-sample (250 ml minimum) from the sampling bucket and take it to the nearest treatment plant laboratory (TPL) for quantification. Quantify the chlorine according to Test 302 in the Laboratory Procedures Manual.
 - 7.5.2.3 Call Misty Brown (x3035) or Carlita Barton (x3093) before leaving the sampling location to inform them of the situation. Notify the Supervisor of Treatment Plant Operations for the appropriate plant. Upon returning to SJCWQL, an e-mail memo of the violation must be written which should include the time, date, and location of the violation, any significant observations, and

residual chlorine values determined at the TPL, along with any other chlorine data taken from other location(s). The memo must be addressed to Misty Brown and Carlita Barton.

- 7.5.3 Record field observations for all receiving water samples using the "Ambient Station Observation Sheet" (Refer to Appendix 3). Each form may be used for up to three sampling events for the same test.

7.6 Collect sub-samples for chemical analysis.

- 7.6.1 Collect a 500-ml "Wet Chem" sample in a plastic bottle for WRP composites and freshwater receiving water stations. Do not submit a "Wet Chem" sample for JWPCP (acute and chronic) or for marine receiving water samples. Samples are submitted for conductivity and alkalinity analyses. This sample does not require preservation.
- 7.6.2 Collect a 250 ml "Hardness" sample in a plastic bottle for WRP composites and freshwater receiving water stations. Do not submit a "Hardness" sample for JWPCP (acute and chronic) or marine receiving water samples. This sample is preserved by adding approximately 1.25 ml (1/4 of a vial) of nitric acid to 250 ml of sample.
- 7.6.3 Collect a 250 ml ammonia sample in a plastic bottle for JWPCP (acute and chronic), Lancaster (receiving water and effluent), and for the 100-foot ammonia compliance locations under the LB, LC, WN, and SJC permits (acute and chronic). Preserve sample by adding 1.25 ml of sulfuric acid (1/4 of a vial).

- 7.6.3.1 The ammonia samples that are collected at the 100-foot ammonia compliance locations (i.e. LB-RA1B, LC-R31B, SJC-R2, SJC-C2, SJC-R11, SJC-R12, and the WN "B" stations) are not logged in. Use the generic ammonia label. pH and temperature are also taken at these locations. Record the data in the blue folder located in each vehicle. Do not obtain LIMS ID numbers for these analyses.

- 7.6.3.2 These samples are only logged in if toxicity is present. A biologist will inform samplers if these samples need to be logged in after test termination.

- 7.6.4 Diazinon/chlorpyrifos must be sampled concurrently with bioassay samples. Collect a 1 L sample in an amber glass bottle as scheduled. The sample must be collected using a sterile sampling technique. Collect the sample directly from the water source (do not use a bucket or secondary container). Refer to Appendix 3 for details.

7.7 Sample processing upon arrival to SJCWQL.

- 7.7.1 Remove samples from the cooler, measure the temperature of the sample, and record it, along with the received time, on the chain of custody (COC) sheet in the "Received By" section.
- 7.7.2 For WRP samples (or any samples that were not previously checked by biology staff for the presence of chlorine), check for the presence of chlorine.
 - 7.7.2.1 Pour off 100 ml of sample, adjust the temperature to $20 \pm 2^{\circ}\text{C}$, and check for the presence of chlorine. If chlorine is not present, enter "<0.05 mg/L chlorine" in the provided space on the COC. Label the sample container "<0.05 mg/L Cl_2 " and include tester's initials. If residual chlorine is present, dechlorinate the sample with sodium sulfite. Enter under "Notes" that the sample was dechlorinated by SJC Biology staff and include tester's initials. Always re-check for chlorine on WRP samples to ensure that the sample was completely dechlorinated.
- 7.7.3 Receive the WRP samples in LIMS the same day as collection.
 - 7.7.3.1 Log into LIMS and select *Batching* → *New Batch* from the menu bar.
 - 7.7.3.2 Use the queue "RECI" (lower-case "L") to receive the cubitainers. Type this in the "queue" field in the Advanced Find window.
 - 7.7.3.3 Click Ok, then double-click on the "RECI" that will show up on the New Batch window.
 - 7.7.3.4 Un-check any samples you don't wish to receive and click "Build Batch."
 - 7.7.3.5 Save your batch, then select *Operations* → *Posting* → *By Batch* from the menu bar.
 - 7.7.3.6 In the "Run Date" field, type in the same date/time that you entered on the Time of Receipt part of the Bioassay COC.
 - 7.7.3.7 Save your changes and then close all windows. The samples are received.
- 7.7.4 Submit the completed log-in sheet and any chemical samples to Sample Receiving where a LIMS ID number will be assigned for receiving water samples. The plant samples will also be submitted to Sample Receiving but a LIMS ID number is not obtained; the sample should already have a LIMS ID obtained by the TPL.
 - 7.7.4.1 Place the log-in form in the "To be checked" folder which will then be put with the corresponding bioassay paperwork.
- 7.7.5 Complete the "Chain of Custody" (COC) form.
 - 7.7.5.1 Samples for in-house testing

- 7.7.5.1.1 On the in-house COC, fill out test requirement, sample collection site, corresponding NPDES permit, and laboratory responsible for sampling.
- 7.7.5.1.2 Check the appropriate bioassay(s) being performed with the sample.
- 7.7.5.1.3 Record the sample container information. Descriptions should read exactly how the sample container is labeled.
- 7.7.5.1.4 Document sampler's name and obtain signature of sampler, date and time sample was received, chlorine residual value and temperature of sample.
- 7.7.5.1.5 Fill out the "RECEIVED BY" section upon arrival at the laboratory.
- 7.7.5.1.6 Circle the appropriate destination of the sample.
- 7.7.5.1.7 Record any notes regarding the sample, including if SJC Biology dechlorinated the sample.
- 7.7.5.1.8 Place the COC in the "To be Checked" folder so that they can be reviewed. Once reviewed they are photocopied and the copies are placed in a storage box. The copies of COCs are held for approximately three months or until pertinent bioassay reports have been completed and we can be certain the original COC has not been misplaced.
- 7.7.5.1.9 The original COC can be placed with the corresponding bioassay paperwork.
- 7.7.5.1.10 If any information is missing on the COC for a plant sample, a report can be run in LIMS.
 - 7.7.5.1.10.1 Log-in to LIMS and select "Systems" → "Run Reports"
 - 7.7.5.1.10.1.1 Type in or select "Bioassay Sample Report" from the drop down menu.
 - 7.7.5.1.10.1.2 Enter in the valid Lab ID number and press "Select".

7.7.5.2 Samples being shipped to a contract laboratory

- 7.7.5.2.1 Complete the COC as you normally would but rather than filling out the "received by" section you must fill out the "relinquished by" section. If the sample is to be picked up or shipped out to a contract laboratory, the representative must fill out the "received by" section. A copy of the COC is held at the SJC Biology Laboratory.
 - 7.7.5.2.1.1 For a sample being shipped out, a "shipping batch" needs to be built for SJC-E WRP, SJC-W

WRP, and receiving water bioassay samples.
All other WRP samples do not require the steps listed below; signing the COC is the only record of transfer to SJC Biology staff.

- 7.7.5.2.1.1.1 Select **Batching→New Batch** from the menu bar.
- 7.7.5.2.1.1.2 Type in the queue as “SHPa” and click “OK.”
- 7.7.5.2.1.1.3 Double-click on the appropriate shipping description (ex. “Ship to Aquatic Testing Laboratory”, etc.). Select the samples to be transferred and click “Build Batch.”
- 7.7.5.2.1.1.4 “Save” your batch and click “Yes” in the next window to take custody of the containers.
- 7.7.5.2.1.1.5 The “Transfer Containers” window will open. In the “reason” field use the “List of Values” to select the appropriate shipping reason (ex. “Ship to Subcon Aquatic Testing Lab”)
- 7.7.5.2.1.1.6 Save the transfer and close the pop-up report and “Output Containers” window.
- 7.7.5.2.1.1.7 Select **Operations→Posting→By Batch.**
 - 7.7.5.2.1.1.7.1 In the Run Date field, type in the current time and date. Save your changes and close all windows. Samples are now shipped.

7.7.6 Deliver sample to proper location.

7.7.6.1 All samples to be used for in-house testing are stored in a 4°C cooler until they are needed for test initiation or renewal.

7.7.6.2 All samples that are to be shipped to a contract laboratory are shipped via FedEx.

- 7.7.6.2.1 Line cooler with two plastic bags, add ice, and place samples into ice.
- 7.7.6.2.2 Knot and zip tie both bags to reduce water leakage.
- 7.7.6.2.3 After making a photocopy for our records, place the COC and LIMS COC in the plastic envelope on the inside lid of the cooler.

- 7.7.6.2.4 Tape ice chest shut with duct tape.
- 7.7.6.2.5 Prepare a Federal Express Label from the Internet. Make sure the sample is set up for Priority Overnight shipping. Refer to FedEx shipping instructions for details.
- 7.7.6.2.6 Place the cooler(s) in the area designated for FedEx pick-up located at the stockroom's loading dock.

8 Quality Control

- 8.1 All effluent and receiving water samples collected require a chain of custody to track the samples used during each test. Receiving water samples also require an observation sheet to document the current conditions at the time of sample collection.
- 8.2 All samples are checked when they are relinquished to ensure that they meet the temperature requirements and are in the same condition as they were upon sample collection.

9 Method Performance

- 9.1 The sampling equipment (e.g. bucket, pump, etc.) must be thoroughly rinsed with receiving water before the sample is collected to avoid contamination between receiving water samples.
- 9.2 Sample containers must be new and clean to avoid contamination.
- 9.3 All samples must be transported to the SJCWQL in ice, and upon arrival, samples should be $<4.0^{\circ}\text{C}$ unless they have been on ice for a short period of time, i.e. less than one hour.
- 9.4 Sample containers that are leaking or damaged will not be submitted for chemical analysis.

10 References

10.1 *River Monitoring Methods and Procedures* SOP

Appendix 1:

**Sampling Locations &
Sampling Specific Procedures**

Sampling Locations

1 Specific sampling procedures and locations for effluent samples.

1.1 Joint Water Pollution Control Plant (JWPCP)

1.1.1 Acute and Chronic: Collect a 24-hour composite sample of the final effluent from the JWPCP laboratory.

1.1.1.1 From SJCWQL, take 605 South to 105 West or 91 West or 405 North. Exit 110 South to Sepulveda Blvd and turn left. Turn right at Figueroa. The JWPCP is on both sides of Figueroa just south of the railroad tracks. Turn left into JWPCP.

1.1.1.2 Stop at the security gate and use your badge to enter the plant. Make a right after the booth at the stop sign. Park in front of the laboratory building and enter into the main entrance of the laboratory building.

1.1.1.3 Samples for acute and chronic bioassay are collected by JWPCP personnel. Proceed to the east side of the street to the Process Control Lab (PCL). Enter thru the access door using your I.D. card on the card reader to open the door. The sample container should be in the sample-receiving refrigerator. If you cannot locate the sample, contact Susan Mizoguchi (x5640) or Greg Hoerner (x5512) at JWPCP. Pour a subsample for ammonia analysis into a 250 ml bottle from the sample container and preserve with sulfuric acid. Have the COC signed by the person who collected the sample. Place samples on ice during transport.

1.2 Long Beach WRP

1.2.1 Acute and Chronic: Collect a 24-hour composite sample of the final effluent from the Long Beach WRP TPL.

1.2.1.1 From SJCWQL, take the 605 Fwy South. Exit Spring Street and turn right, then turn left at Studebaker. Proceed south on Studebaker, and then turn left on Willow Street. Pass over the San Gabriel River. The Long Beach plant is visible on the right. The gate code is #1492#.

1.2.1.2 The samples are collected by LBWRP personnel and are stored in the refrigerator. Collect the necessary sub-samples. Fill out the COC with the appropriate information and have the person who sampled sign the COC. Put LIMS labels on cubitainers and bottles. Place samples on ice during transport.

1.3 Los Coyotes WRP

1.3.1 Acute and Chronic: Collect a 24-hour composite sample of the final effluent from the Los Coyotes WRP TPL.

1.3.1.1 Take the 605 Fwy South, exit Alondra and continue straight through the signal. Take this street past the golf course; the street ends at the Los Coyotes WRP. The gate code is #1492#.

1.3.1.2 The samples are collected by LCWRP personnel and stored in a small refrigerator. Collect the necessary sub-samples. Fill out the COC with the appropriate information and have the person who sampled sign the COC. Put LIMS labels on cubitainers and bottles. Place samples on ice during transport.

1.4 Pomona WRP

1.4.1 Acute and Chronic: Collect a 24-hour composite sample of the final effluent from the Pomona WRP TPL.

1.4.1.1 Take the 60 Fwy East and transition to the 57 Fwy North. Exit at Temple Avenue and turn right, then turn left at Diamond Bar Blvd. Turn left on Humane Way. Turn left into the small driveway before the railroad tracks and proceed into the plant. The gate code is #1776#.

1.4.1.2 The samples are collected by POMWRP personnel and stored in a refrigerator. Collect the necessary sub-samples. Fill out the COC with the appropriate information and have the person who sampled sign the COC. Put LIMS labels on cubitainers and bottles. Place samples on ice during transport.

1.5 Saugus WRP

1.5.1 Acute and Chronic: Collect a 24-hour composite sample of the final effluent from the Saugus WRP TPL.

1.5.1.1 Take the 605 Fwy North to the 210 Fwy West to the 5 Fwy North. Exit Valencia and turn right. Turn right at Magic Mountain Blvd. At Bouquet Canyon Road turn left. Pass the feed store/animal hospital on the right and turn right onto the small, steep driveway just beyond the feed store. Use caution when crossing the railroad tracks because

Metrolink trains utilize these tracks. Follow the service road to the Saugus WRP and use the remote gate opener to enter.

