

Appendix A-2

Emergency Response Plans

1. Sewer Overflow Response Manual
2. Example Emergency Response Plan for Pump Stations (Duckett PS)
Pump Station ERPs are kept separately from this SSMP. Refer to the specific ERP for the pump station in question. A set of all pump station ERPs is kept in the Collections Office.

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Sewer Overflow Response Manual



Las Gallinas Valley
Sanitary District

Written: April 2005
Revised: April 2018

Sanitary Sewer Overflow

INTRODUCTION	TAB 1
Definitions	1-1
Customer Relations	1-1 & 1-2
Initial Call - Start Here	1-3
Emergency Assistance Call Out List	1-4
SEWER OVERFLOW– INSIDE	TAB 2
Sewer Overflow - Inside Initial Response	2-1
Sewer Overflow - Inside Response	2-2
Claims Handling	2-3
Backflow Prevention	2-4
BPD and Cleanout Diagram	2-5
Side Sewer Details Diagram	2-6
LGVSD Ordinance 40	2-7
SEWER OVERFLOW – OUTSIDE	TAB 3
Outside Initial Response	3-1
Outside Response	3-2 & 3-3
Estimating Volume: Methods 1 and 2	3-4
Estimating Volume: Method 3	3-5
San Diego Manhole Flow Rate Reference Sheet	3-6
SEWER OVERFLOW REPORTING REQUIREMENTS	
TAB 4	
Reporting Requirements Flowchart	4-1
Reporting Requirements	4-2
Electronic and Annual Reporting	4-3
CONTRACTORS FOR EMERGENCY REPAIR	TAB 5
REPORT FORMS	TAB 6
LGVSD Incident Report	
Marin County SSO Report	

DEFINITIONS

Category 1 SSO is one that is a spill of any volume that reaches surface water

Category 2 SSO is one that is greater than or equal to 1,000 gallons that do not reach surface water

Category 3 SSO is one that is less than 1,000 gallons that do not reach surface water

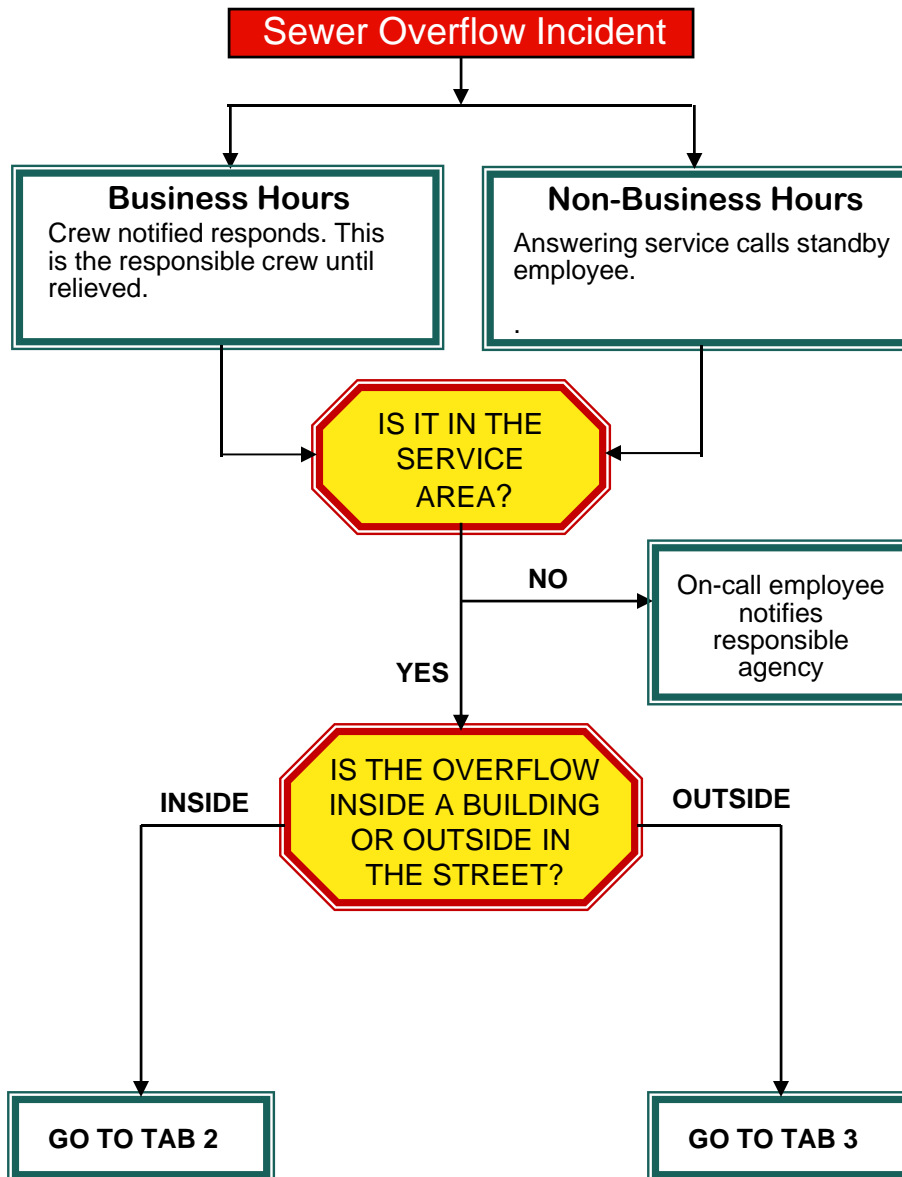
CUSTOMER RELATIONS

It is important for employees to communicate effectively with District homeowners or residents, especially in sewage backup situations. How we communicate - on the phone, in writing, or in person - is how we are perceived. Good communication with the homeowner results in greater confidence in our ability to address the problem satisfactorily, less chance of having the homeowner prolong the claims process, and less chance of him/her exaggerating the damage done to the property.

As a representative of the District, you will occasionally have to deal with an irate homeowner. A calm reasonable homeowner can become an unreasonable and irate should he/she perceive us as being indifferent, uncaring, unresponsive, or incompetent. Although sometimes difficult, effective management of a sewage backup situation is critical. If it is not managed well, the situation can get out of hand and the District can end up with a costly prolonged battle. We want the homeowner to be assured that the District is responsive and the homeowner's best interest is a top priority.

A Few Communication Tips

1. Give the homeowner ample time to explain the situation or to vent.
2. As soon as possible, let the homeowner know that you will find the source of the problem and will have it corrected as quickly as you can.
3. Acknowledge the homeowner's concerns. For example, if the homeowner seems angry or worried about property damage, say something like, "I understand you're concerned about the possible damage to your property, but we will have a professional clean-up crew restore the area, and we will take care of any repairs or losses you may have as a result of this incident."
4. Express regret, on behalf of the District, for any inconveniences caused by the incident.
5. As much as possible, keep the homeowner informed on what is being done and will be done to correct the problem.
6. Keep focused on getting the job done in a very professional manner. Don't wander from the problem with too much unnecessary small talk.
7. Don't find fault or lay blame on anyone.
8. Before you leave, make sure the homeowner has the name and telephone number of persons to contact at the District.
9. Make sure someone follows up with a telephone call to ensure everything is being handled as it should be.



Sewer Overflow: Emergency Assistance 1-4

<u>Field Personnel</u>	Cell	Pager	Home
<i>Bob Buchholz</i>	(415) 747-7036	(415)258-5029	(415) 827-7579
<i>Brian Exberger</i>	(415) 747-7030	(415)258-5034	(415) 493-6817
<i>Rob Fernandes</i>	(415) 747-7042	(415) 258-5014	(415) 892-9318
<i>Chris Gill</i>	(415) 747-7032	(415) 258-5022	(510) 290-8514
<i>Brian Johnson</i>	(415) 747-7046	(415) 258-5076	(415) 472-2879
<i>Greg Pease</i>	(707) 533-3520		(707)533-3520
<i>Mel Liebmann</i>	(415) 747-2840	(415) 458-4107	(415) 898-1784
<i>Chris Campbell</i>	(415)755-0570	(415) 258-5004	(510)275-3613
<i>Josh Binder</i>	(415) 747-7034	(415) 458-4107	(925) 368-3348
<i>Ralph Loveless</i>	(415) 747-7048	(415) 258-5034	(707) 927-6695
<i>John Bontrager</i>	(415)747-7017	(415) 258-5056	(831) 325-3650