- 1.5.1.2 The samples are collected by Saugus WRP personnel and are stored in the refrigerator. Collect the necessary sub-samples. Fill out the COC with the appropriate information and have the person who sampled sign the COC. Put LIMS labels on cubitainers and bottles. Place samples on ice during transport.

1.6 San Jose Creek WRP

- 1.6.1 Acute and Chronic: Collect a 24-hour composite sample of the final effluent from the San Jose Creek WRP.

- 1.6.1.1 San Jose Creek West and East: The samples are stored in the treatment plant laboratory's refrigerator. Collect the necessary sub-samples. Fill out the COC with the appropriate information and have the person who sampled sign the COC. Put LIMS labels on cubitainers and bottles. Take the samples to the sample preparation area of the Biology Laboratory and fill out the "received by" section of the COC, check for chlorine, and place the cubitainer in the 4°C cooler. The receiving temperature reading and time are the same as the initial readings.

1.7 Valencia WRP

- 1.7.1 Acute and Chronic: Collect a 24-hour composite sample of the final effluent from the Valencia WRP.

- 1.7.1.1 Take the 605 Fwy North to the 210 Fwy West to the 5 Fwy North. Exit at Magic Mountain Parkway and turn left. At the Old Road turn right. After passing Rye Canyon Road turn left. Enter the plant.
 - 1.7.1.2 The samples are collected by Valencia WRP personnel and are stored in the refrigerator. Collect the necessary sub-samples. Fill out the COC with the appropriate information and have the person who sampled sign the COC. Put LIMS labels on cubitainers and bottles. Place samples on ice during transport.

1.8 Whittier Narrows WRP

- 1.8.1 Acute and Chronic: Collect a 24-hour composite sample of the final effluent from the Whittier Narrows WRP.

- 1.8.1.1 From SJCWQL, take the 60 Fwy West, exit at Rosemead Blvd. and turn left. Continue on Rosemead past the nursery on the right. The entrance to the Whittier Narrows WRP is immediately following the nursery on the right hand side. The gate code is #1812#.
- 1.8.1.2 The treatment plant lab is upstairs in the plant operations building. Use the south stairs on the outside of the building. The chronic samples are stored in the refrigerator. Collect the necessary sub-samples. Fill out the COC with the appropriate information and have the person who sampled sign the COC. Put LIMS labels on cubitainers and bottles. Place the samples on ice for transport.

1.9 Lancaster WRP

- 1.9.1 Acute and chronic: Collect a grab sample of the final effluent from the Lancaster WRP.

- 1.9.1.1 Take 605 fwy North. Merge onto 210 fwy West. Merge onto 5 fwy North. Merge onto Hwy 14 North. Exit D St. Turn right. Before going to the sampling point, turn left into the Lancaster plant and continue past the gate to the Lab to obtain a remote for opening the gate to continue to the final effluent. Leave the plant and turn right to continue on D St. Turn left on Sierra Hwy. Turn Right on Avenue C. Turn right on first unmarked asphalt road. Proceed through gate and turn left before reservoir. The sampling point is in a small shack located just north of the northeast corner of the reservoir. Sample the effluent using the field submersible pump. Collect the necessary sub-samples. Fill out the COC with the appropriate information and have the person who sampled sign the COC. Place samples on ice during transport.

2 WRP outfall locations

2.1 Long Beach WRP

- 2.1.1 Long Beach outfall #001: From SJCWQL, take the 605 Fwy South. Exit on Spring Street and turn right, and then turn left at Studebaker. Proceed south on Studebaker, and then turn left on Willow Street. Pass over the San Gabriel River. The Long Beach plant is visible on the right. From the entrance of the LBWRP, proceed through the gate to the left and on the asphalt road along Coyote Creek. Proceed down the ramp onto the

concrete channel and then go north (upstream) along the eastern channel. The outfall is located south of the Willow Street overpass downstream of site LB-RA-1 and 600 feet upstream of site LB-RA.

2.1 Los Coyotes WRP

- 2.1.1 Los Coyotes outfall #001: From LCWRP turn right on Alondra Blvd. Turn right on Studebaker Rd. Turn right on Artesia Blvd. Turn left in to the bike path entrance. Open the gate by using the CAT 30 key and proceed south to the ramp. Enter the river channel and head North (right) past the Artesia Blvd. overpass. The outfall is downstream of Alondra Blvd.

2.2 San Jose Creek WRP

- 2.2.1 San Jose Creek WRP outfall #001: From SJCWRP, proceed south on the 605 Fwy. Exit at Florence Avenue and turn right at the end of the off-ramp. Turn left into the driveway on the east side of the San Gabriel River (SGR). Open the gates by using the CAT 30 key and proceed south to the ramp. Drive down the ramp toward the Firestone Blvd. overpass. Make a u-turn at the base of the ramp and continue upstream (north) to the outfall located on the west side of the river.
- 2.2.2 San Jose Creek WRP outfall #001A: From SJCWRP take the 605 freeway South. Exit Whittier Blvd. Turn right on Whittier Blvd. Turn left on Millux. Turn left on Underwood St. Turn right on Pico Vista. Enter the San Gabriel coastal water spreading grounds. Turn left and follow the service road towards the pumping station at rubber dam #2. The SJC WRP outfall 001A is located adjacent to the pumping station above rubber dam #2.
- 2.2.3 San Jose Creek WRP outfall #002: Proceed to the north side of the SJCWRP-East. Follow the road to the left. The outfall is located on the immediate right.
- 2.2.4 San Jose Creek WRP outfall #003: From SJCWRP-East, proceed to SJCWRP-West. Drive to the northeast end of the plant. Using the A297 key, proceed through the gate and drive onto the dirt road to the 605 Fwy overpass of the SGR. The outfall is just above (upstream of) site WN-R11.

2.3 Whittier Narrows WRP

- 2.3.1 Whittier Narrows WRP outfall #001: From SJCWRP, go right on Workman Mill Road, right on Peck Road, then left on Durfee. Make a U-turn at the intersection of Durfee Avenue and Rosemead Boulevard and continue east on Durfee Avenue. Turn right into the first driveway into the Whittier Narrows Nature Center. Proceed on the road and make a right

just before San Gabriel River waterway. Follow the road past the outfall on the left and park on the left near the Whittier Narrows Dam. Whittier Narrows WRP outfall is located 450 feet upstream of station WN-RA (and 50 feet upstream of the dam).

- 2.3.2 Whittier Narrow WRP outfall #002: From SJCWRP, go right on Workman Mill Road, right on Peck Road, then left on Durfee. Make a U-turn at the intersection of Durfee Avenue and Rosemead Boulevard and continue east on Durfee Avenue. Turn right into the first driveway into the Whittier Narrows Nature Center. Proceed on the road and make a left just before San Gabriel River waterway. Turn into the chain-linked fence on the left. Cross over the Zone 1 ditch bridge on the right. Proceed to a square concrete station with a wheeled-stanchion that is located on the opposite side of the Zone 1 ditch. The outfall is 175 feet upstream of site WN-RB.
- 2.3.3 Whittier Narrows WRP outfall #003: From SJCWRP, go right on Workman Mill Road, right on Peck Road, then left on Durfee. Make a U-turn at the intersection of Durfee Avenue and Rosemead Boulevard and continue east on Durfee Avenue. Turn right into the first driveway into the Whittier Narrows Nature Center. Proceed on the road and make a left just before San Gabriel River waterway. Turn into the chain-linked fence on the left. Cross over the Zone 1 ditch bridge on the right. Make an immediate left and follow the dirt road until it curves to the left. WN-RC is located on the left; look for a cone-shaped structure. Listen for flow if the vegetation is too thick around the sampling site. The outfall is directly upstream of site WN-RC.
- 2.3.4 Whittier Narrows WRP outfall #004: From SJCWRP, go right on Workman Mill Road, right on Peck Road, then left on Durfee. Make a right after Rosemead Blvd into the first gate. If this gate is locked, proceed through the Whittier Narrows Recreation Park entrance located on Rosemead Blvd. Turn left when you see the park sign. The entrance to the path is to the left side of the park parallel to the 60-West. Follow the Rio Hondo River bike path until the outfall is reached. The outfall is located at the point where the bike path bends, adjacent to a power pole, about 650 feet upstream of site WN-RD.

2.4 Scripps Institute of Oceanography

- 2.4.1 Scripps Institute Pier: From SJCWQL, take the Pomona (60) Freeway East to the 57 Freeway South. The 57 South becomes the Santa Ana (5) Freeway South. Take the Santa Ana (5) Freeway south towards San Diego. Exit at La Jolla Village Road. Turn right on La Jolla Village Drive. This road will become North Torrey Pines Road. Turn left onto La Jolla Shores Drive. Go about one mile and turn right on Naga. Continue left on Naga to the stop sign. Turn left on Discovery Way and park near the Center for Coastal Studies building. Collect water from spigot labeled “filtered” to the left of the pier entrance. Allow the water to run from this

hose for a minute or two to insure the best quality of seawater. Filter the seawater through a 60- μ m filter and label carboys with “60 μ m filtered Scripps Seawater”, date collected, date of expiration (two weeks after collection), time, and initials. Secure the carboys before returning to SJCWQL.

Receiving Water Locations & Sampling Specific Procedures

Station: LB-RA1

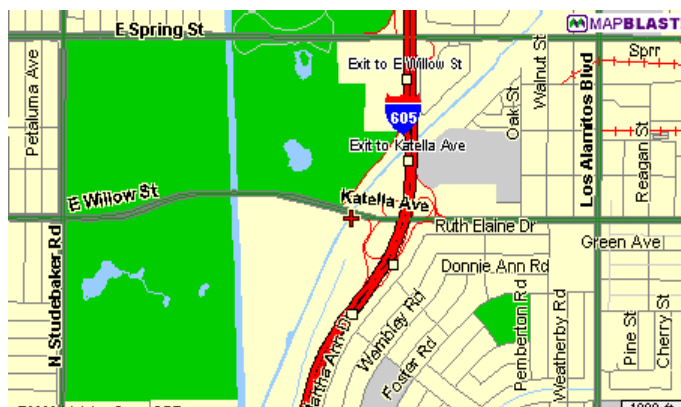
North

West



East

South



Directions: From SJCWQL, take the 605 Fwy South. Exit on Spring Street and turn right, and then turn left at Studebaker. Proceed south on Studebaker, and then turn left on Willow Street. Pass over the San Gabriel River. The Long Beach plant is visible on the right. From the entrance of the LBWRP, proceed on the asphalt road along Coyote Creek. Follow the road to a gate just west of the bike access bridge. From the gate, proceed down the ramp and continue south into the concrete lined portion of Coyote Creek then head north towards the Willow Street overpass. Station LB-RA1 is just upstream of the LBWRP outfall. Station LB-RA-1 is located just downstream of the Willow Street overpass and upstream of the LBWRP outfall. The sampling location is marked with an “X” and “RA-1”.

Instructions: A grab sample is collected by immersing a stainless steel bucket into the receiving water. Measure the distance (in inches) from the surface of the water to the mark (nail with painted “X”) at the top of the low flow channel and record on the observation sheet (for river run monitoring).

GPS: N 33° 48' 11.0" W 118° 05' 3.4"

Station: LB-RA/RA1B

North



South



Directions to RA: Follow directions for LB-RA1 listed above. Station LB-RA is located 600 feet below the LBWRP's outfall. The sampling location is marked "RA."

GPS: N 33° 47' 48.6" W 118° 05' 19.8"

Directions to RA1B: Follow directions for LB-RA1 listed above. Station LB-RA1B is located 100 feet below the LBWRP's outfall. The sampling location is marked "RA1B."

GPS: N 33° 47' 53.6" W 118° 05' 15.6"

Instructions: A grab sample is collected by immersing a stainless steel bucket into the receiving water. Ensure that the WRP is discharging at the time of sample collection. Call operations at (562) 421-8612 to verify that there is plant discharge.

Station: LB-RA2

South

East



West

North



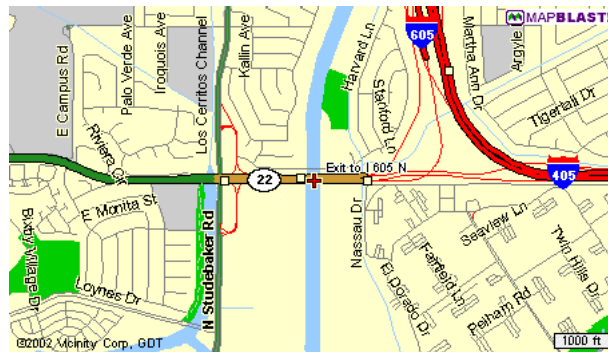
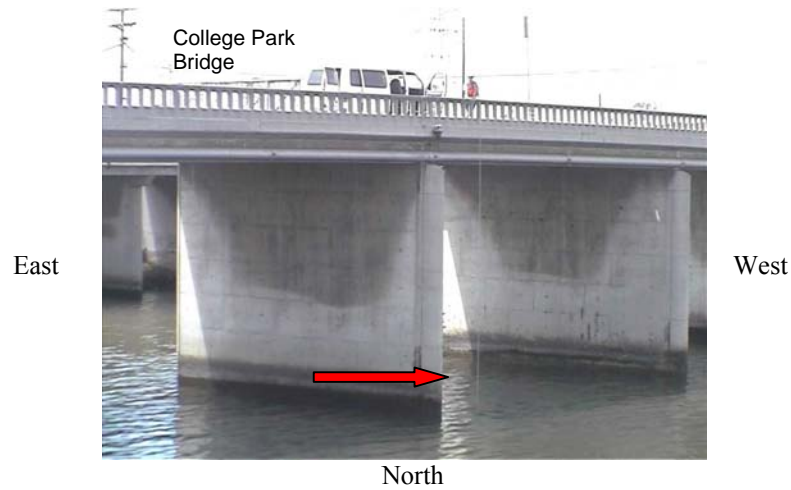
Directions: From SJWQL, take the 605 Fwy South. Exit on Willow Street and turn right, then turn left at Studebaker. Proceed south on Studebaker, and then turn left on Atherton St. Access to station SGR-RA2 can be gained by entering the bike path from on the west side of the San Gabriel River. Proceed through the gates and drive to the overpass of the San Diego Fwy. Station SGR-RA-2 is located below the overpass of the San Diego (405) Fwy.

Instructions: Sample collection should be attempted at mid-tide (2.7') \pm 15 minutes. The inflatable boat is used to collect samples at this station because samples must be taken at mid-depth and mid-channel. Row the boat to the middle of the river and set the anchor (see *Boat Safety SOP*). Use the bomb sampler (see Section 7.4.1.4 of the *River Monitoring Methods and Procedures SOP*) to collect monthly coliform samples and the field submersible pump to collect all other mid-depth samples. Record the salinity during monthly river monitoring.

GPS: N 33° 47' 13.5" W 118° 05' 37.2"

Station: LB-R6

South



Directions: From the SJCWRP, take the 605 Fwy South to the 22 Fwy West. Exit at Studebaker and turn right at College Park Drive. Proceed about half of a mile to College Park Bridge. Make a u-turn at the park entrance and park at the 20' marker on the north side of the bridge.

Instructions: Mid-depth samples are collected from the top of the bridge using the field submersible pump and/or bomb sampler. Samples are collected at mid-depth and mid-channel. Samples should be collected ± 30 minutes from the mid-tide time. Record the salinity during monthly river monitoring.

GPS: N 33° 46' 26.3" W 118° 05' 50.1"

Station: LB-R7

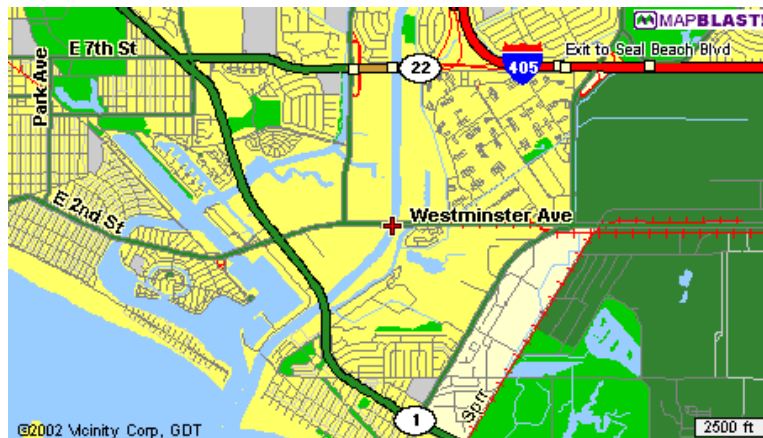
South

East



West

North



Directions: From the SJCRWP, take the 605 Fwy South to the 22 Fwy West. Exit at Studebaker and turn left. Turn left at Westminster Avenue and proceed to the SGR overpass. Park on the north side of the bridge.

Instructions: Mid-depth samples are collected from the top of the bridge using the field submersible pump and/or bomb sampler. Samples are collected at mid-depth and mid-channel. Record the salinity during monthly river monitoring.

GPS: N 33° 45' 34.1" W 118° 05' 51.8"

Station: LB-R8

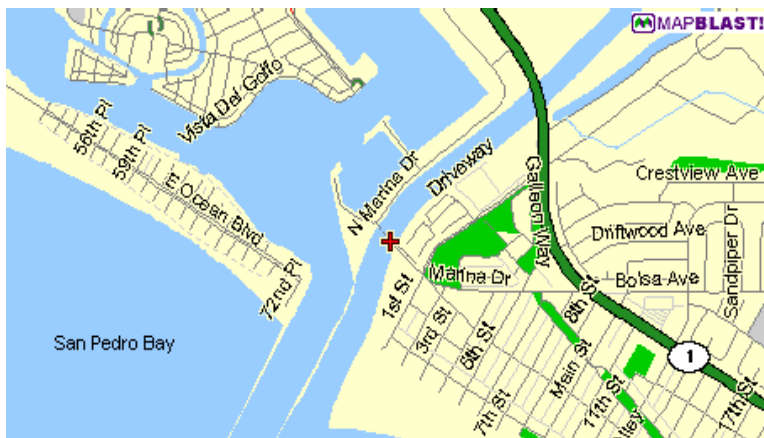
North



West

East

South



Directions: From the SJCWRP, take the 605 Fwy South to the 22 Fwy West. Exit at Studebaker and turn left. Continue on Studebaker and make a right at Westminster Avenue (2nd Street). Make a left on Marina Drive. Follow Marina Drive to where it ends at the Marina Drive overpass.

Instructions: Mid-depth samples are collected from the top of the bridge using the field submersible pump and/or bomb sampler. Samples are collected at mid-depth and mid-channel. Record the salinity during monthly river monitoring.

GPS: N 33° 44' 50.3" W 118° 06' 49.3"

Station: LC-R31

North

West



East

South



Directions: From SJCWRP, proceed south on the 605 Fwy. Exit at Alondra Blvd. and turn right at the end of the off-ramp. Continue west on Alondra Blvd. over the river and make a U-turn and head east on Alondra Blvd. Turn right into the driveway on the east side of the San Gabriel River (SGR). Open the gates by using the CAT 30 key and proceed south on the bike path to the first ramp leading into the concrete-lined channel. Turn right (travel north). Station R3-1 is located south of the Alondra Blvd. overpass and just downstream of the first culvert.

Instructions: A grab sample is collected by immersing a stainless steel bucket into the receiving water. Measure the distance from the surface of the water to the mark (nail with painted “X”) at the top of the low flow channel and record on the observation sheet (for river run monitoring).

GPS: N 33° 53' 16.9" W 118° 06' 30.6"

Station: LC-R4/R31B

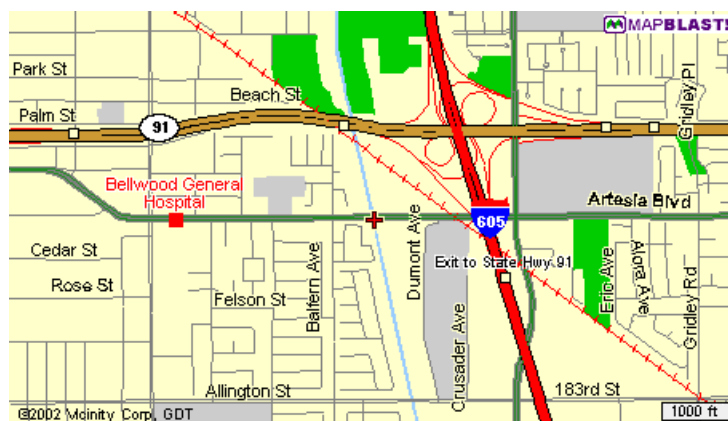
South

East



West

North



Directions to LC-R4: From SJCWRP, proceed south on the 605 Fwy. Exit South St and make a right. Make a right on Studebaker Rd. Make a left on Artesia Blvd. Turn left into the driveway on the east side of the San Gabriel River (SGR). Open the gates by using the CAT 30 key and proceed south on the bike path to the first ramp leading into the concrete-lined channel. Proceed north (right) to the Artesia Blvd. overpass, which is downstream of the Los Coyotes WRP outfall. The sampling location is marked "R4."

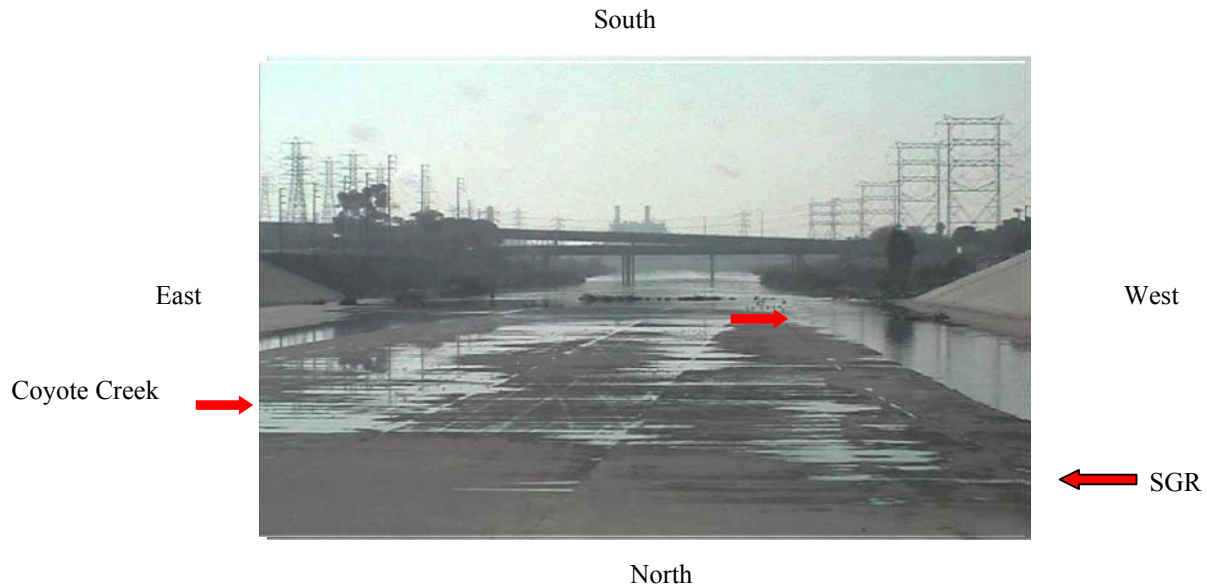
GPS: N 33° 52' 23.0" W 118° 06' 23"

Directions to LC-R31B: Follow directions to LC-R4 above. LC-R31B is located upstream of LC-R4 and 100 feet downstream of the LCWRP outfall. The sampling location is marked "R31B".

GPS: N 33° 52' 46.6" W 118° 06' 30.0"

Instructions: A grab sample is collected by immersing a stainless steel bucket into the receiving water. Indicate whether the WRP is discharging at the time of sample collection.

Station: LC-R9W

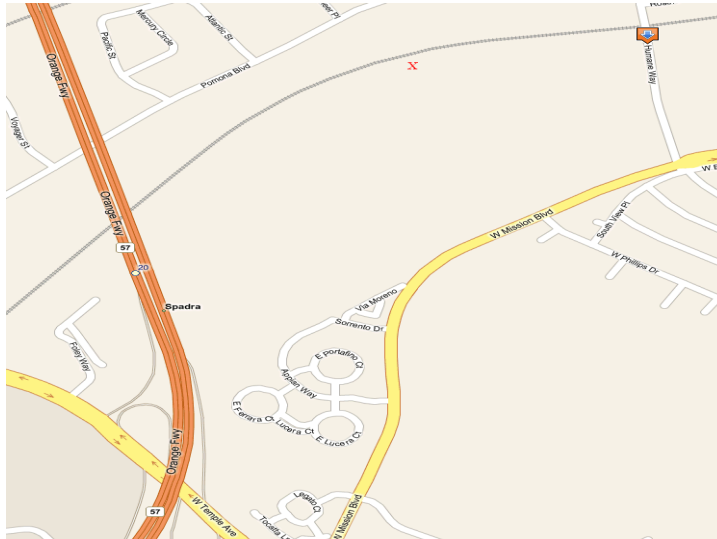


Directions: From the entrance of the LBWRP, proceed on the asphalt road along Coyote Creek. Follow the road to a gate just west of the bike access bridge. From the gate, proceed down the ramp and continue south into the concrete-lined portion of San Gabriel River/Coyote Creek. Station LC-R9W is located near the end of the concrete-lined portion of the San Gabriel River.

Instructions: A grab sample is collected by immersing a stainless steel bucket into the receiving water. Station LC-R9W is subject to tidal influence due to its proximity to the San Gabriel River estuary. Review the tide program in the laboratory before sampling to avoid tidal interference. If it cannot be avoided, sample upstream of the crossover and upstream of the tidal interference.

GPS: N 33° 47' 27.6" W 118° 05' 30.8"

Station: Pom-RA



Directions: From SJCWQL, take the 60 Fwy East and transition to the 57 Fwy North. Exit at Temple Avenue and turn right, then left at W Mission Blvd. Turn left on Humane Way. Turn left into the small driveway before the railroad tracks and proceed into the Pomona WRP. Follow the road to the west end of the plant. Use river keys to open the gate that leads to the Pomona WRP outfall. Follow the discharge downstream to POM-RA. Station POM-RA is located 12 feet downstream of the Pomona WRP outfall.

Instructions: A grab sample is collected using the grab method. Indicate whether the WRP is discharging at the time of sample collection. Call (909) 622-3623 and ask if they are currently discharging and record this on the observation sheet. Do not collect a sample if discharge is not present.