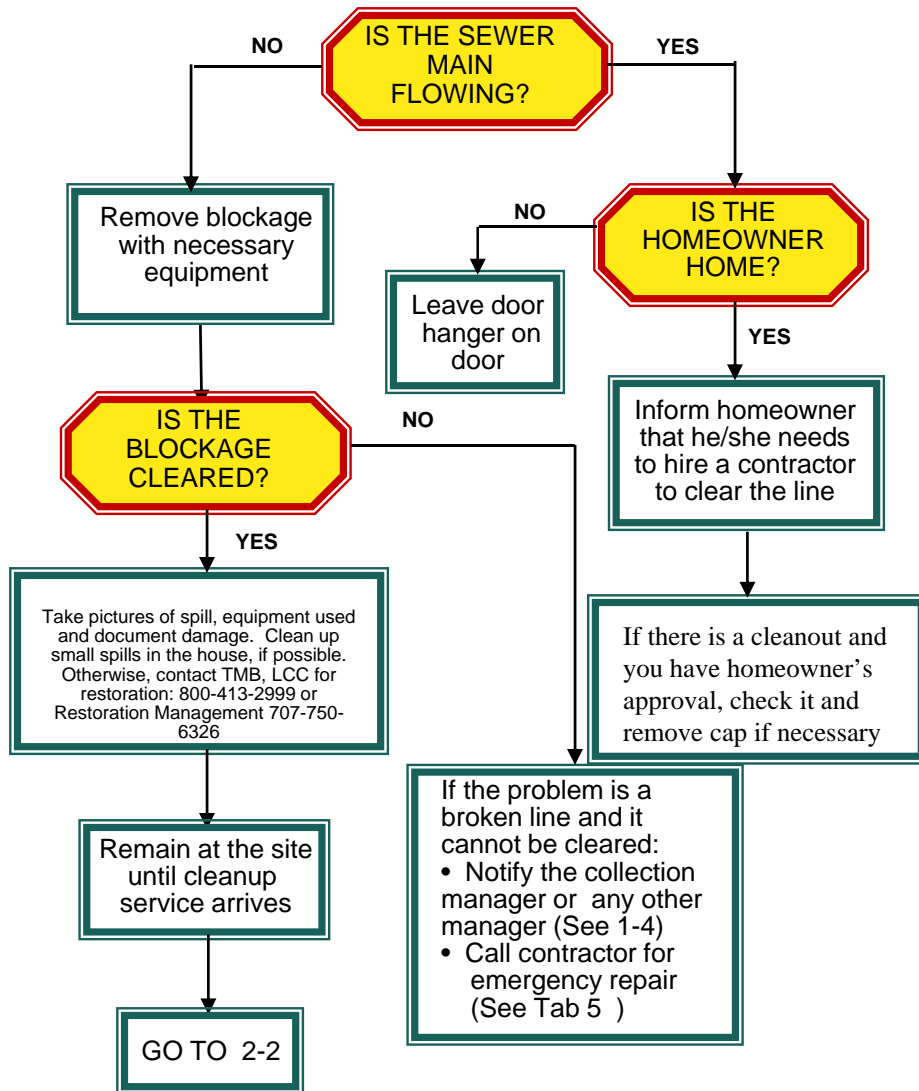
Administration

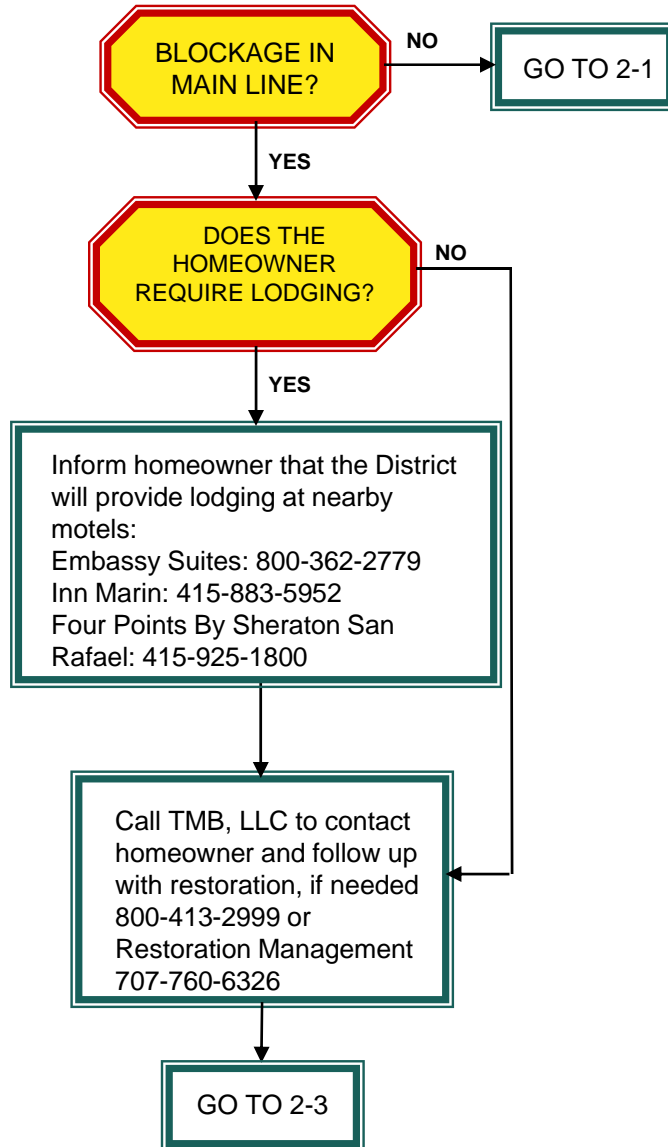
<i>Chris DeGabriele, GM</i>	(415) 497-5741		
<i>Susan McGuire</i>	(707) 481-7809		(707) 481-7809
<i>Teresa Lerch</i>	(415) 250-4531		(415) 892-7806
<i>Kristina Kempf</i>	(415) 446-8544		(415) 446-8544
<i>Mike Cortez</i>	(707) 704-1944		(707) 649-1624

Marin County Sanitary Districts

<i>Central Marin Sanitation Agency</i>	(415) 459-1455
<i>Novato Sanitary District</i>	(415) 892-1694
<i>Sanitary District No. 1 (Ross Valley)</i>	(415) 461-1122
<i>Sanitary District No. 5 (Tiburon)</i>	(415) 435-1501
<i>Sewerage Agency of Southern Marin</i>	(415) 388-2402
<i>Sausalito-Marín City Sanitary District</i>	(415) 322-0244

Sewer Overflow – Inside Initial Response 2-1





Whenever there is a possibility of property damage, inform the homeowner that the Collections Manager will follow up and will contact him/her. Do not discuss financial liabilities with the homeowner. Take pictures of affected area and homeowner's property.

Unless otherwise directed by the Collections Manager, whoever responds first to the sewer backup should complete the appropriate report (see Tab 4) before leaving the site of the sewer backup, if at all possible. ***Take as many photos as needed to accurately represent the extent of the damage. Take photos of areas not impacted as well.***

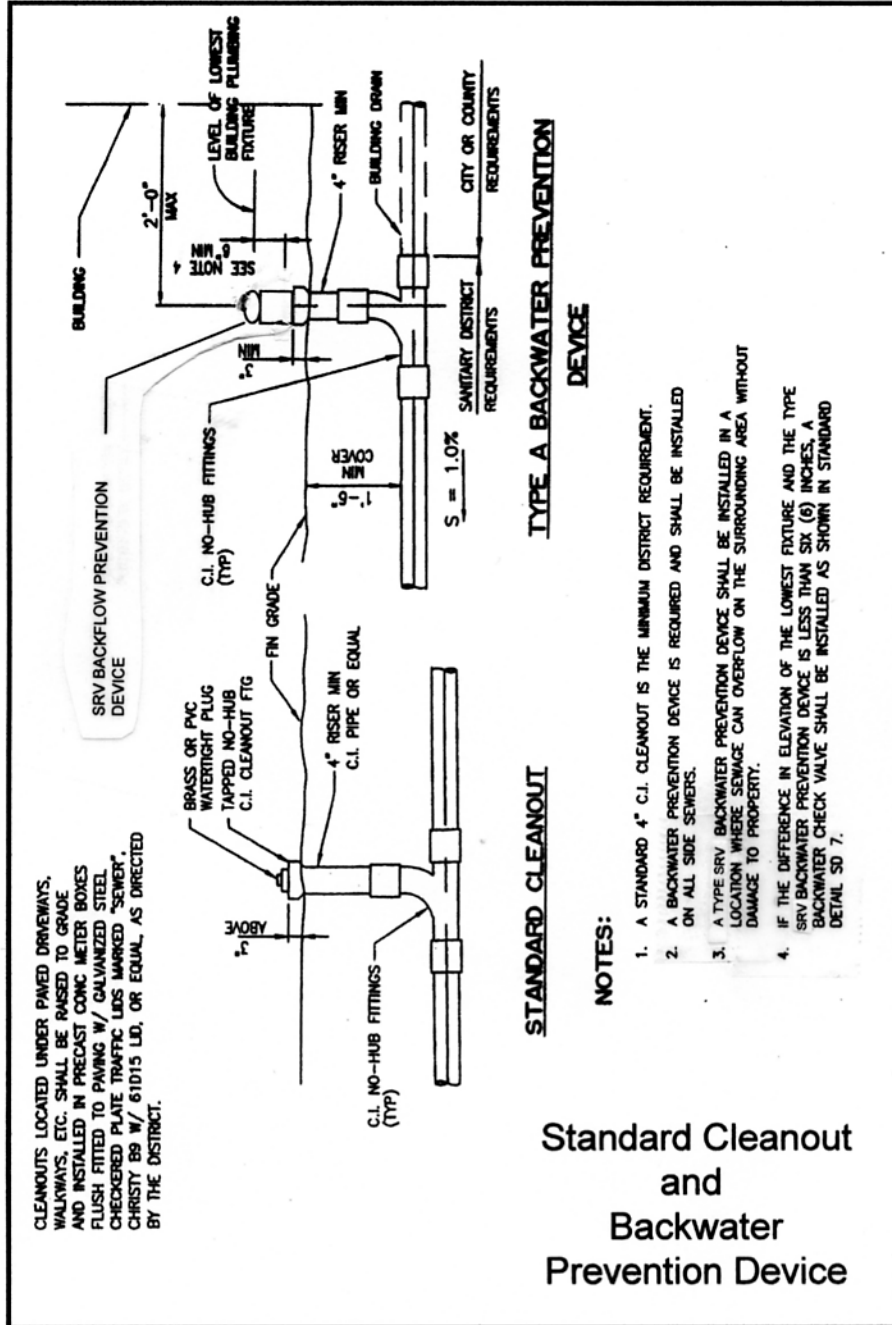
Notify the District's insurance carrier:

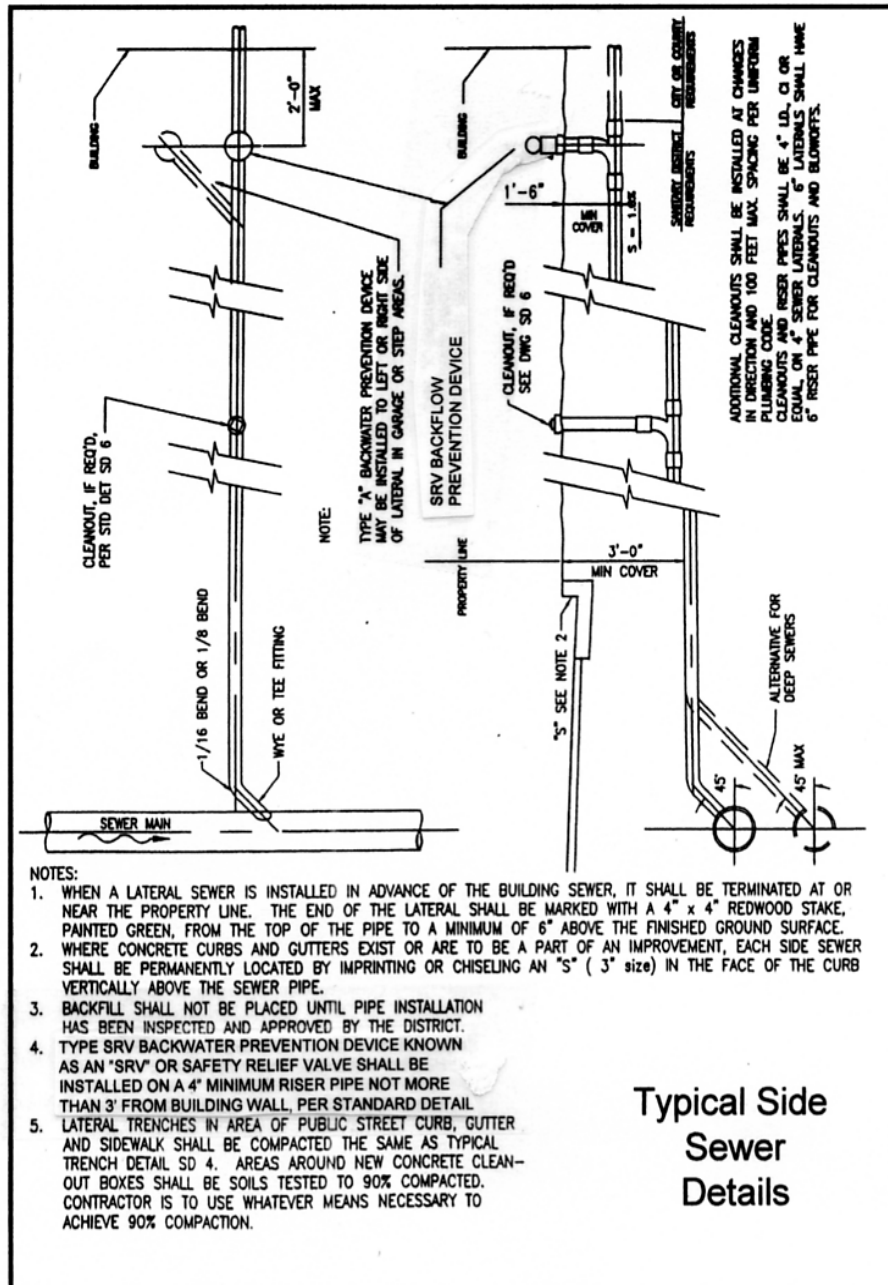
York Risk Services Group
Melissa Ryan
Senior Claims Examiner
Indemnity
(916) 960-0939

Sewer Overflow – Backflow Prevention 2-4

If it is determined, after a sewer backup, that the homeowner does not have a Backflow Prevention Device, explain that one is needed to prevent future backups into the home. Tell the homeowner that when there is a blockage in the sewer system, it would normally rise through a manhole and flow to the surrounding area. Explain that if the house plumbing is below the level of an overflowing manhole it can back up through a lateral line and enter the home. After this explanation, do the following:

1. Tell the homeowner that he/she is responsible for having a BPD installed.
2. Explain that it's a plumber's job and the cost varies depending on the complexity of the job.
3. Tell the homeowner that the District has to approve the BPD and installation. Explain that the plumber should contact the District for the approval.
4. If necessary, use the BPD diagrams (2-5 and 2-6) to explain how the BPD works.
5. Answer whatever questions that come up as best you can.
6. If the homeowner expresses interest in the District's Sanitary Code, have him or her contact the District office for a copy.



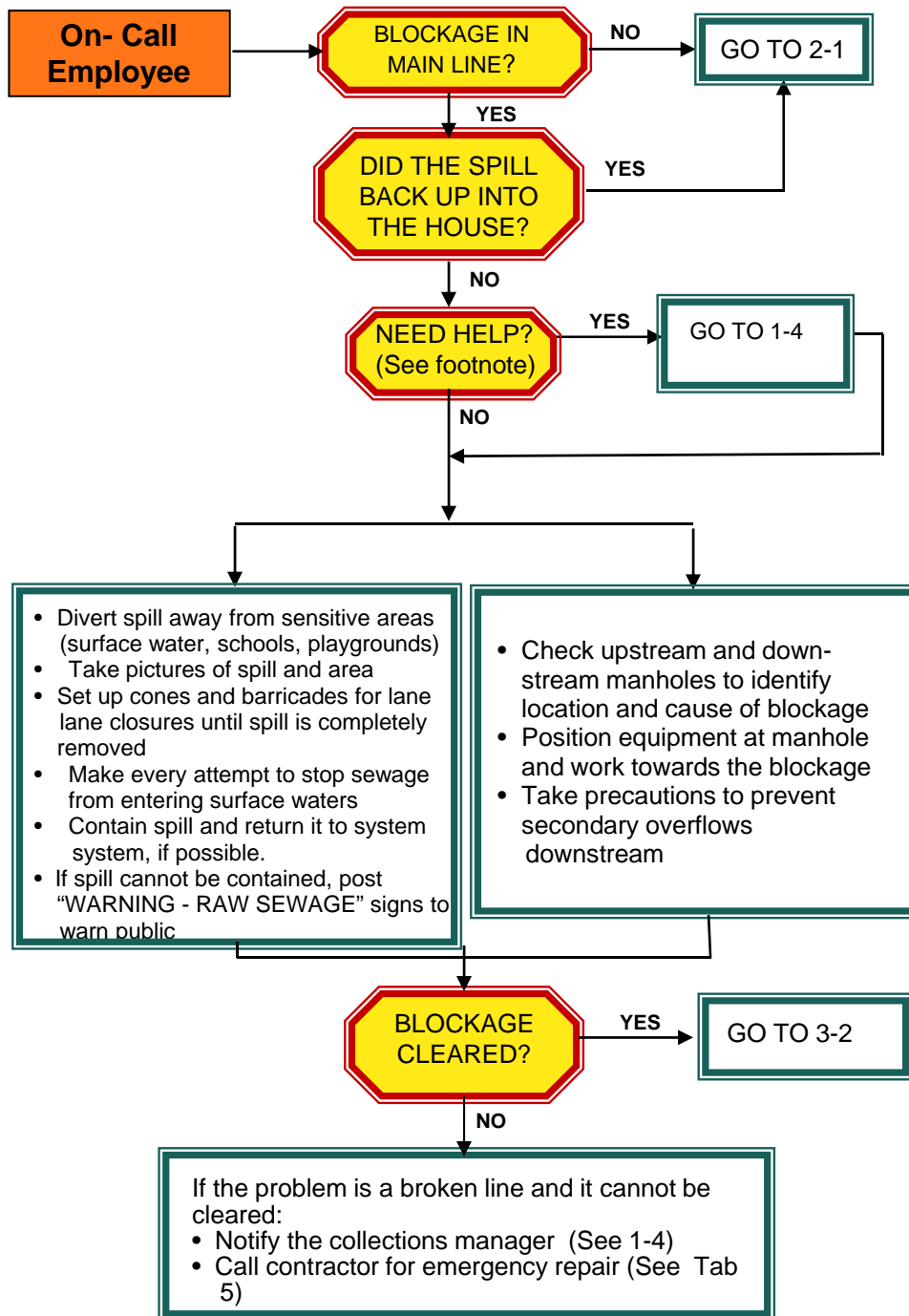


Sewer Overflow – LGVSD Ordinance 40 2-7

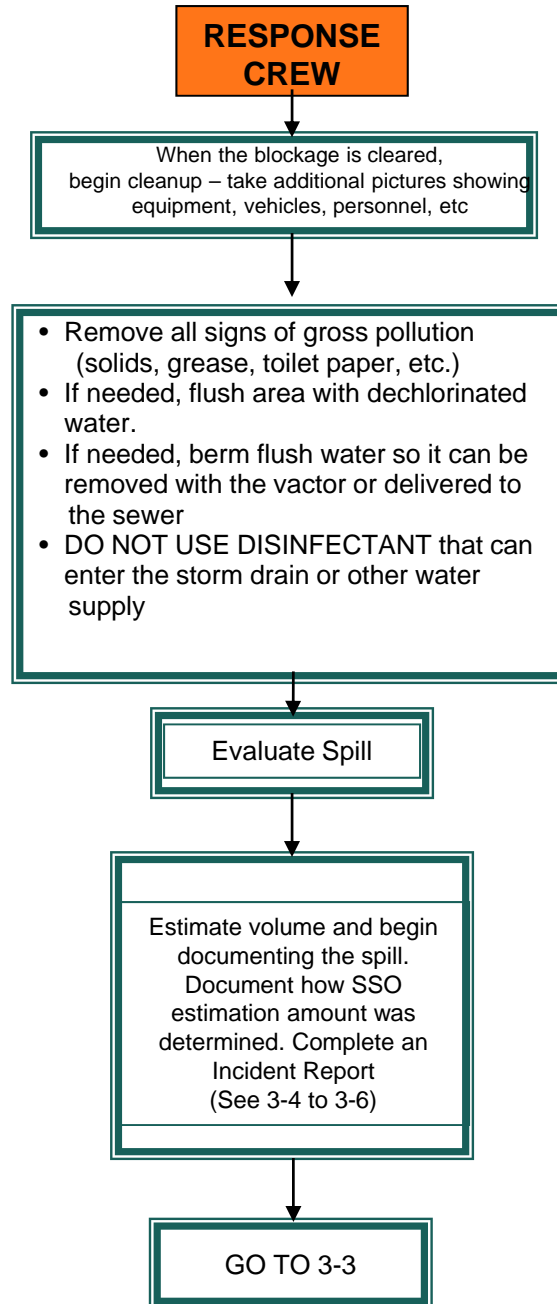
ORDINANCE 40, SECTION 2:

Buildings in which the elevation of the lowest floor is less than 18 inches above the rim elevation of the nearest upstream manhole or rodhole in the reach of main sewer into which a side sewer connects shall be protected from backflow of sewage by installing a backwater prevention device of a type and in the manner prescribed by the District. Any such backflow device shall be installed by the applicant for sewer service and shall be located on the building sewer between the building and the property line. The backflow device, if below grade, shall be enclosed in a box with removable cover and shall be readily accessible for inspection and maintenance. The installation of any such backflow device shall be at the sole cost and expense of the applicant. The maintenance of the backflow device shall be the sole obligation of the permittee or his successor in interest. The District shall be under no obligation to ascertain that the backflow device continues in operating condition.