GPS: N 34° 3' 18.8" W 117° 47' 44.1"

Station: Pom-RC

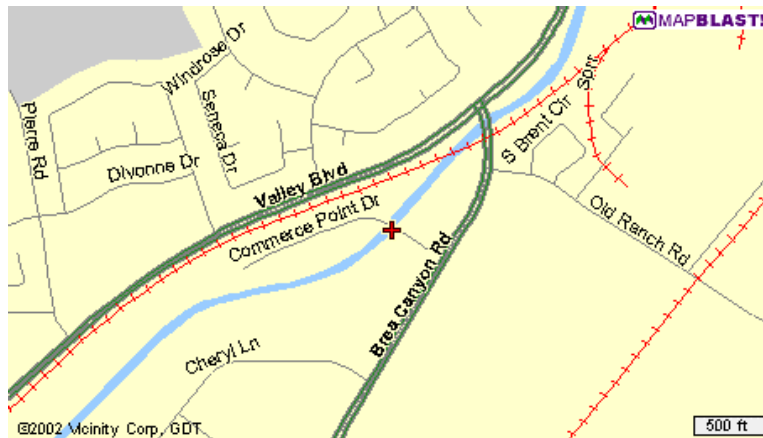
North

West



East

South



Directions: From SJCWQL, take the 605 Fwy North to the Pomona (60) Fwy East. Exit Brea Canyon Road and turn left at first signal. Turn left on Brea Canyon Rd. Turn left on Commerce Point Drive. Turn right into the second gate; proceed to next gate; follow road to Station POM-RC under the bridge. If the flow is too high in the channel, enter into the first gate, and park above the low flow channel. If flow is split into two separate channels flowing on opposite banks, a sample is collected further downstream where the river converges.

Instructions: A grab sample is collected by immersing a stainless steel bucket into the receiving water. If parked above the low flow channel, use a submersible pump or bucket with a rope to collect a sample. Quantitative in-stream flow measurements are taken downstream of the Commerce Point Drive overpass using the FlowTracker. If there is interference from algae during flow measurements, use a qualitative flow measurement.

GPS: N 34° 01' 8.6" W 117° 50' 27.7"

Station: Pom-RD

North

West



East

South



Directions: From SJCWQL, take the 605 Fwy North. Merge onto the 60 Fwy East. Exit 7th St. Turn left on the first light. Turn right (North) on 7th Ave. Turn left into the river bike path just before the San Jose Creek Bridge. Re-set odometer and continue on the river path for 1.1 miles. A handrail ladder locates station POM-RD.

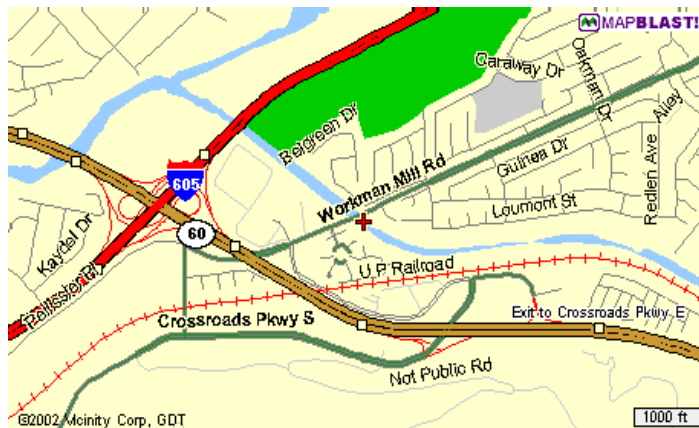
Instructions: A grab sample is collected using a submersible sampling pump from the top of the channel. Quantitative in-stream flow measures are taken using the FlowTracker. If there is interference from algae during flow measurements, use a qualitative flow measurement.

GPS: N 34° 01' 55.5 W 118° 00' 11.6"

Station: SJC-C1



South



Directions: Proceed to the north side of the SJCWRP. Follow the road to the right. Open the gate and proceed east on the gravel road on the south side of San Jose Creek. Station SJC-C1 is approximately 10 feet downstream of the overpass of Workman Mill road.

Instructions: A grab sample is collected by immersing a stainless steel bucket into the receiving water.

GPS: N 34° 02' 13.8" W 118° 01' 03.5"

Station: SJC-C2

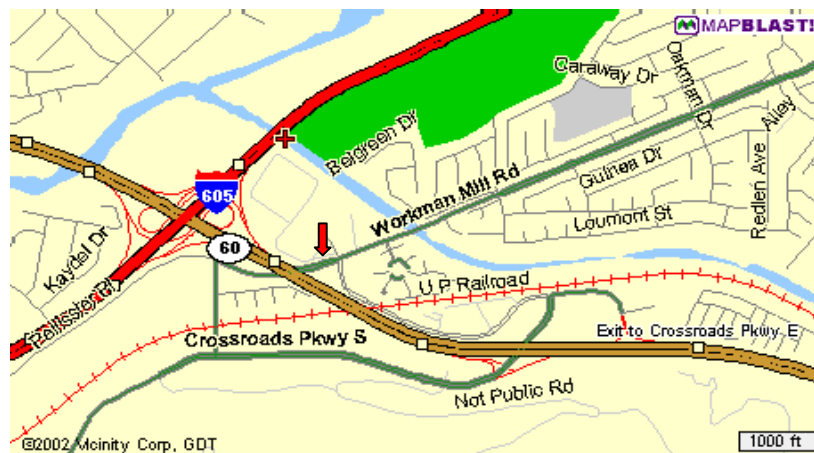
North

West



East

South

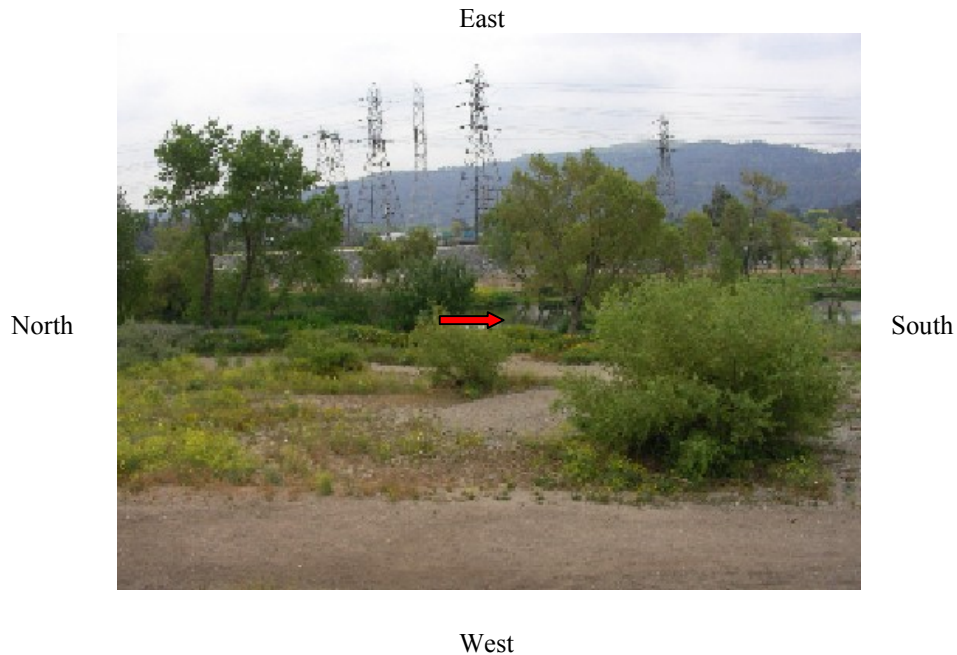


Directions: Proceed to the north side of the SJCWRP. Open the gate located above SJC outfall #002 and enter San Jose Creek. SJC-C2 is located 100 feet downstream of the outfall.

Instructions: A grab sample is collected by immersing a stainless steel bucket into the receiving water. Indicate whether the WRP is discharging at the time of sample collection. Sample after 10:00 a.m. to ensure the presence of WRP discharge. If discharge is not present, call operations at (562) 908-4288 extension 3005 or 3007 to see if discharge can be expected during the workday.

GPS: N 34° 02' 08.5" W 118° 01' 16.7"

Station: SJC-R10



Directions: From SJCWRP, proceed south on Workman Mill Road. Turn right on Peck Road and travel north to Thienes Road. Turn right onto Thienes Road and proceed to the entry gate to the SGR. Open the gates by using the CAT 30 key and proceed north (left) on the bike path. SJC-R10 is located approximately 160 yards upstream of the confluence of San Jose Creek and the San Gabriel River (refer to GPS coordinates).

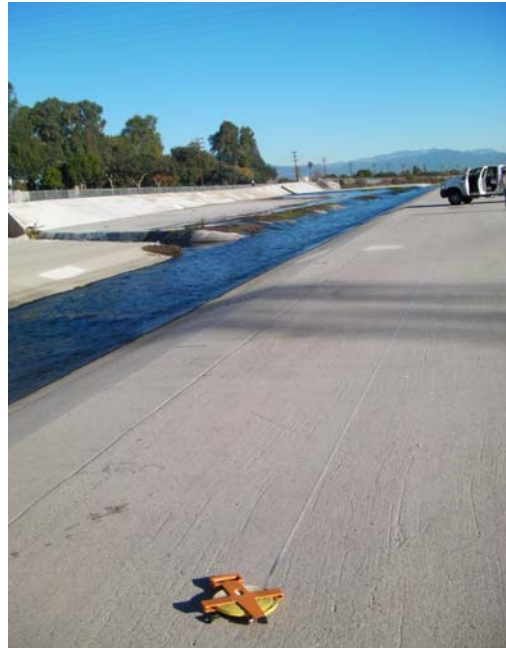
Instructions: A grab sample is collected by immersing a stainless steel bucket into the receiving water. Document if receiving water is flowing over the dam. If water is not flowing over the dam, there is no need to sample. If water is flowing over the dam, collect a sample.

GPS: N 34 2.0' 22.3" W 118 01' 30.7"

Station: SJC-R2

North

West



East

South

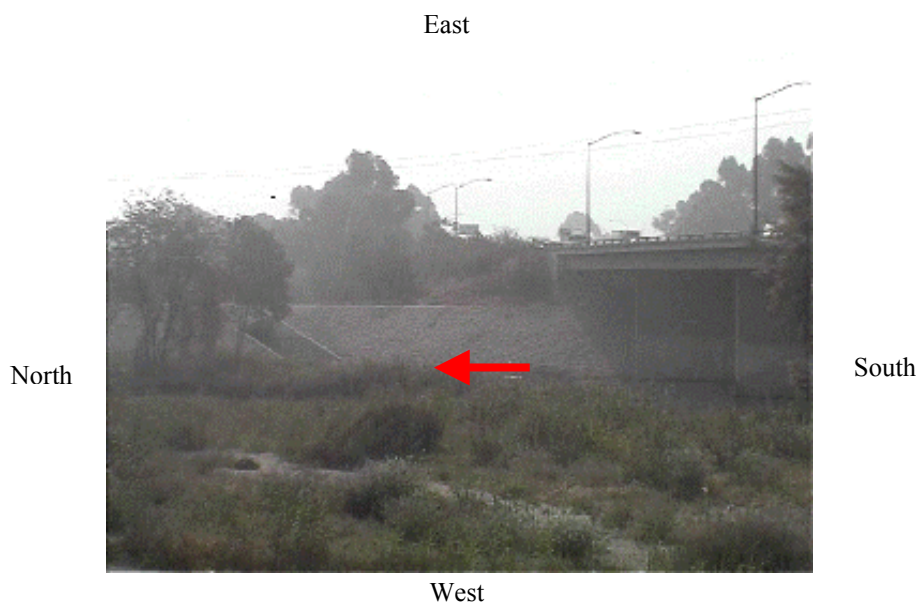


Directions: From SJCWRP, proceed south on the 605 Fwy. Exit at Florence Avenue and turn right at the end of the off-ramp. Turn left into the driveway on the east side of the San Gabriel River (SGR). Open the gates by using the CAT 30 key and proceed south to the ramp. Drive down the ramp to SJC outfall #001. Station SJC-R2 is located 100 feet downstream of the outfall. Location may vary due to discharge flow rate changes. Measure 100 feet downstream starting at the furthest point where discharge enters the channel.

Instructions: A grab sample is collected by immersing a stainless steel bucket into the receiving water. Indicate whether the WRP is discharging at the time of sample collection.

GPS: N 33° 55' 48.5" W 118° 06' 27.1"

Station: SJC/WN-R11

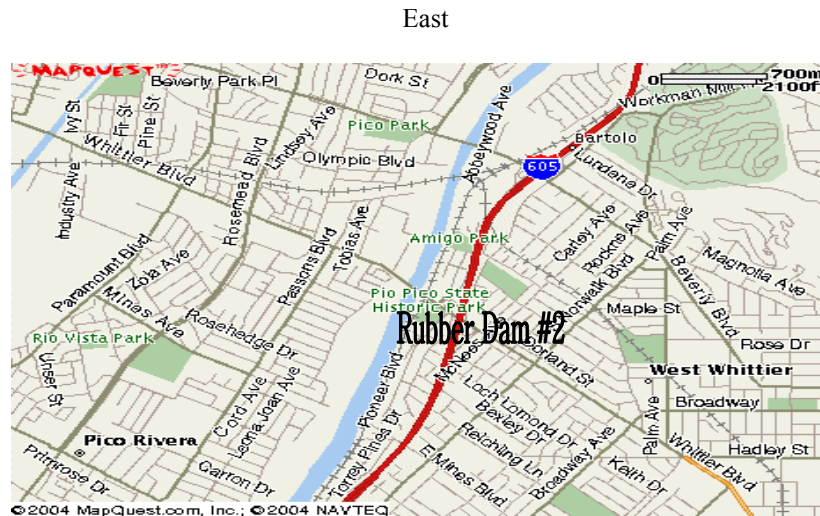


Directions: From the east side of SJCWRP, proceed to the west side of the plant. Drive to the northeast end of the plant. Using the A297 key, proceed through the gate and drive onto the dirt road. SJC-R11 is located 100 feet downstream of SJC outfall #003 on the SGR.

Instructions: A grab sample is collected by immersing a stainless steel bucket into the receiving water. Indicate whether the WRP is discharging at the time of sample collection.

GPS: N 34° 02' 09.9" W 118° 01' 53.4"

Station: SJC-R12



Directions: From SJCWRP take the 605 freeway South. Exit Whittier Blvd. Turn right on Whittier Blvd. Turn left on Millux. Turn left on Underwood St. Turn right on Pico Vista. Enter the San Gabriel coastal water spreading grounds using the spreading grounds key. Turn left and follow the service road towards the pumping station at rubber dam #2. The SJCWRP outfall 001A is located adjacent to the pumping station above rubber dam #2. Station R12 is located 100 feet downstream of the outfall.

Instructions: A grab sample is collected by immersing a stainless steel bucket into the receiving water. Indicate whether the WRP is discharging at the time of sample collection. Samples should only be collected at SJC-R12 if SJCWRP outfall 001A is discharging into the river. Do not collect if discharge is not present or if discharge is being diverted into the spreading grounds.

GPS: N 33° 59' 38.2" W 118° 04' 24.6"

Station: WN-RA/WN-RAB

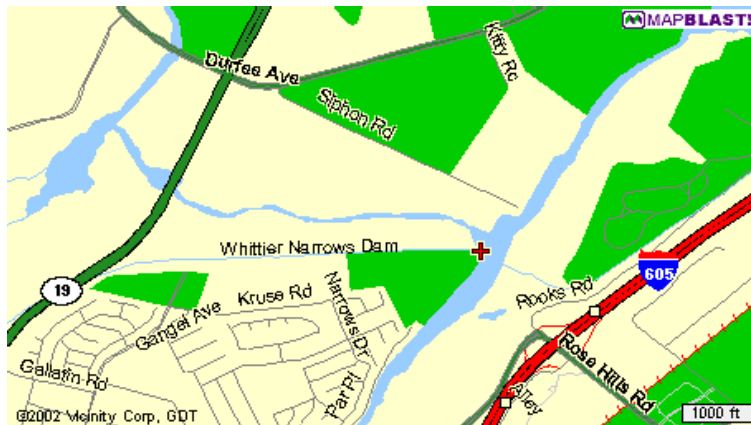
East

North



South

West



Directions to WN-RA: From the SJCWQL, make a right onto Workman Mill Road. Make a right onto Peck Road. Turn left on Durfee Avenue. Make a left into the last gate of the Whittier Narrows Nature Center. Proceed on the road and make a right just before San Gabriel River waterway. Follow road past the outfall on the left and park on the left near the Whittier Narrows Dam. Station WN-RA is located 50 feet upstream of the Whittier Narrows Dam.

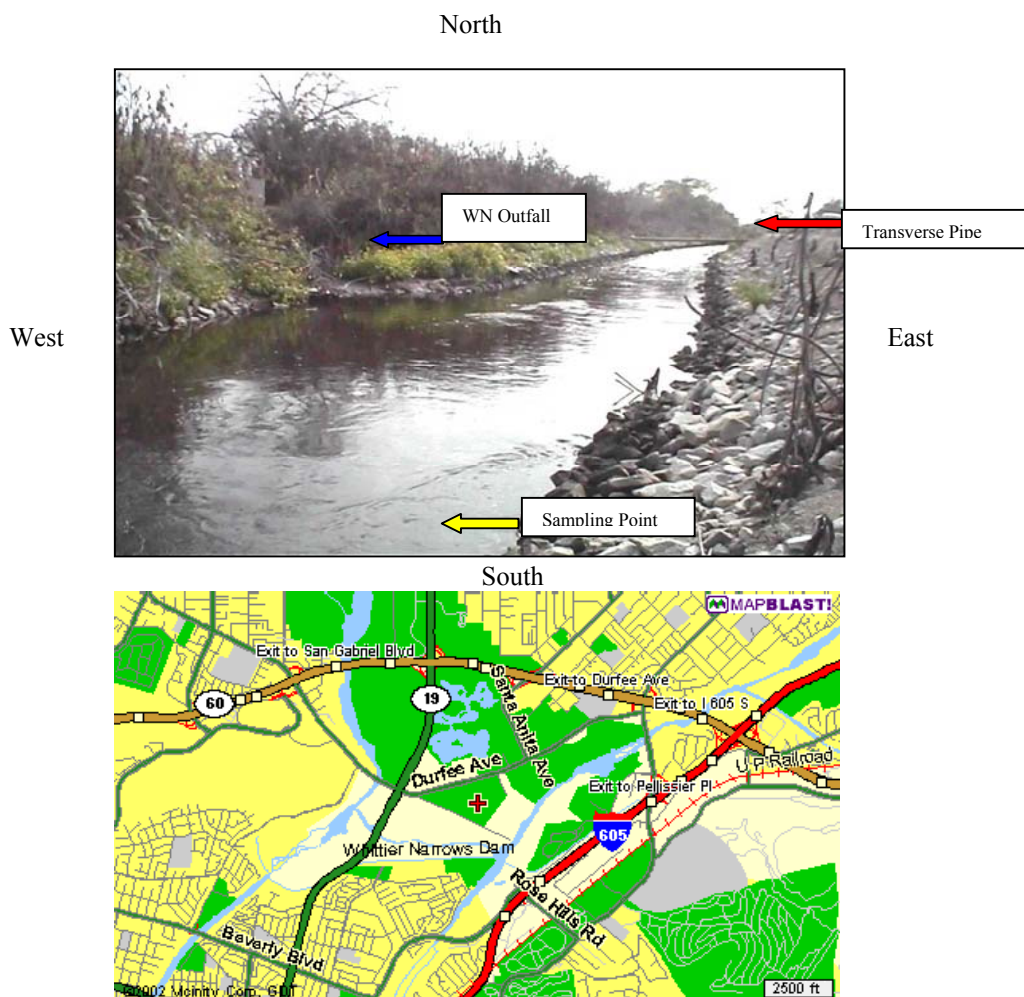
GPS at WN-RA: N 34° 01' 17.1" W 118° 03' 19.8"

Directions to WN-RAB: Follow directions to WN-RA above. WN-RAB is located upstream of WN-RA and 100 feet downstream of the WNWRP outfall #001.

GPS at WN-RAB: N 34° 01' 20.5" W 118° 03' 17.4"

Instructions: A grab sample is collected by immersing a stainless steel bucket into the receiving water. Indicate whether the WRP is discharging at the time of sample collection.

Station: WN-RB/WN-RBB



Directions to WN-RB: From the SJCWQL, make a right onto Workman Mill Road. Make a right onto Peck Road. Turn left onto Durfee Avenue. Make a left into the last gate of the Whittier Narrows Nature Center. Cross over the Zone 1 ditch bridge. Make a left before the SGR waterway. Enter a chain-linked fence and follow the river past a small road. WN-RB is located at the bend in the river downstream the bridge, and downstream of the WNWRP outfall 002 on the Zone 1 Ditch.

GPS at WN-RB: N 34° 01' 38.3" W 118° 03' 30.4"

Directions to WN-RBB: Follow directions to WN-RB above. WN-RBB is located 100 feet downstream of the WNWRP outfall #002.

GPS at WN-RBB: N 34° 01' 38.1" W 118° 03' 31.1"

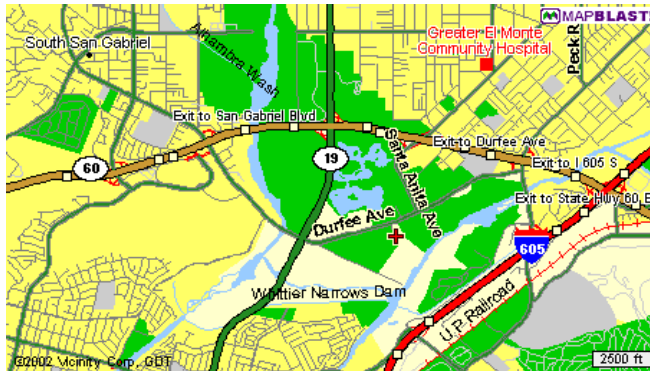
Instructions: A grab sample is collected by immersing a stainless steel bucket into the receiving water. To obtain a flow measurement, drive to the bridge located upstream of WN-RB. Record the time it takes for a floating object to float 10 feet (starting at the downstream edge of the concrete riprap), and record on the observation sheet. Also measure the distance from the bridge (the upper portion of the concrete) to the water's surface. Indicate whether the WRP is discharging at the time of sample collection.

Station: WN-RC

South

East

West



North

Directions: From the SJCWQL, make a right onto Workman Mill Road. Make a right onto Peck Road. Turn left on Durfee Avenue. Make a left into the last gate of the Whittier Narrows Nature Center. Cross over the Zone 1 ditch bridge. Make a left before the SGR waterway. Enter a chain-linked fence and make a right at the first road. Make the first left down a dirt road. Follow this road until there is a dead-end and the road curves to the left. WN-RC is located on the left near a cone-shaped structure.

Instructions: A grab sample is collected by immersing a stainless steel bucket into the receiving water. *This station should not have flow.* If flow is observed, notify Misty Brown, Biologist, or Carlita Barton Supervising Biologist, immediately.

GPS: N 34° 01' 44.8" W 118° 03' 40.8"

Station: WN-RD/WN-RDB

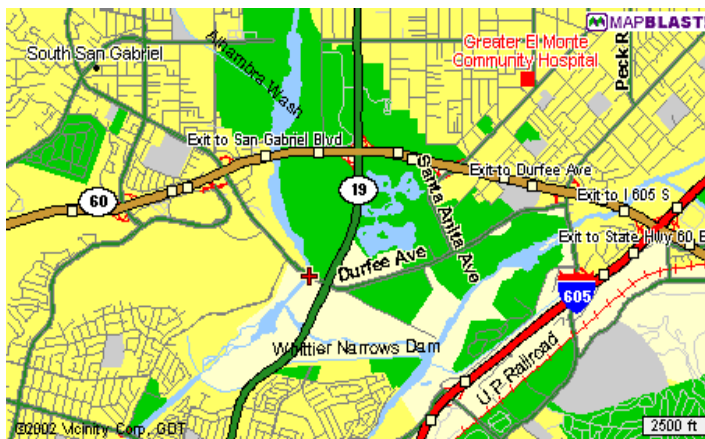
North

East



West

South



Directions to WN-RD: From SJCRP, go right on Workman Mill Road, right on Peck Road, then left on Durfee. Make a right after Rosemead Blvd into the first gate. If gate is locked, enter through the Whittier Narrows Recreation Park entrance off of Rosemead Blvd. Follow the Rio Hondo River bike path (the entrance to the path is to the left side of the park parallel to the 60-West) until WN-RD is reached adjacent to an oil pumping station. Follow the trail on the left (if heading North on the bike path) through trees and brush to the sampling station. Verify flow from WNWRP by proceeding on the asphalt road to WNWRP outfall #004, which is on the left as the bike path bends left.

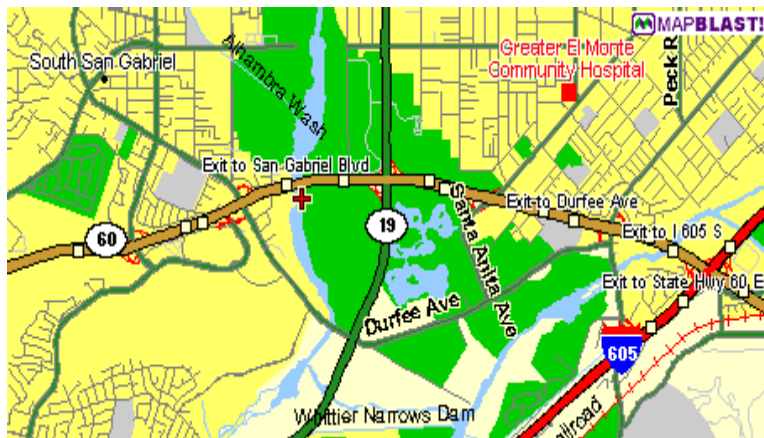
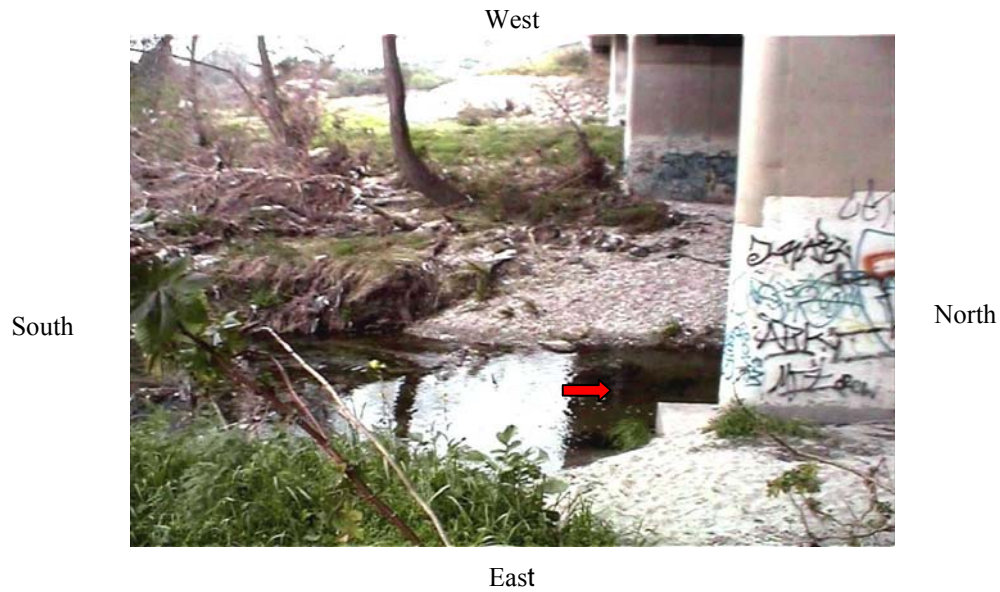
GPS at WN-RD: N 34° 01' 53.3" W 118° 04' 15.3"

Directions to WN-RDB: Follow directions to WN-RD above. WN-RDB is located 100 feet downstream of the WNWRP outfall #004.