Sewer Overflow – Outside Initial Response 3-1

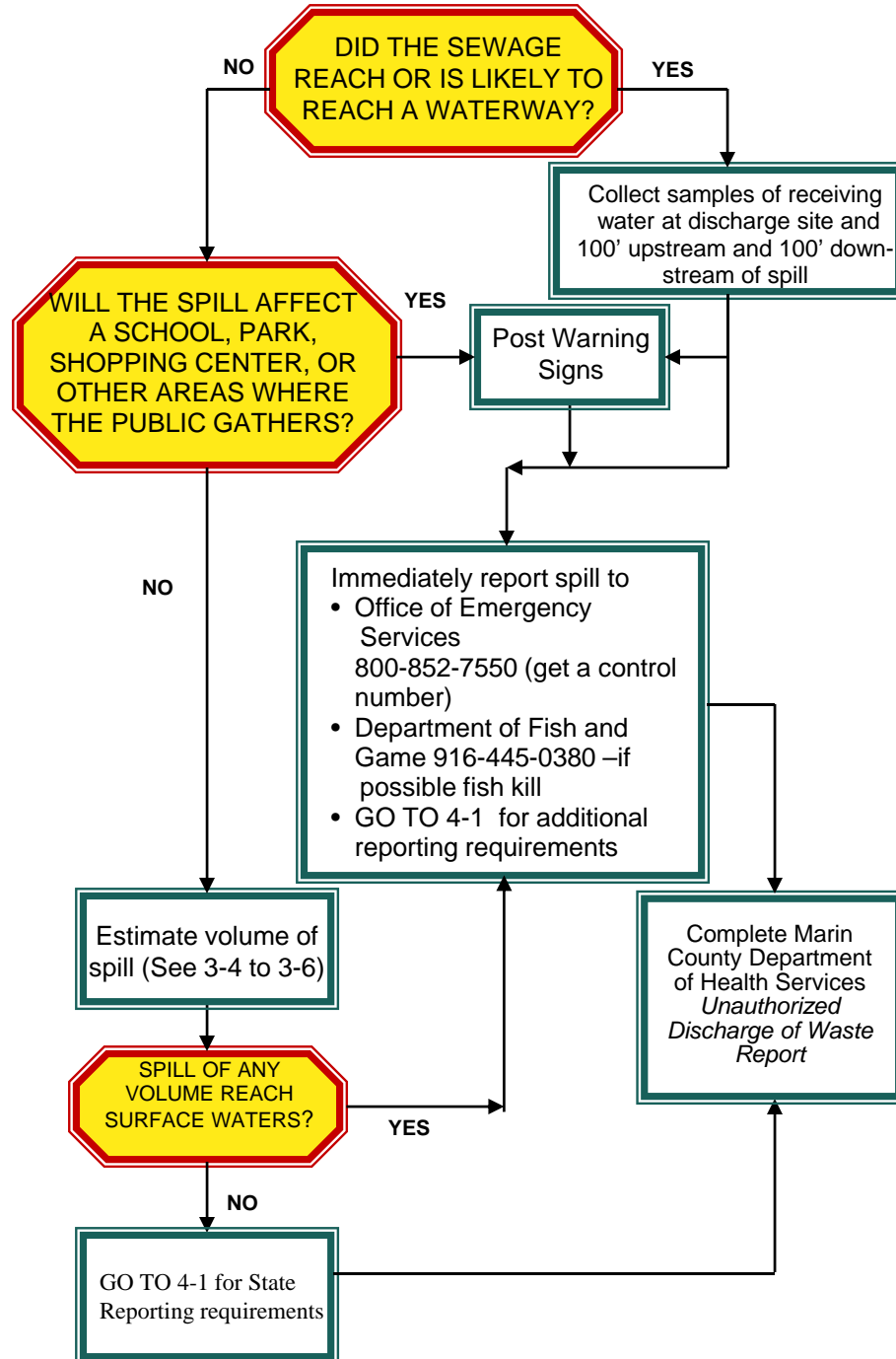


Footnote: If needed, get the emergency response trailer.



Sewer Overflow – Outside Response

3-3



METHOD 1: EYEBALL ESTIMATE

This method can be useful for small spills up to 100 gallons. To use this method, imagine the amount of water that would spill from a bucket or barrel. A bucket contains 5 gallons and a barrel contains 50 gallons. If the spill is larger than 50 gallons, try to break the standing water into barrels and multiply by 50 gallons.

METHOD 2: MEASURED VOLUME

Most small spills can be estimated with this method. The shape, dimensions, and depth of the spilled wastewater are needed. The shape and dimensions are used to calculate the area of the spill and the depth is used to calculate the volume.

Step 1 - Sketch the shape of the contained sewage

Step 2 - Measure or pace off the dimensions.

Step 3 - Measure the depth at several locations

Step 4 - Convert the dimensions including depth to feet

Step 5 - Calculate the area using the following formulas:

Rectangle Area = length x width

Circle Area = diameter x diameter x 0.785

Triangle Area = base x height x 0.5

Step 6 - Multiply area times the depth

Step 7 - Multiply the volume by 7.5 to convert it to gallons

METHOD 3: DURATION AND FLOW

This method is used when it is difficult or impossible to measure area and depth. The volume of the spill is estimated by multiplying the duration (in hours or days) by the flow rate (in gallons per hour or gallons per day).

Duration

The time elapsed from the start of the spill to the time the spill has stopped. The following are some approaches that can be used to estimate duration.

Start time: Initially, there will be limited deposits of grease and toilet paper at the spill site. After a few days, the grease forms a light-colored residue. After a few weeks, the grease turns dark and the quantity of toilet paper and other materials will increase. These changes can be used to estimate start time in the absence of other information. Check with appropriate neighbors or other witnesses.
End time: The time is estimated by observing the “blow down” that occurs when the blockage has been removed.

Flow Rate

Flow rate is the average flow leaving the sewer system at the time the spill has stopped. Three ways to estimate the flow rate are:

San Diego Manhole Flow Rate Reference Sheet (See 3-5). This sheet shows the sewage flowing from a manhole cover for a variety of flow rates.

Changes in flows in the downstream flow meters can be used to estimate the flow rate during the spill (better for large SSOs).

Once the location of the spill is known, the number of upstream connections can be determined from the field maps. Multiply the number of connections by 150 gallons per day per connection or 8-10 gallons per hour per connection.

If the spill was near or at a pump station, SCADA can be used to determine the average flow through the system during specific times of day.

Once the duration and flow rate have been estimated, the volume of the spill is the product of duration in hours or days times the flow rate in gallons per hour or gallons per day.



City of San Diego
Metropolitan Wastewater Department

Reference Sheet for Estimating Sewer Spills
from Overflowing Sewer Manholes
All estimates are calculated in gallons per minute (gpm)