GPS at WN-RDB: N 34° 01' 38.0" W 118° 03' 30.8"

Instructions: A grab sample is collected by immersing a stainless steel bucket into the receiving water. Indicate whether the WRP is discharging at the time of sample collection.

Station: WN-RD1



Directions: From Station WN-RD, proceed north on the bike path to the 60 Fwy overpass. Station WN-RD-1 is on the left, under the 60 Fwy overpass.

Instructions: A grab sample is collected by immersing a stainless steel bucket into the receiving water. To obtain a flow measurement, measure the distance from the concrete platform to the water's surface. Record the time it takes for a floating object to travel 10 feet (markings are on the bridge footing). Record both measurements on the observation sheet.

GPS: N 34° 02' 26.5" W 118° 04' 27"

Station: Saugus RA

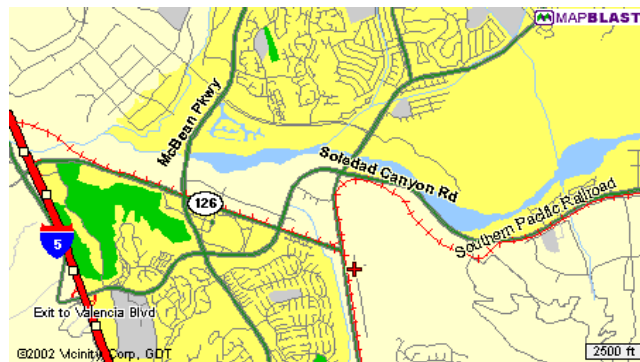
North

West



East

South



Directions: Take the 605 fwy north, to the 210 west, to the 5 north. Exit Magic Mountain Parkway turn right. Turn left on Bouquet Canyon Rd. and then left on Valencia Blvd. Immediately after you pass the Ultramar gas station, enter the bike path from the west (right) side. Follow the path beyond the bridge. Saugus RA is located 300 ft upstream of Saugus WRP outfall. Station Sa RA is normally dry.

Instructions: There is usually no water present at station Sa-RA. If water is present, collect a sample by submersing the sample container into the receiving water.

GPS: N 34° 25' 26.5" W 118° 32' 22.4"

Station: Saugus RB

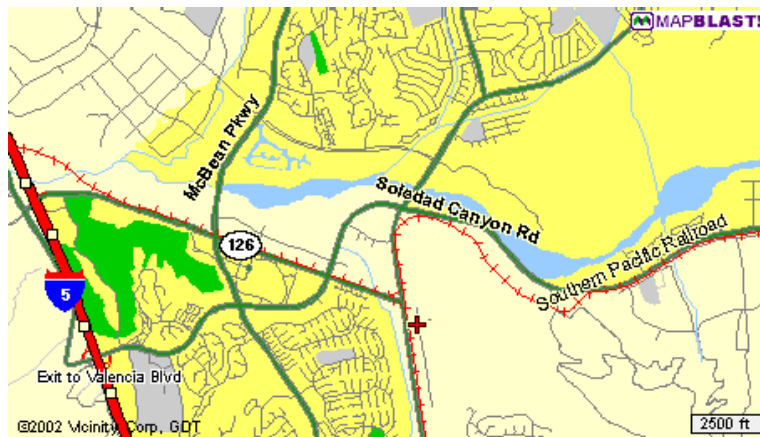
South

East



West

North



Directions: Take the 605 Fwy north, to the 210 Fwy west, to the 5 Fwy north. Exit Magic Mountain Parkway and turn right. Turn left on Bouquet Canyon Rd. and then left on Valencia Blvd. Immediately after you pass the gas station, enter the bike path from the west (right) side. Follow the path down to the bridge. Collect sample on the west side of the bridge. Saugus RB is located downstream of Saugus WRP outfall.

Instructions: A sample is collected by submersing the sample container into the receiving water.

GPS: N 34° 25' 23.8" W 118° 32' 22.6"

Station: Saugus RB-01



Directions: Take the 605 Fwy north, to the 210 Fwy west, to the 5 Fwy north. Exit Magic Mountain Parkway and turn left. Turn right on The Old Road and then left into the driveway for the Valencia WRP. Turn left onto the road just before the guard shack for the WRP and continue until the first heavy iron gate on the right that is painted yellow. Continue down the road past the gate until under the bridge. Park and walk out to RB-01, which is approximately 50 feet downstream of the bridge for The Old Road and is in front of the concrete ledge.

Instructions: A sample is collected by submersing the sample container into the receiving water.

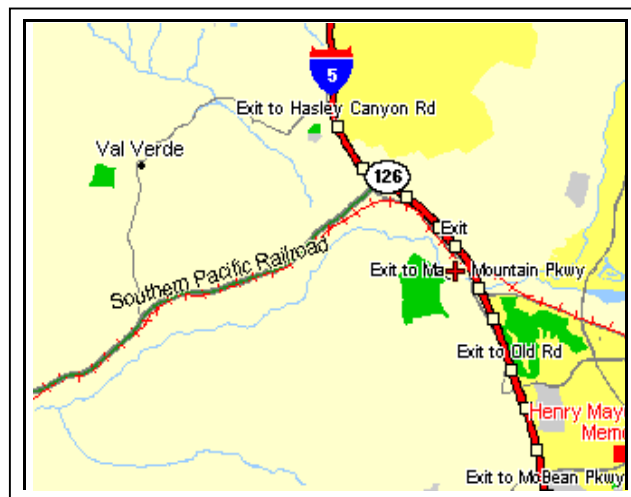
GPS: N 34° 42' 65.4" W 118° 58' 68.8"

Station: Valencia RC

North



South



Directions: Take the 605 fwy North. Merge onto 210 fwy West. Merge onto 5 fwy North. Exit Magic Mountain Parkway and turn left. Turn right onto the Old Road. Turn left on Sky View Lane, make the first right, and then turn left on Feedmill Rd. Proceed on Feedmill Rd. to the Magic Mountain employee parking lot. Enter through the gate, and drive to the far right corner of the lot. Follow the trail down to station RD. From station RD walk upstream passing the Valencia discharge. Station RC is located approximately 100 yards upstream from the VAWRP outfall.

Instructions: A sample is collected by submersing the sample container into the receiving water. Flow is taken quantitatively using the Flowtracker.

GPS: N 34° 25' 52.5" W 118° 35' 38.7"

Station: Valencia RD



Directions: Take the 605 Freeway north to the 210 Freeway west to 5 Freeway north. Exit Magic Mountain Parkway and turn left. Turn right onto The Old Road, and a left onto Sky View Lane, Right on BLANK, and left on Feedmill Road. Proceed on Feedmill Road to the Magic Mountain employee's parking lot. Enter thru the gate, and drive to the far right side of the lot. Follow the trail down to station RD. Station RD is located approximately 100 yards downstream of Valencia WRP outfall.

Instructions: A sample is collected by submersing the sample container into the receiving water. Note whether the VAWRP discharge is present.

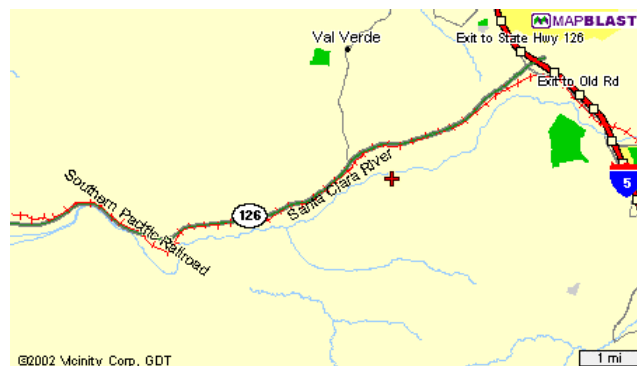
GPS: N 34° 25' 58.1" W 118° 35' 40.8"

Station: Valencia RE

North



South



Directions: Take the 605 Freeway north to the 210 Freeway west to 5 Freeway north. Exit on the 126/Newhall Ranch Road and turn left to go west on the 126 Freeway. After passing the RV campground, turn left at the first signal (Willcott Way). Follow the dirt road leading to the two chain link gates. Park at the locked gate and call Jessie Gomez (805-341-2736) or Emillio Cervantes (805-490-0454). Emillio or Jessie will unlock the gate. Follow the dirt trail on the right hand side of the fence dividing the two fields down to Station RE; be cautious of areas of mud and soft dirt. VA-RE is located in the middle of the river along the seasonal dirt road; when the dirt road is present, the sample location is where the flow converges at least 20 feet downstream from the road.

Instructions: A sample is collected by submersing the sample container into the receiving water. Flow is taken quantitatively using the Flowtracker.

GPS: N 34° 25' 06.8" W 118° 38' 8.5"

Station: Valencia RF

Northeast



Southwest



Directions: Take the 605 Freeway north to the 210 Freeway west to 5 Freeway north. Exit on the 126/Newhall Ranch Road and turn left to go west on the 126 Freeway. Proceed 8.4 miles West on the 126 highway until a center turning lane. Make a U-turn and proceed East 0.8 miles and park along the guardrail on the shoulder of the road. Be very cautious of entering and exiting the vehicle while parked along the highway and do not set the hazard lights. Proceed down the embankment and across the diversion ditch (you may bring motorcycle ramp to use as a bridge if the wooden bridge is not present) and out to the middle of the river along the seasonal dirt road. If the seasonal road present, the sample point is located where the flow converges approximately 20 feet downstream of the road.

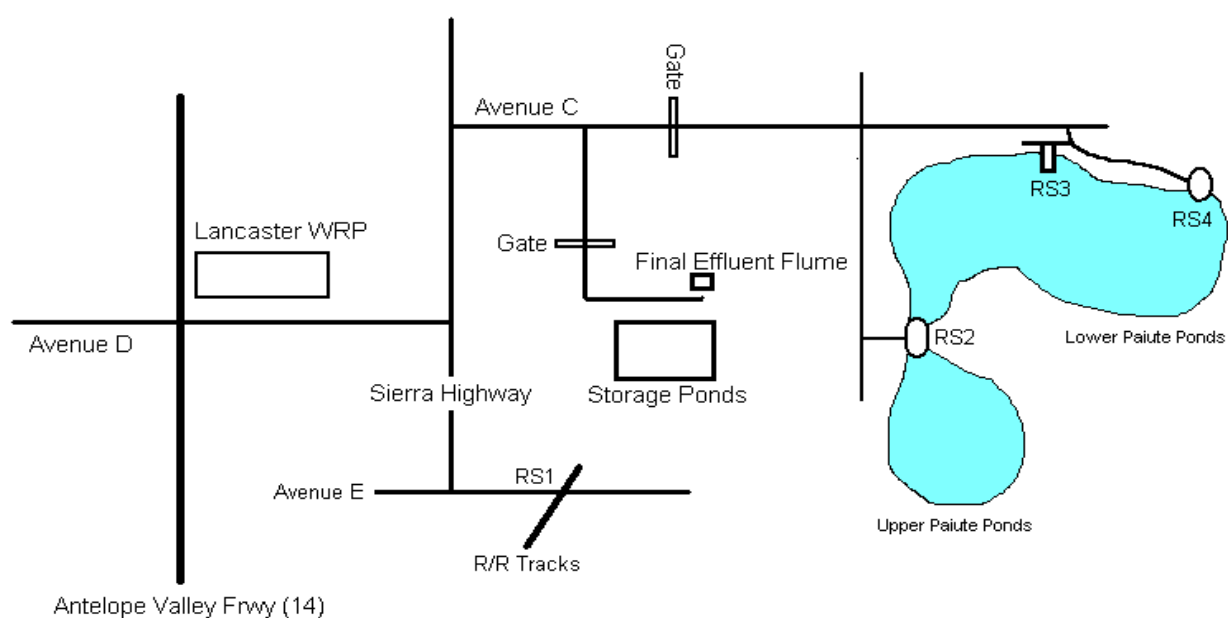
Instructions: A sample is collected by submersing the sample container into the receiving water.

GPS: N 34° 40' 45.9" W 118° 58' 68.8"

Lancaster Receiving Water Stations

Instructions:

Effluent: Chronic and acute effluent grab samples are collected at the Lancaster Reservoir Outfall. At this location, all treatment processes have taken place and the samples are dechlorinated. The effluent discharged at the Lancaster Reservoir Outfall is discharged into the Piute Ponds (receiving water station RS2). Contact Lancaster operations to verify that they are discharging before samples are collected.