City of San Diego
Metropolitan Wastewater Department



5 gpm



25 gpm



50 gpm



100 gpm



150 gpm



200 gpm



225 gpm



250 gpm

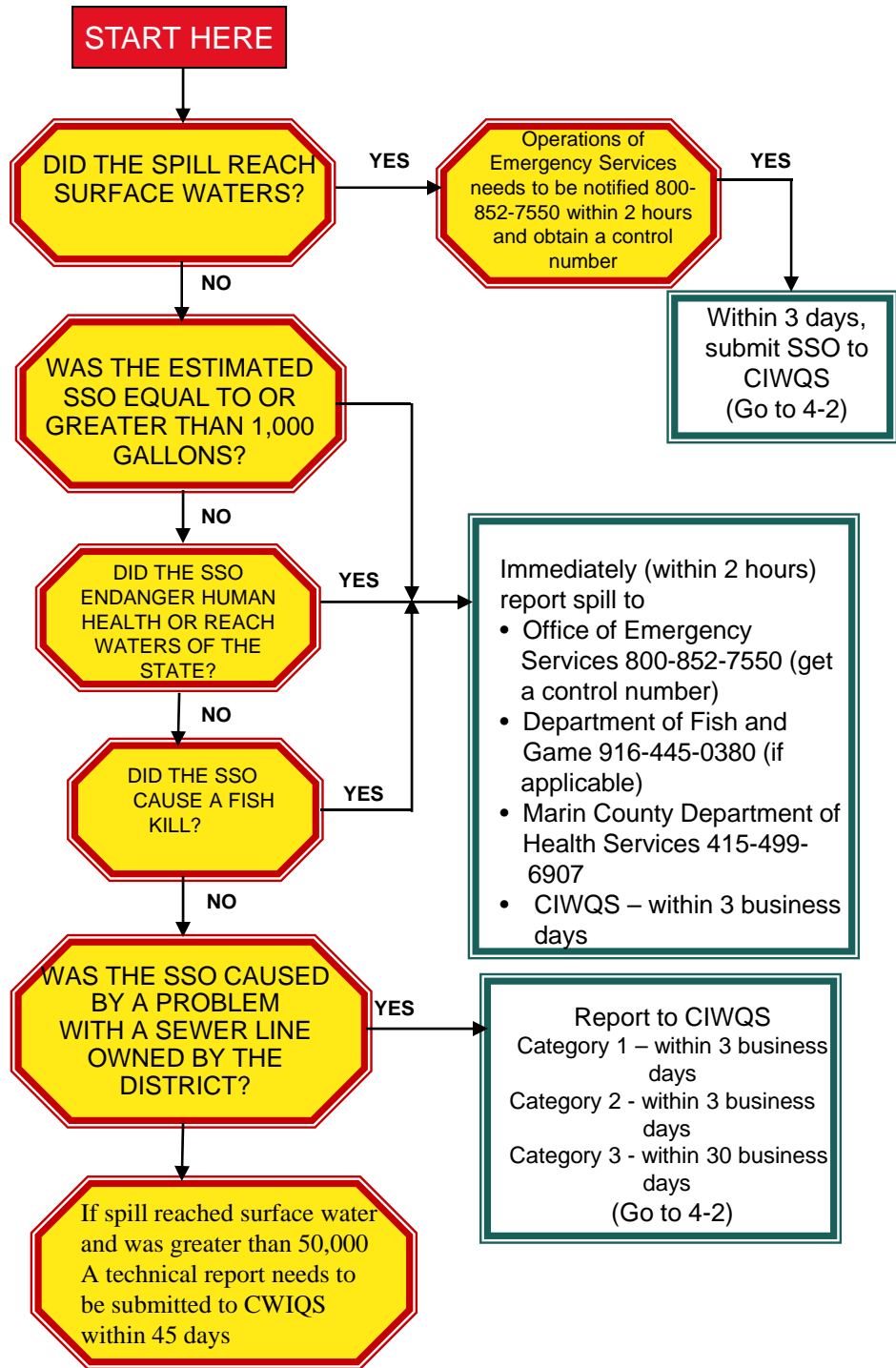


275 gpm

All photos were taken during a demonstration using metered water from a hydrant in cooperation with the City of San Diego's Water Department.

rev. 4/99

Sewer Overflow – Reporting Requirements 4-1



Sewer Overflow – Reporting Requirements 4-2

IMMEDIATE REPORTING

Reporting to CIWQS

As soon as staff is aware of a sanitary sewage overflow (SSO) :

Category 1 needs to be reported within 3 business days of being notified of the spill and certified within 15 calendar days.

Category 2 needs to be reported within 3 business days of being notified of the spill and certified within 15 calendar days.

Category 3 needs to be certified reported within 30 calendar days of the end of the month the SSO occurred.

Immediate Reporting to Office of Emergency Services

For any Category 1 SSO that is 1,000 gallons or more, contact the OES at 800-825-7550 within 2 hours and obtain a control number. Environmental Health Services needs to be notified no matter the size of a Category 1.

415-472-6907 during business hours

415-479-2311 during evenings or weekends

Immediate Notification to Public

Notify the public when the SSO has a potential to imminently and substantially affect public health. Post visible warning signs at the SSO location where there are schools, parks, shopping centers or other areas where there is public access and the SSO may endanger human health.

REPORT FORMS

LGVSD Incident Report

This report is for all spills. After verbally reporting the incident to the Collection System Manager, or General Manager, submit this report to the District Office.

Spill Containment and Cleanup Procedures Report

This is a check-off sheet that the Collection Crew must initial for each step needed. Submit this report to the Collection Manager.

Marin County Unauthorized Discharge of Waste Report

Fax this report to the County for overflows that would affect schools, parks, shopping centers or other areas where the public gathers, or if the overflow is more than 1,000 gallons or if any discharge reaches surface waters.

Sewer Overflow – Emergency Repairs 5-1

If the contracted services require more than one day of work, the expenditure must be authorized by the Collections Manager or General Manager.

For force main or pipeline repair call:

Linscott Construction	
397 Smith Ranch Road, San Rafael	415-492-1755
After hours: Bruce Linscott	415-999-5472

Maggiora & Ghilotti, 555 Dubois St., San Rafael	415-459-8640
After hours: Scott Ghilotti	(H) 415-897-6349
	(C) 415-847-1484
	(C) 415-827-2719

Ghilotti Bros., 525 Jacoby St., San Rafael	415-454-7011
Troy Simning, VP Project Management	(C) 415-760-9505

Michael Ghilotti, Chief Operating Officer	(C) 415-760-0700
	(H) 415-492-8840

For welders call:

Zappetini Welding	415-454-2511
Irish Welding	415-488-0230

For large (4,000 gallons) tank truck call :

Universal Environment (Benicia)	707-747-6699
Synagrow Technologies (headquarters in Corona)	909-277-2662
Suisun City Office	707-438-3730
Daniel Miller	(C) 510-772-1837
Redwood Sanitary Service	707-823-7630
Pacific Sanitation (Windsor)	707-838-2597

For small (2,000 gallon) tank truck call Roto-Rooter	415-898-2700
Roy's Sewer Service	707-892-5480

For diesel fuel call Royal Petroleum (24 hrs)	415-454-4066
or Bay Cities Oil	800-937-2266

Las Gallinas Valley Sanitary District Duckett Pump Station



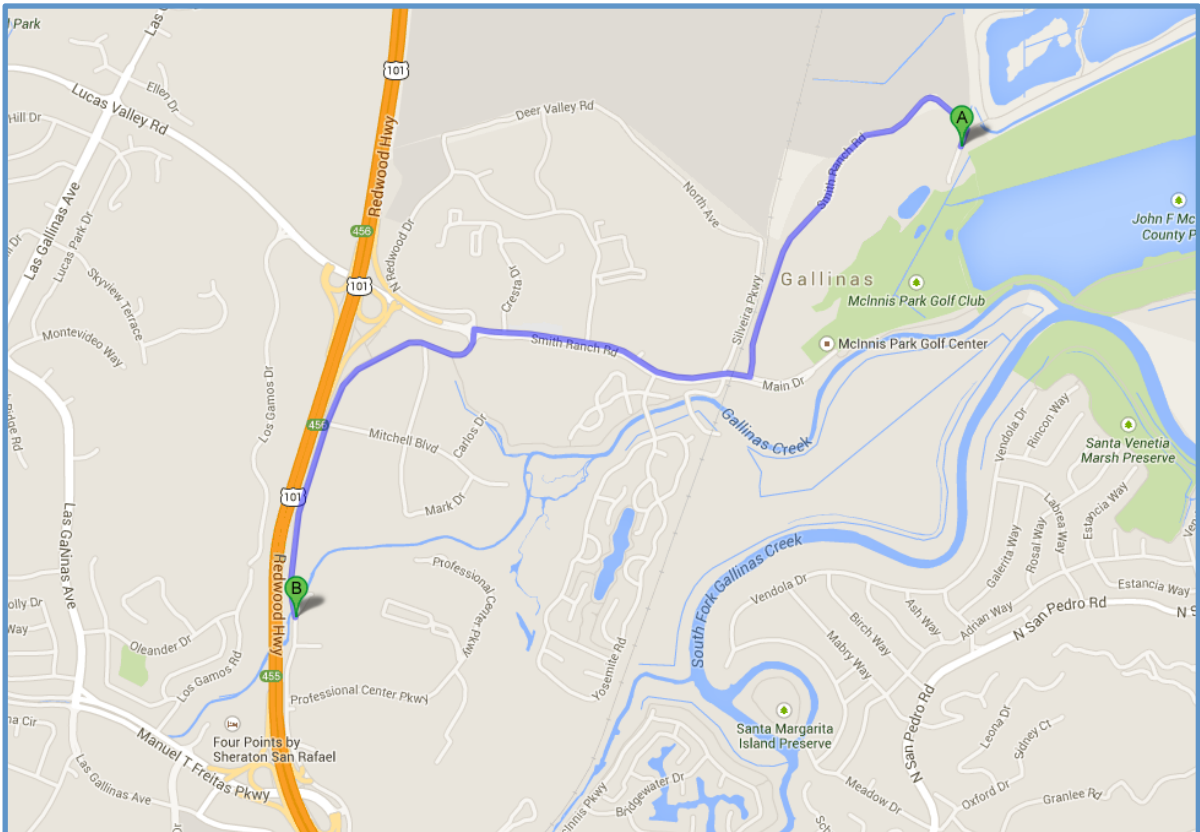
SSO Emergency Response Plan

Table of Contents

Topic	Page
Pump Station Technical Information	3
Hazards and Cautions	6
Pump Station Network	7
Overflow Decision Tree	9
Overflow Decision Tree Guide	12
Spill Notification Procedures	15
Spill Containment	16
Pump Station Power Map	17
Pump Station Control System	18
Lockout/Tagout Procedures	27
Manual Generator Start-Up Procedures	29
Bypass Configuration	35
Contact Information	39
System Map Pages	44

Pump Station Technical Information

Name	PS11 – Duckett Pump Station
Address	4238 Redwood Hwy
Lat., Long.	38.013225,-122.540202
Sewer Map	LGVSD Sanitary Sewer Map pg. K10
Directions	<p>From the LGVSD treatment plant at 300 Smith Ranch Road, San Rafael, CA 94903</p> <ul style="list-style-type: none"> Head north on Smith Ranch Rd toward Main Dr. (0.8 mi) Turn right to stay on Smith Ranch Road (0.5 mi) Turn left onto Redwood Frontage Rd (0.8 mi) Destination will be on left behind North Bay Moving and Storage Drive up the driveway to the left of the building.



Pump Station Technical Information - *Continued*

Station Information	
Est. wet well dimensions	13.5'x9.0'x20.2' deep per side
Est. wet well capacity	~13,730 gallons per side
Est. hold time (dry weather)	
Est. hold time (wet weather)	
Low point (likely overflow point)	MH T000.01 Located in front of the station Approx. GPS: 38.010967,-122.526034
Upstream pump station(s)	No upstream pump stations
Downstream pump station	Ties into the Mulligan force main which goes to the WWTP
Forcemain Data	18" x 6,150 feet
Discharge location	WWTP

Pump Capacities		
Pump	Motor & Pump	Capacity
#1	100 HP; Flygt 3305; 480v; 3ph	4,400 gpm
#2	100 HP; Flygt 3305; 480v; 3ph	4,400 gpm
#3	35HP; Flygt 3201; 480v; 3ph	2,200 gpm
#4	35HP; Flygt 3201; 480v; 3ph	2,200 gpm

Pump Station Technical Information - *Continued*

Station Power		
Primary Power	PG&E Supply voltage	480/3-Phase
	PG&E Service #	
	PG&E Meter #	1008819620
Backup Generator	Brand/Model	Caterpillar C9
	Fuel type	Diesel
	Fuel capacity	
	Power Capacity	300 kW
	Output Voltage	480v, 3 phase

Station Bypass Configuration

Pump Bypass: This pump station is configured for a station bypass to the force main.

Hazards & Cautions

Traffic Control

Follow the MUTCD, CalOSHA safety, and Las Gallinas Valley Sanitary District (LGVSD) personal protective equipment requirements for addressing traffic hazards when working in the public right of way. Provide detours to keep vehicles from entering any spill areas. Emergency response vehicles & equipment may require dedicated space marked by cones or barricades. Consider the use of:

Barricades	Cones
Signage	Caution Tape
Flares	Flaggers

Provide appropriate signage, caution tape or other means to inform the public of the spill and keep them from any inadvertent contact.

Obstacles and Crossings

Must be considered if bypassing a failed force main, particularly when crossing parking areas, driveways and roadways.

Safety Hazards

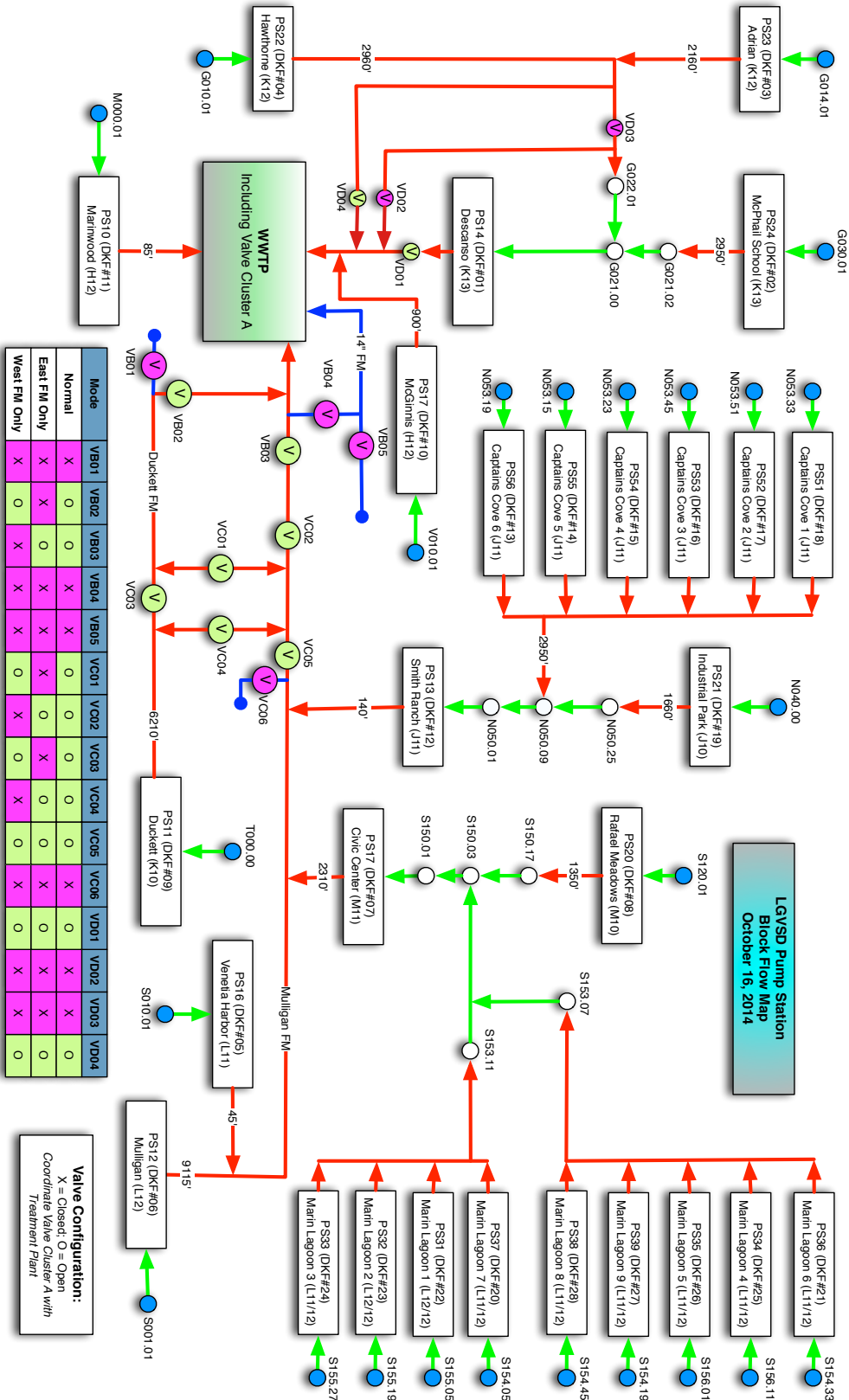
Electrical Hazards: Follow LOTO procedures when de-energizing and locking out electrical equipment. Always verify that all forms of stored energy are controlled prior to initiating exposure.

Sanitary Hazards: Wear latex gloves under leather gloves and safety glasses when handling equipment contaminated with raw sewage (when splashing/aerosols are likely to occur).

In addition to following good work practices and CalOSHA regulations, always follow LGVSD programs for:

Confined Space	Lockout/Tagout
Traffic Control	PPE Selection & Use
Respiratory Protection	Any other policy, safe practice or rule, as required.