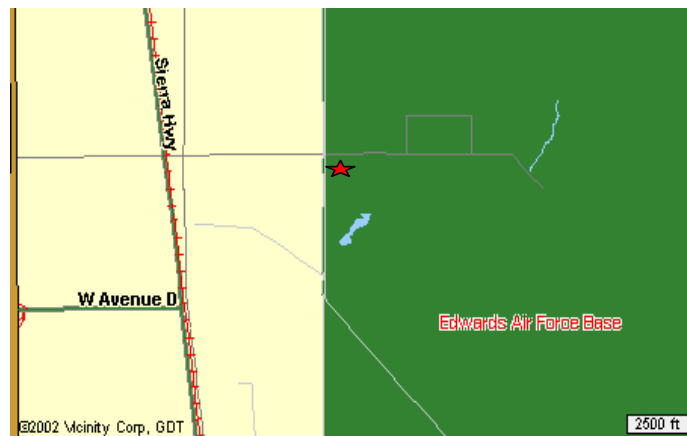


Station: Lancaster WRP Sampling Location

North



South



Directions: Take 605 fwy North. Merge onto 210 fwy West. Merge onto 5 fwy North. Merge onto Hwy 14 North. Exit D St. Turn right. Continue on D St. Turn left on Sierra Hwy. Turn Right on Avenue C. Turn right on first unmarked asphalt road. Proceed through gate and turn left before reservoir. The sampling point is in a small shack just north of the northeast corner of the reservoir.

Instructions: Use the field submersible sampling pump to collect a sample. Make sure to use designated Lancaster observation sheets.

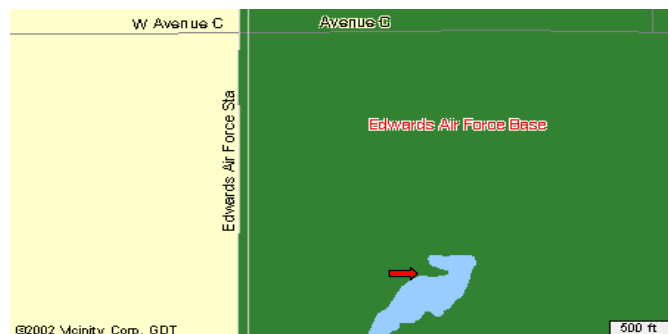
GPS: N 34° 47' 4.3" W 118° 08' 25.5"

Station: Lancaster RS2

North



South



Directions: Take 605 fwy North. Merge onto 210 west. Merge onto 5 fwy North. Merge onto Hwy 14 North. Exit D St. Turn right. Continue on D St. Turn left on Sierra Hwy. Turn Right on Avenue C. Continue on Avenue C until road ends at a gate. Use Key #297. Turn right at first unmarked dirt road. Turn left at second unmarked dirt road. Sampling site is located where the water crosses the dirt road.

Instructions: Use the field submersible sampling pump to collect a sample.

GPS: N 34° 46' 50.7" W 118° 07' 48.0"

Appendix 2:

Data Sheets Used for Bioassay Sample Collections

San Jose Creek Water Quality Laboratory Chain of Custody/Login Sheet

Example: COC
used for receiving
water sites.

Collect Date: 10/13/2010		BU: JO13011	UID: B669
Profile: 108-LB_RIV_BIO	Project Manager: Misty Brown		Ext. 3035
Collector:			
Prelogin #	Location / Sample ID / WO	Matrix / Receive Temp	Collect Time
		Containers / Preservative	Acodes

Bioassay Chain of Custody Information:

Bioassay Workorder:

ID # 10101300445

Test Requirement:	<input checked="" type="checkbox"/>	NPDES	WRP NPDES Permit:		SJCWRP		LBWRP		POWRP
		Experimental			WNWRP		VAWRP		JWPCP
		N/A			LCWRP		SAWRP		N/A
Bioassay(s) to be Performed:		CDC							
Location:	Long Beach Station RSW-002 (RA)								
Sample Type:	Grab (<20 minutes)			Start Date:	10/13/2010				
Sampler:	C. Alba			Signature:	[Signature]				
Date Collected:	10/13/2010			Time:	1102				
Chlorine Residual:	< 0.05 mg/L			Time:	1105				
Receive Temp:	25.2 °C			Time:	1106				

Relinquished By:			Received By:	M. Brown	
Signature:			Signature:	[Signature]	
Company:	Lacsd		Company:	Lacsd	
	Other:			Other:	
Leaking/Damaged?	No		Leaking/Damaged?	No	
	Yes, Explain below			Yes, Explain below	
Date/Time:	/ / :		Date/Time:	10/13/10 12:42	
Receive Temp:	°C		Receive Temp:	3.3 °C	
Dechlorination Verification:	<0.05 mg/L	NA	Dechlorination Verification:	<0.05 mg/L	NA

Sample delivered to (circle one): 4° Cooler Testing Area Other _____

Notes: _____

Relinquished by: _____ Date: _____ Received by: _____ Date: _____

Example: COC used
for Final effluent
samples (not
including SJC).



Internal Transfer Chain of Custody

Chain 174689 - HBN 105805

Transferred From: Long Beach TPL

To: SJC Biology Lab

Lab ID: 10121700147		Sample Description: LB_CI_Tertiary - M BIO Wknd F			
Pos	Container	Type	Preserv	Collected	Utilization
1	10121700147-2	CUB1G	None	12/17/2010 06:00	RecFrm-LB, ShipTo-BiO
Previous Location - RECEIVING					

Bioassay Chain of Custody Information:

Bioassay Workorder: 51950

Test Requirement:	<input checked="" type="checkbox"/> NPDES Experimental N/A	WRP NPDES Permit:	<input type="checkbox"/> SJCWRP <input type="checkbox"/> WNWRP <input type="checkbox"/> LCWRP	<input type="checkbox"/> LBWRP <input type="checkbox"/> VAWRP <input type="checkbox"/> SAWRP	<input type="checkbox"/> POWRP <input type="checkbox"/> JWPCP <input type="checkbox"/> N/A
Bioassay(s) to be Performed:					
Location:	LB_CI_Tertiary		Start Date:	12/16/2010 06:00	
Sample Type:	24 hr. Final Composite		End Date:	12/17/2010 06:00	
Sampler:	Greg Lynn Berg		Signature:	<i>Greg Berg</i>	
Date Collected:	12/17/2010		Time:	0600	
Chlorine Residual:	3.15 mg/L		Time:	06:15	

Transfers

#	Released By	Released To	Date/Time	Location	Receive Temp
1	<i>Greg Berg</i>	<i>J. Taniyama</i>	12/17/10 0851	BIO	6.1 °C
2					°C
3					°C

Biology Group Pick-up:					
Receive Temp:	6.1 °C		Time:	0851	
Relinquished By:			Received By:	<i>J. Taniyama</i>	
Signature:			Signature:	<i>J. Taniyama</i>	
Company:	Lacsd Other:		Company:	Lacsd Other:	
Leaking/Damaged?	No Yes, Explain below		Leaking/Damaged?	No Yes, Explain below	
Date/Time:	/ /		Date/Time:	12/17/10 11:30	
Receipt Temp:	°C		Receipt Temp:	0.8 °C	
Dechlorination Verification:	<0.05 mg/L	NA	mg/L	Dechlorination Verification:	<0.05 mg/L
					NA
					mg/L

Sample delivered to (circle one): 4° Cooler Testing Area Other _____

Notes: _____

Example: COC used for logging in chemistry analysis for final effluent samples.

Internal Transfer Chain of Custody

Chain 174690 - HBN 105807

Transferred From: Long Beach TPL

To: San Jose Creek

Lab ID: 10121700147		Sample Description: LB CI Tertiary - M BIO Wknd F			
Pos	Container	Type	Preserv	Collected	Utilization
1	10121700147-4	P250ML	HNO3	12/17/2010 06:00	SM2340C, SM2340C_S
Previous Location - RECEIVING					
2	10121700147-3	P500ML	None	12/17/2010 06:00	SM2320B_M, SM2320B_MP, SM2510B
Previous Location - RECEIVING					

Transfers

#	Released By	Released To	Date/Time	Location	Receive Temp
1	Greg Berg	J. Lamyane	12/17/10 0851	SJC	6.1°C
2		Samuel	12/17/10 1230		2.2°C
3					°C
4					°C
5					°C

12-17-10P12:30 ACVD

Received ca 1

Example: COC used for logging in chemistry analysis for SJC-E/W final effluent.

Internal Transfer Chain of Custody



Chain 156739

Transferred From: San Jose Creek

To:

Lab ID: 10110200005		Sample Description: SJE CI Tertiary-Bioassay Chem			
Pos	Container	Type	Preserv	Collected	Utilization
1	10110200005-1	P500ML	None	11/2/2010 06:00	SM2320B_M, SM2320B_MP, SM2510B
2	10110200005-2	P250ML	HNO3	11/2/2010 06:00	SM2340C, SM2340C_S
3	10110200005-3	NOCNT	None	11/2/2010 06:00	

Transfers

#	Released By	Released To	Date/Time	Location	Receive Temp
1	<i>[Signature]</i>	<i>Mr. Matt Peters</i>	11/2/10 8:30	RECEIVING	8.0 °C
2	<i>[Signature]</i>	<i>Charlyne Alba</i>	11/2/10 09:14		4.2 °C
3					°C
4					°C
5					°C

11-02-10A09:14 RCVD

Example: COC used for SJC final effluent samples.

San Jose Creek Water Quality Laboratory Chain of Custody/Login Sheet

Collect Date: 11/02/2010	BU: JO13031	UID: B664
Profile: 645-CITertBIOTPL	Project Manager: Amy De Smet	Ext.
Collector: San Creek APL		

Prelogin #	Location / Sample ID / WO	Matrix / Receive Temp	Collect Time	Containers / Preservative	Acodes
------------	---------------------------	-----------------------	--------------	---------------------------	--------

Bioassay Chain of Custody Information:

Bioassay Workorder:

Test Requirement:	<input checked="" type="checkbox"/>	NPDES	WRP NPDES Permit:	<input type="checkbox"/>	SJCWRP	<input type="checkbox"/>	LBWRP	<input type="checkbox"/>	POWRP
	<input type="checkbox"/>	Experimental		<input type="checkbox"/>	WNWRP	<input type="checkbox"/>	VAWRP	<input type="checkbox"/>	JWPCP
	<input type="checkbox"/>	N/A		<input type="checkbox"/>	LCWRP	<input type="checkbox"/>	SAWRP	<input type="checkbox"/>	N/A

Bioassay(s) to be Performed: CDC

Location:	San Jose Creek East - Chlorinated Tertiary Effluent 1011030083 1011020005 <small>San Jose</small>		
Sample Type:	24 hr. Final Composite	Start Date:	11/1/2010
Sampler:	<i>Lesly / Hernandez</i>	Signature:	<i>[Signature]</i>
Date Collected:	11/2/2010	Time:	0630
Chlorine Residual:	3.08 mg/L	Time:	0718
Receive Temp:	8.0 °C	Time:	0750

Relinquished By:		Received By: <i>M. Watts Peterson</i>	
Signature:		Signature:	<i>[Signature]</i>
Company:	Lacsd	Company:	<i>Lacsd</i>
	Other:		Other:
Leaking/Damaged?	No	Leaking/Damaged?	No
	Yes, Explain below		Yes, Explain below
Date/Time:	11/2/10	Date/Time:	11/2/10 0730
Receive Temp:	°C	Receive Temp:	8.0 °C ★
Dechlorination Verification:	<0.05 mg/L NA mg/L	Dechlorination Verification:	<u><0.05 mg/L</u> NA mg/L

Sample delivered to (circle one): 4° Cooler Testing Area Other _____

Notes: *Temp high due to abnormal high temperatures 11/1/10 & samples collected in the AM due to early test initiation time*

Relinquished by: _____ Date: _____ Received by: _____ Date: _____

Example: Condensed
COC used for logging
in chemistry analysis
for receiving water

10-13-10P:2:50 RCVD

San Jose Creek Water Quality Laboratory Chain of Custody/Login Sheet

Collect Date: 10/13/2010 BU: JO13011 UID: B669
Profile: 108-LB_RIV_BIO Project Manager: Misty Brown Ext. 3035
Collector:

Location / Sample ID / WO	Matrix / Receive Temp	Collect Time	Containers / Preservative	Acodes
SGR_LB_RSW-002 LB RA - Q BIO CDC FLDI/NOCONT/None 10101300445-2	Water 3.3 4.3 °C 12/14/10	11:02	1-CUB1G(Non); 1- NOCONT(Non);	E1002_CDC; FLDAIRTEMP; FLDRIVBS;
SGR_LB_RSW-002 LB RA - Q Diazinon LB RA - Q Diazinon 101013	Water 4.3 °C	11:02	1-AGILW(Non); 1- NOCONT(Non);	SUB_8141AP;
SGR_LB_RSW-002 LB RA - Bioassay Chem LB RA - Bio Chem-10OCT-Test#1	Water 4.3 °C	11:02	1-NOCONT(Non); 1-P250ML(HNO3); 1-P500ML(Non);	SM2320B_M; SM2340C; SM2510B;
SGR_LB_RSW-001 LB RA-1 - Q BIO CDC LB RA-1 - 10OCT-Test#1	Water 2.9 4.3 °C 12/14/10	11:20	1-CUB1G(Non); 1- NOCONT(Non);	E1002_CDC; FLDAIRTEMP; FLDRIVBS;
SGR_LB_RSW-001 LB RA-1 - Q Diazinon LB RA-1 - Q Diazinon 101013	Water 4.3 °C	11:20	1-AGILW(Non); 1- NOCONT(Non);	SUB_8141AP;
SGR_LB_RSW-001 LB RA-1 - Bioassay Chem LB RA-1-Bio Chem10OCT-Test#1	Water 4.3 °C	11:20	1-NOCONT(Non); 1-P250ML(HNO3); 1-P500ML(Non);	SM2320B_M; SM2340C; SM2510B;
SGR_LB_RSW-002A LB RA-1B - Q BIO CDC/PPA LB RA-1B - 10OCT-Test#1	Water 2.4 4.3 °C 12/14/10	11:10	2-CUB1G(Non); 1- NOCONT(Non);	E1002_CDC; E2000_PPA; FLDAIRTEMP; FLDRIVBS;
SGR_LB_RSW-002A LB RA-1B - Bioassay Chem LB RA-1B-Bio Chem10OCT-Test#1	Water 4.3 °C	11:10	1-NOCONT(Non); 1-P250ML(HNO3); 1-P500ML(Non);	SM2320B_M; SM2340C; SM2510B;