Pump Station Network

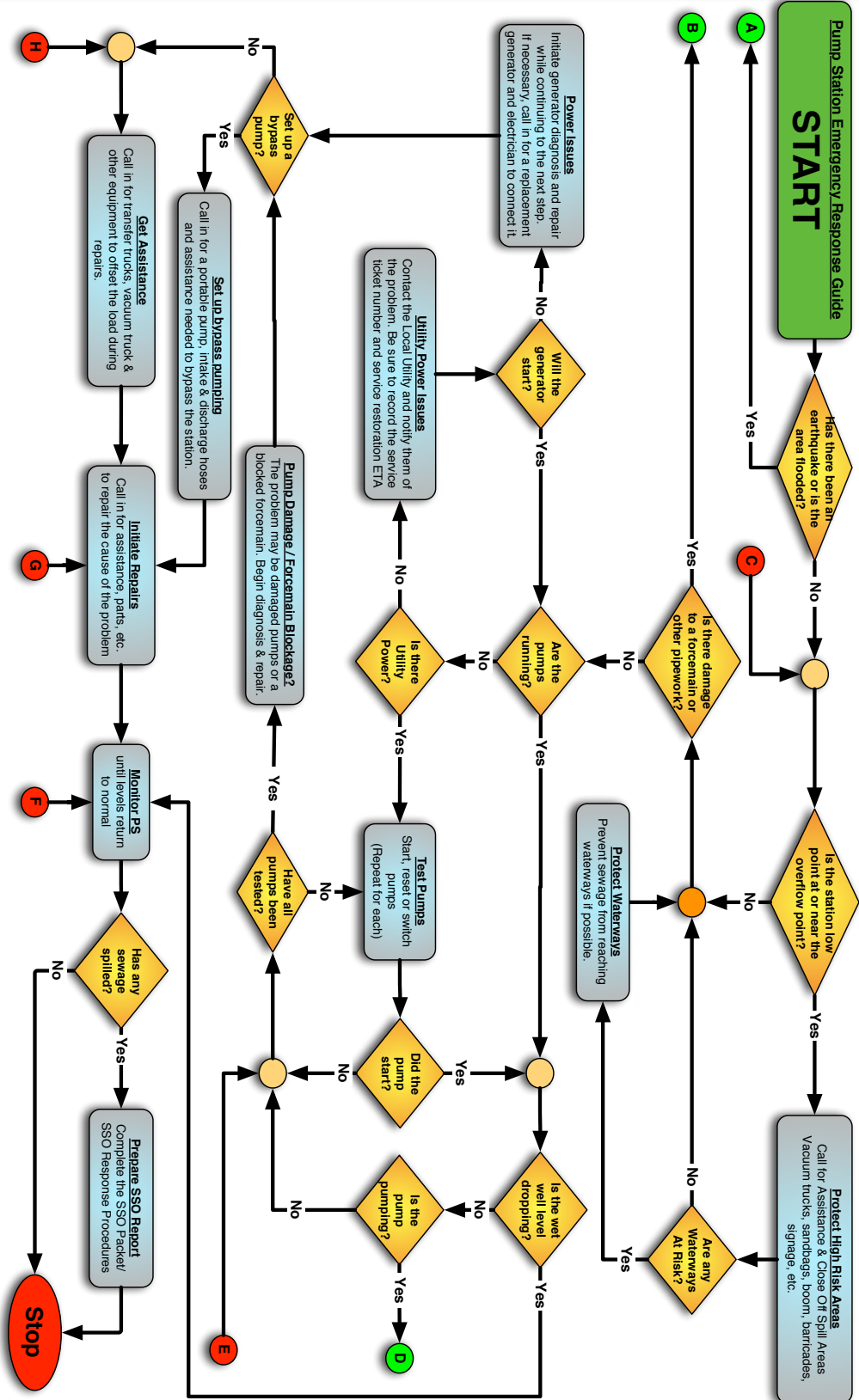


Pump Station Network - *Continued*

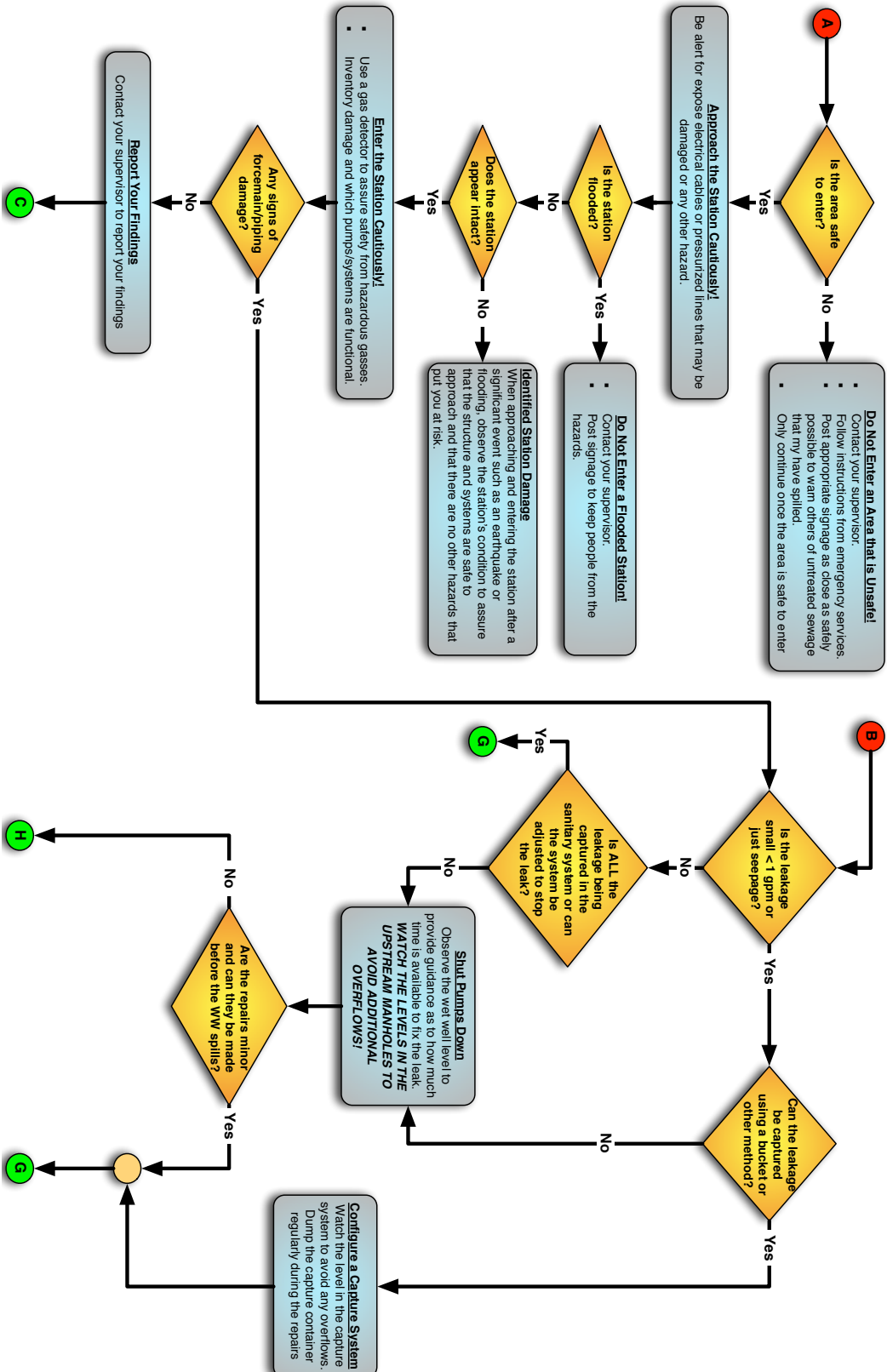
LGVSD Facility Locations

Ident	Name	Address	GPS (Est.)	Map
PS10	Marinwood	300 Smith Ranch Rd	38.02569,-122.51781	H12
PS11	Duckett	4238 Redwood Hwy	38.013225,-122.540202	K10
PS12	Mulligan	47 Meadow Dr.	38.00749,-122.522532	L12
PS13	Smith Ranch	Smith Ranch Rd	38.018333,-122.52651	J11
PS14	Descanso	807 Descanso	38.015888,-122.514424	K13
PS15	McGinnis	350 Smith Ranch	38.021277,-122.520172	H12
PS16	Venetia Harbor	79 Vendola	38.010394,-122.526211	L11
PS17	Civic Center	111 McInnis	38.005793,-122.531934	M11
PS20	Rafael Meadows	401 Merrydale (across)	38.001263,-122.538148	M10
PS21	Industrial Park	153 Paul (behind)	38.018382,-122.537618	J10
PS22	Hawthorne	403 Vendola	38.013062,-122.520862	K12
PS23	Adrian	Adrian Wy	38.011988,-122.517331	K12
PS24	McPhails	1590 Vendola (next to)	38.013765,-122.51021	K13
PS31	Marin Lagoon 1	33 Waterside	38.005978,-122.527965	L12/12
PS32	Marin Lagoon 2	92 Waterside	38.005747,-122.52602	L12/12
PS33	Marin Lagoon 3	164 Waterside	38.007208,-122.525136	L11/12
PS34	Marin Lagoon 4	216 Waterside	38.008254,-122.526856	L11/12
PS35	Marin Lagoon 5	Waterside @ Mariner's Circle	38.008945,-122.528055	L11/12
PS36	Marin Lagoon 6	Lagoon Ct	38.007591,-122.527865	L11/12
PS37	Marin Lagoon 7	Mariners Cir	38.007323,-122.528935	L11/12
PS38	Marin Lagoon 8	14 Mariners	38.006776,-122.530145	L11/12
PS39	Marin Lagoon 9	56 Mariners	38.008162,-122.529147	L11/12
PS51	Captains Cove 1	159 Capts Cove	38.016956,-122.531525	J11
PS52	Captains Cove 2	128 Capt Cove	38.017549,-122.531189	J11
PS53	Captains Cove 3	30 Wharf Cir	38.017433,-122.53065	J11
PS54	Captains Cove 4	89 Dockside	38.018126,-122.530569	J11
PS55	Captains Cove 5	28 Dockside	38.018538,-122.529744	J11
PS56	Captains Cove 6	16 Dockside	38.017847,-122.529757	J11

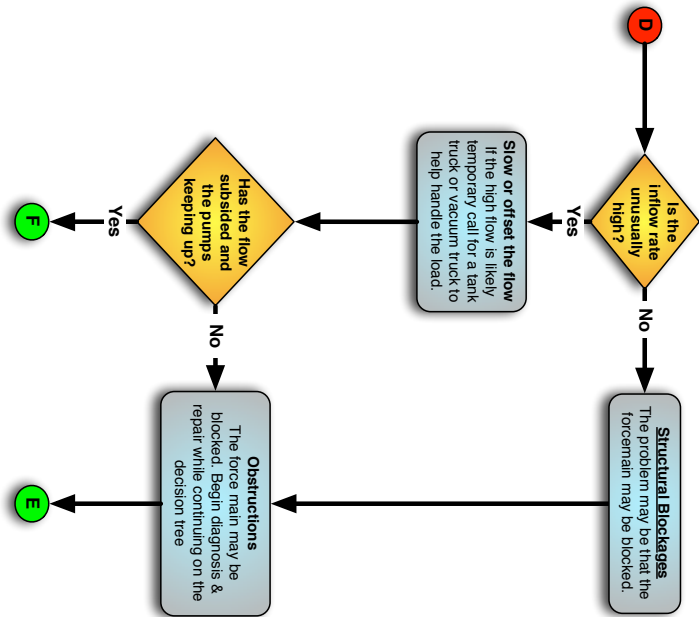
Overflow – Decision Tree



Overflow – Decision Tree - Continued



Overflow – Decision Tree - Continued



LEGEND

- Page-To-Page Link - Departure Point w/matching letter
- Page-To-Page Link - Arrival Point w/matching letter
- Simple Flow Merge (Watch arrows for flow direction)
- ◆ Decision Point
- ▭ Task/Direction Item

Overflow – Decision Tree Guide

Note: *This section is to elaborate on the questions and tasks found in the flow chart section above. As such, these questions are in alphabetical order and are not in the appropriate sequence for use. Refer to the flow chart for the correct sequence.*

Are any waterways at risk?

If the station is spilling or may spill, will the overflow reach any waters of the state such as SF Bay; local creeks or streams; or a storm drain?

Any signs of forcemain/piping damage?

When approaching and entering the station after a significant event such as an earthquake or flooding, observe the station's systems, piping, etc., from a distance to identify any force main or piping damage that may have occurred. Leaks, dents, scrapes, etc., should be noted and reported to your supervisor. If damage is identified, answer yes here.

Are the pumps running?

Are any of the pump motors running? Indications include SCADA, running indicator lamps, physical observation (such as seeing the check valve move), or audible sounds.

Are the repairs minor and can they be made before the WW spills?

If the repairs are minor, an attempt may be made to fix the problem, provided it can be completed quickly enough that an overflow is unlikely. If the fix might take longer, such as replacing a pump, there is a high likelihood that the station would overflow before the repairs are complete.

Can the leakage be captured using a bucket or other method?

If there is a small leak that can be 100% captured in a bucket or some sort of diversion back into the sanitary system in order to buy additional time to make the permanent fix, answer yes here.

Did the pump start?

If the pump has started when turned on, answer yes here. Otherwise, answer no.

Does the station appear intact?

When approaching and entering the station after a significant event such as an earthquake or flooding, observe the station's condition to identify any damage; assure that the structure and systems are safe to approach; and that there are no other hazards that put you at risk. If none are identified, answer yes here.

Overflow – Decision Tree Guide - *Continued*

Has any sewage spilled?

If the station has spilled any sewage that has not been 100% contained in the sanitary system, answer yes here.

Has there been an earthquake or is the area flooded?

If there has been a significant earthquake or the station was inundated by flood waters of any sort, answer yes here.

Have all pumps been tested?

Have all the pumps been tested (restart, etc.)? Each one should be tested individually. Once all the station's pumps have been tested, answer yes here. Otherwise, answer no.

Is ALL the leakage being captured in the sanitary system or can the system be adjusted to stop the leak?

If all the leakage is being captured in the sanitary system, or if an adjustment can be made to retain or stop the spill and keep it in the sanitary system, answer yes here.

Is the area safe to enter?

When approaching a station that has recently been subjected to a large event such as an earthquake or flooding, take great care to assess the situation and assure that it is safe for you to enter. If it is safe to enter the station area, answer yes here.

Is the leakage small (<1gpm)?