Sample Inspection: (If "No" selected for any parameter, enter comment on sample after log-in and notify PM)

All Containers Intact?	Yes	No	N/A	NOTES: If N/A, directly from: If No, report to bench analyst immediately If Yes, report to bench analyst
Containers labeled correctly (match COC)?	Yes	No	N/A	
Proper containers for requested analyses?	Yes	No	N/A	
Containers preserved properly?	Yes	No	N/A	
VOA vial(s) free of headspace?	Yes	No	N/A	
Samples received on Ice?	Yes	No	N/A	
Metals sample preserved with HNO3?	Yes	No	N/A	
Special Handling Instructions?	Yes	No	N/A	

Relinquished by: Celia

Date: 10/13/10

Received by: Saren

Date: 10/13/10

AMBIENT STATION OBSERVATION SHEET

STATION _____

LIMS ID # _____

Date			
Time			
Observations by:			
Weather Conditions	Clear, Mostly Sunny, Partly Cloudy, Mostly Cloudy, Cloudy, Foggy, Rain	Clear, Mostly Sunny, Partly Cloudy, Mostly Cloudy, Cloudy, Foggy, Rain	Clear, Mostly Sunny, Partly Cloudy, Mostly Cloudy, Cloudy, Foggy, Rain
Air Temperature (°F)			
Oil, grease, scum, solids of waste origin present?	YES NO	YES NO	YES NO
Discoloration of surface water observed?	YES NO	YES NO	YES NO
Algal Blooms Present?	YES NO	YES NO	YES NO
Odors Present?	YES NO	YES NO	YES NO
Foam Present?	YES NO	YES NO	YES NO
Plant Discharge Present? <small>(Apply to compliance sites only) All Whittier Narrow Rec. Water(excludingRD-1) SJC C2 LC-R31B LC R4 LB RA1B SJC R11 Po RA Va RD SJC R12 LB RA Sa RB</small>			
Other Significant Observations (Storm Drain Flow)	YES NO	YES NO	YES NO
Sludge Deposits?	YES NO	YES NO	YES NO
Water Users in the River:			
Non-contact Users:			
Wildlife Present?	YES NO	YES NO	YES NO
Estimated Amount of Vegetation:	ABOVE NORMAL NORMAL BELOW NORMAL	ABOVE NORMAL NORMAL BELOW NORMAL	ABOVE NORMAL NORMAL BELOW NORMAL
Notes:			

Verified by _____ Date : _____

Misty Brown

L:/WP51/Sampling_River Run/Bioassay Ambient observation sheets/ambient observation.doc

AMBIENT STATION OBSERVATION SHEET

(Lancaster Receiving Stations)

updated October 23, 2002

STATION _____ LIMS ID# _____

Date			
Time			
Observations by:			
Weather Conditions	CLEAR, MOSTLY CLOUDY, PARTLY CLOUDY, MOSTLY SUNNY, RAIN, FOGGY, CLOUDY	CLEAR, MOSTLY CLOUDY, PARTLY CLOUDY, MOSTLY SUNNY, RAIN, FOGGY, CLOUDY	CLEAR, MOSTLY CLOUDY, PARTLY CLOUDY, MOSTLY SUNNY, RAIN, FOGGY, CLOUDY
Oil, grease, scum, solids of waste origin present?	YES NO	YES NO	YES NO
Discoloration of surface water observed?	YES NO	YES NO	YES NO
Floating material?	YES NO	YES NO	YES NO
Odors Present?	YES NO	YES NO	YES NO
Foam Present?	YES NO	YES NO	YES NO
Other Significant Observations (Storm Drain Flow)	YES NO	YES NO	YES NO
Comments and/or Unusual Occurrences: X Color of receiving water appears normal ** Determine source (WRP or other); Fill out Monitoring=s Observation Sheet (see back)			

Verified by _____ Date _____

Misty Brown

L:\WP51\FORMS\RIVER\NewAMOBSEr.wpd

Appendix 3:

Miscellaneous Sampling Forms

CURRENT FLOW MEASUREMENTS (apply to river runs & bioassay sample collections)

LONG BEACH	
Station	Current Flow Measurements (flow units = cfs)
LB-RA1	Measurement of water height, conversion using Manning's Table
LB-RA	LB-RA-1 + LBWRP discharge
LB-RA2	Qualitative estimates (Above normal, Normal, Below normal)
LB-R6	Qualitative estimates (Above normal, Normal, Below normal)
LB-R7	Qualitative estimates (Above normal, Normal, Below normal)
LB-R8	Qualitative estimates (Above normal, Normal, Below normal)

LOS COYOTES	
Station	Current Flow Measurements (flow units = cfs)
LC-R31	Measurement of water height, conversion using Manning's Table
LC-R4	LC-R31 + LCWRP discharge
LC-R9W	Qualitative estimates (Above normal, Normal, Below normal)

WHITTIER NARROWS	
Station	Current Flow Measurements (flow units = cfs)
WN-RD1	Use of table providing for area and surface velocity.
WN-RD	WN-RD-1 + WNWRP discharge flow (004)
WN-RC	Currently not in use
WN-RB	Use of table providing for area and surface velocity.
WN-RA	Flow rate from WNWRP discharge 001. Indicate if flow is coming from upstream of WNWRP discharge 001 in which case the flow will be >WNWRP discharge. If there is no discharge, use a qualitative measurement.
WN-R11	Qualitative estimates (Above normal, Normal, Below normal)

POMONA	
Station	Current Flow Measurements (flow units = cfs)
Pom-RA	Pomona WRP discharge.
Pom-RC	Quantitative measurements using Flow Meter (Flow Tracker). If a quantitative measurement is not possible use qualitative estimates (Above normal, Normal, Below normal)
Pom-RD	Quantitative measurements using Flow Meter (Flow Tracker). If a quantitative measurement is not possible use qualitative estimates (Above normal, Normal, Below normal)

SAUGUS	
Station	Current Flow Measurements (flow units = mgd)
SA-RA	Quantitative measurements using Flow Meter (Flow Tracker)
SA-RB	Saugus WRP discharge

VALENCIA	
Station	Current Flow Measurements (flow units = mgd)
VA-RC	Quantitative measurements using Flow Meter (Flow Tracker)
VA-RD	VA-RC + VAWRP Discharge
VA-RE	Quantitative measurements using Flow Meter (Flow Tracker)

SAN JOSE CREEK	
Station	Current Flow Measurements (Qualitative); SJC-R2 (flow units = mgd)
SJC-C1	Qualitative estimates (Above normal, Normal, Below normal)
SJC-C2	Qualitative estimates (Above normal, Normal, Below normal)
SJC-R2	SJC-E + SJC-W discharge (subtract 1 hour & 45 minutes from the sampling time when requesting flow)
SJC-R10	Qualitative estimates (Above normal, Normal, Below normal)
SJC-R11	Qualitative estimates (Above normal, Normal, Below normal)
SJC-R12	Qualitative estimates (Above normal, Normal, Below normal)

*100-ft locations ("B locations") are calculated the same way as the compliance location except WN-RDB, which uses Whittier Narrows WRP discharge.

Diazinon Testing Concurrent with Chronic Toxicity Testing

PERMIT	LOCATIONS	SPECIFIED MONTHS
Long Beach WRP	RA, RA1, RA2, R6, R7, R8	Jan/Apr/July/Oct
Los Coyotes WRP	R31, R4, R9W	Jan/Apr/July/Oct
Valencia WRP*	RC, RD, RE	Jan/Apr/July/Oct
Saugus WRP*	RA, RB	Jan/Apr/July/Oct
Whittier Narrows WRP	R11, RA, RB, RC, RD, RD1	Feb/May/Aug/Nov
San Jose Creek WRP	C1, C2, R2, R10, R11, R12, R13	Feb/Aug
Pomona WRP*	Pomona Effluent	June/Dec
	RA, RC, RD	Feb/June/Aug/Dec

Note: *Saugus, Valencia, and Pomona also require chlorpyrifos

Bioassay Testing Frequency

WRP	TEST	FREQUENCY	NOTES
Long Beach			
Final Effluent	Acute	Quarterly (Jan, April, July, Oct)	
	Chronic	Monthly	
Receiving Water (LB-RA1, RA, RA2, R6, R7, R8)	Acute	Semiannual (Jan, July)	
	Chronic	Quarterly (Jan, April, July, Oct)	
	Diazinon	Quarterly (Jan, April, July, Oct)	Diazinon for all 6 locations
LB-RA1B	Acute	Quarterly (Jan, April, July, Oct)	
	Chronic	Quarterly (Jan, April, July, Oct)	
Los Coyotes			
Final Effluent	Acute	Quarterly (Jan, April, July, Oct)	
	Chronic	Monthly	
Receiving Water (LC-R31, R4, R9W)	Acute	Semiannual (Jan, July)	
	Chronic	Quarterly (Jan, April, July, Oct)	
	Diazinon	Quarterly (Jan, April, July, Oct)	
LC-R31B	Acute	Quarterly (Jan, April, July, Oct)	
	Chronic	Quarterly (Jan, April, July, Oct)	
Whittier Narrows			
Final Effluent	Acute	Quarterly (Feb, May, Aug, Nov)	
	Chronic	Monthly	
Receiving Water (WN-RA, RB, RC, RD, RD1, R11)	Acute	Semiannual (Feb, Aug)	
	Chronic	Quarterly (Feb, May, Aug, Nov)	
	Diazinon	Quarterly (Feb, May, Aug, Nov)	
RA-B, RB-B, RD-B	Acute	Quarterly (Feb, May, Aug, Nov)	
	Chronic	Quarterly (Feb, May, Aug, Nov)	
San Jose Creek			
Final Effluent	Acute	Annual (Aug)	
	Chronic	Monthly	
Receiving Water (SJC-C1, C2, R2, R10, R11, R12, R13)	Acute	Annual (Aug)	
	Chronic	Quarterly (Feb, May, Aug, Nov)	
	Diazinon	Semiannual (Feb, Aug)	
Pomona			
Final Effluent	Acute	Quarterly (Feb, June, Aug, Dec)	
	Chronic	Monthly	
	Diazinon	Semiannual (June, Dec)	
	Chlorpyrifos	Semiannual (June, Dec)	
Receiving Water (Pom-RA, RC, RD)	Acute	Semiannual (June, Dec)	
	Chronic	Quarterly (Feb, June, Aug, Dec)	
	Diazinon	Quarterly (Feb, June, Aug, Dec)	
	Chlorpyrifos	Quarterly (Feb, June, Aug, Dec)	
Valencia			
Final Effluent	Acute	Quarterly (Jan, April, July, Oct)	
	Chronic	Monthly	
Receiving Water (Va-RC, RD, RE)	Acute	Semiannual (Jan, July)	
	Chronic	Quarterly (Jan, April, July, Oct)	
	Benthic Algae	Annual	(concurrent with bioassessment)
	Diazinon	Quarterly (Jan, April, July, Oct)	
	Chlorpyrifos	Quarterly (Jan, April, July, Oct)	
Saugus			
Final Effluent	Acute	Quarterly (Jan, April, July, Oct)	
	Chronic	Monthly	
Receiving Water (Sa-RA, RB)	Acute	Semiannual (Jan, July)	
	Chronic	Quarterly (Jan, April, July, Oct)	
	Benthic Algae	Annual	(concurrent with bioassessment)
	Diazinon	Quarterly (Jan, April, July, Oct)	
	Chlorpyrifos	Quarterly (Jan, April, July, Oct)	
JWPCP			
Final Effluent	Acute	Monthly	
	Chronic	Monthly	West Basin (Feb/Aug)
Lancaster			
Final Effluent	Acute	Quarterly (Feb, May, Aug, Nov)	
	Chronic	Annual (July)	
Receiving Water (Lan-RS2)	Acute	None	
	Chronic	Annual (July)	

Biology Group LIMS Profiles

JWPCP

1. WRP Bioassays- **649**

Lancaster

1. WRP Bioassays- **509**
2. Receiving Water Bioassays- **588**

Long Beach

1. WRP Bioassays- **641**
2. Receiving Water Bioassays- **108**
3. River Runs- **98**

Los Coyotes

1. WRP Bioassays- **642**
2. Receiving Water Bioassays- **485**
3. River Runs- **289**

Pomona

1. WRP Chronic Bioassays- **643**
2. WRP Acute Bioassays- **392**
3. Receiving Water Bioassays- **296**
4. River Runs- **380**

SJC

1. SJC East WRP Chronic Bioassays- **645**
2. SJC East WRP Acute Bioassays- **285**
3. SJC West WRP Chronic Bioassays- **644**
4. SJC West WRP Acute Bioassays- **286**
5. Receiving Water Bioassays- **297**
6. River Runs- **479**

Saugus

1. WRP Chronic Bioassays- **646**
2. WRP Acute Bioassays- **410**
3. Receiving Water Bioassays- **299**
4. River Runs- **331**

Valencia

1. WRP Chronic Bioassays- **647**
2. WRP Acute Bioassays- **69**
3. Receiving Water Bioassays- **109**
4. River Runs- **494**

Whittier Narrows

1. WRP Chronic Bioassays- **648**
2. WRP Acute Bioassays- **586**
3. Receiving Water Bioassays- **493**
4. River Runs- **298**

Biology QA

1. SJC Biology Group QA Program- **766**
 - a. Includes Hard Dilution Water submittals, copper stock, zinc stock, etc.)