If the leakage is very slight and can be managed without allowing any to escape, answer yes here.

Is the pump pumping?

When the pump is running, can the flow be verified as such via as displayed on a flow meter, check valve position/movement or obvious wet well level reduction. Be sure to check valve positions? If it is pumping adequately, answer yes to this question.

Is the station flooded?

If there are standing flood waters in the station area, answer yes here. **DO NOT ENTER A FLOODED STATION** without being able to lock out any hazards that you are likely to encounter (e.g. utility power creates a serious shock hazard).

Is the station (low-point in system) overflowing or about to overflow?

If the system low point or station is currently overflowing or likely to overflow shortly (< 15-minutes), answer yes here.

Overflow – Decision Tree Guide - *Continued*

Is the wet well level dropping?

Once the station is functional, is the level in the wet well dropping? If the level is going down, answer yes here.

Is there damage to a force main or other pipework?

Observe the station's systems, piping, etc. to identify any forcemain or piping damage that may have occurred. Leaks, dents, scrapes, etc. should be noted and reported to your supervisor. If any damage is identified, answer yes here.

Is there power?

If utility power is available, answer yes here.

Set up a bypass pump?

Does the situation require a solution that a portable bypass pump can provide? If yes, then answer yes here.

Will the generator start?

If the generator is not running and will not start, answer yes here.

Spill Notification Procedures

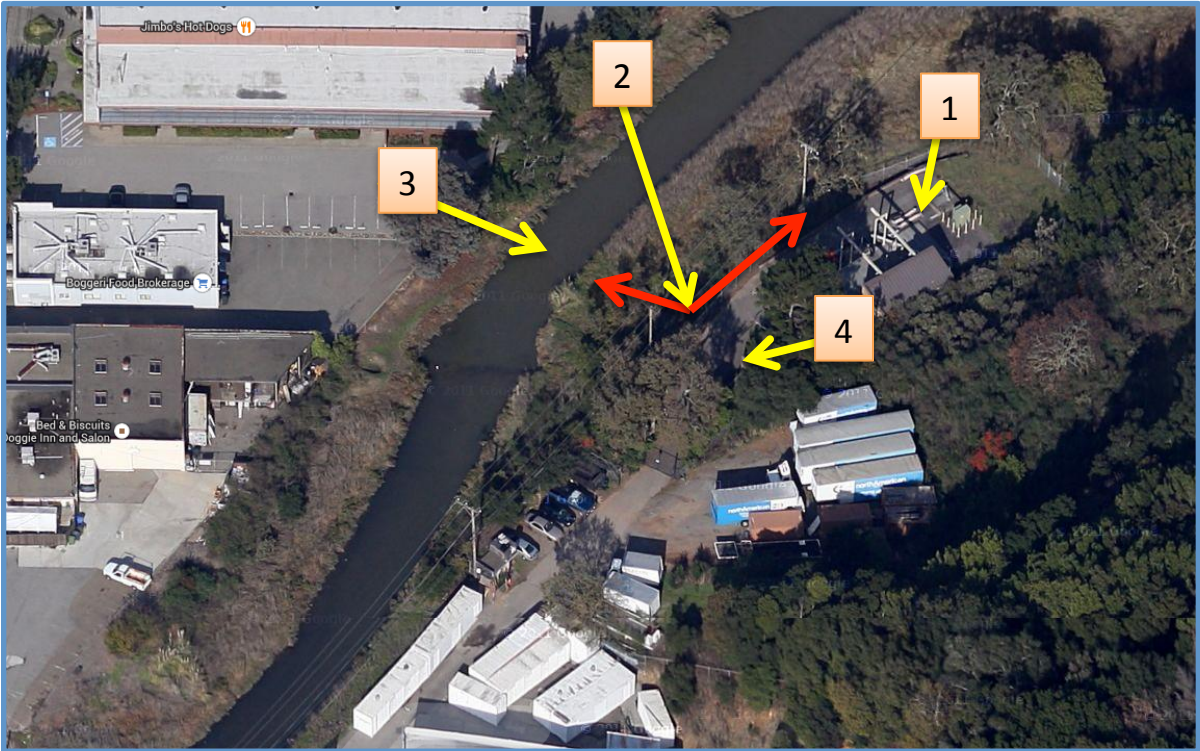
Key SSO Reporting Matrix

Time	Category 1	Category 2	Category 3
2 hours	If the spill is greater than or equal to 1,000 gallons, call CalOES at (800) 852-7550	-	-
	<i>Notify Marin County Environmental Health</i>		
48 Hours	If 50,000 gallons or more were not recovered, begin water quality sampling and initiate impact assessment	-	-
3 Days	Submit Draft Spill Report in the CIWQS database	Submit Draft Spill Report in the CIWQS database	-
15 Days	Certify Spill Report in CIWQS and update as needed until 120 days after SSO end time.		-
NOTE: The complete and detailed reporting requirements are detailed in the Las Gallinas Valley Sanitary District OERP			

SSO Category Definitions

Category	Definition
Category 1	Discharge of untreated or partially treated wastewater of any volume resulting from a sanitary sewer system failure or flow condition that: <ul style="list-style-type: none"> • Reaches surface water and/or tributary to a surface water; or • Reached a Municipal Separate Storm Sewer System (MS4) and was not fully captured and returned to the sanitary sewer system.
Category 2	Discharge of un/partially treated wastewater of 1,000 gallons or more resulting from a sanitary sewer system failure or flow condition that: <ul style="list-style-type: none"> • Does not reach surface water, a drainage channel, or an MS4, or • The entire SSO discharged to the storm drain system was fully recovered and disposed of properly.
Category 3	All other discharges of untreated or partially treated wastewater resulting from a sanitary sewer system failure or flow condition

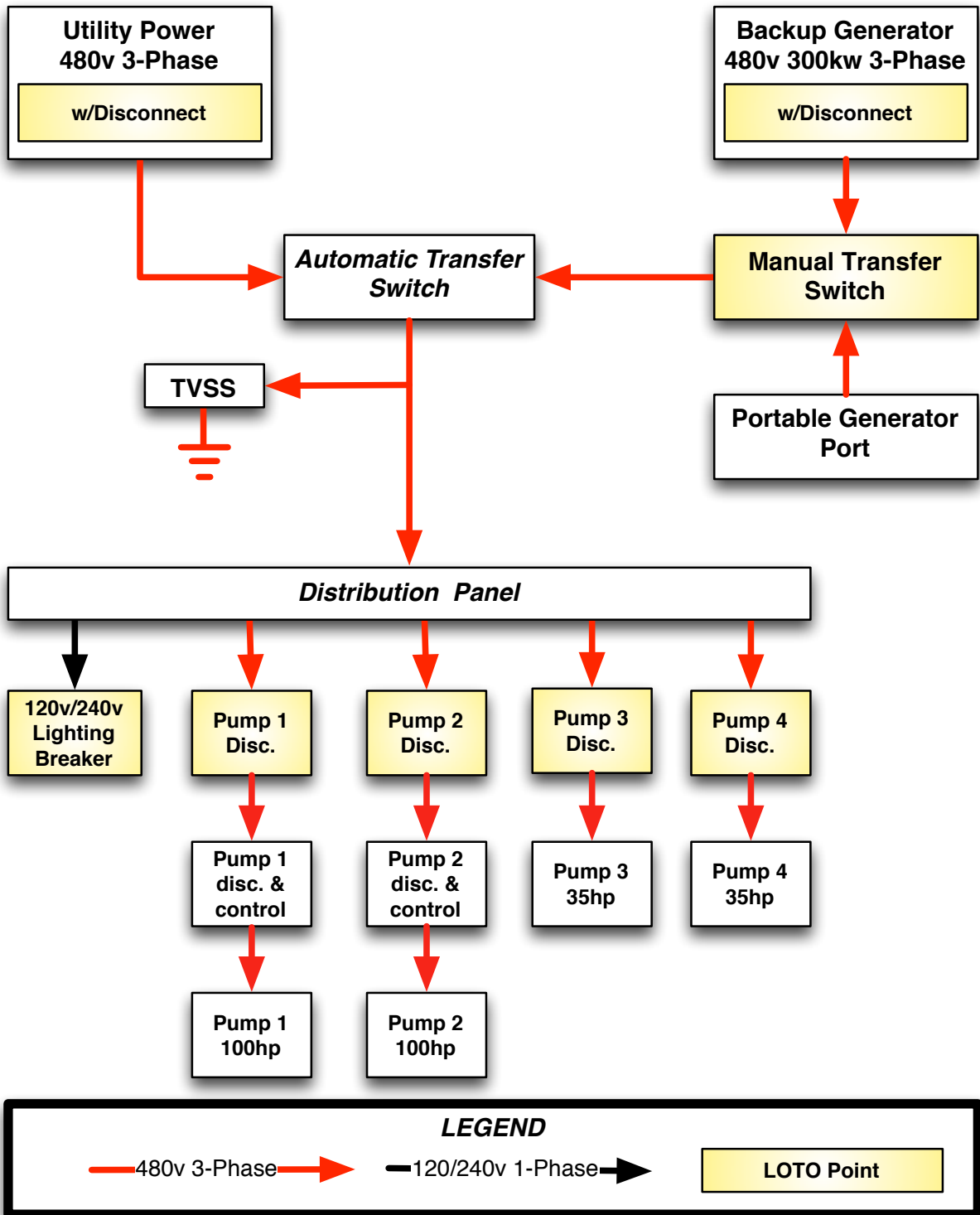
Pump Station – Spill Containment



Potential SSO Impact on State Water

	Type	Containment
1	Pump station wet well	Sandbags or booms to create a holding area around the wet well and/or a vacuum truck to collect the spill.
2	Low point (MH T000.01)	Sandbags or booms to create a holding area around the manhole and/or vacuum truck to collect the spill.
3	Gallinas Creek (~10' W)	Sandbags or booms to create a barrier around the inlets and/or vacuum truck to collect the spill.
4	Storm drain inlet (~20' SE)	Sandbags or booms to create a barrier around the inlets and/or vacuum truck to collect the spill.

Pump Station Power Map

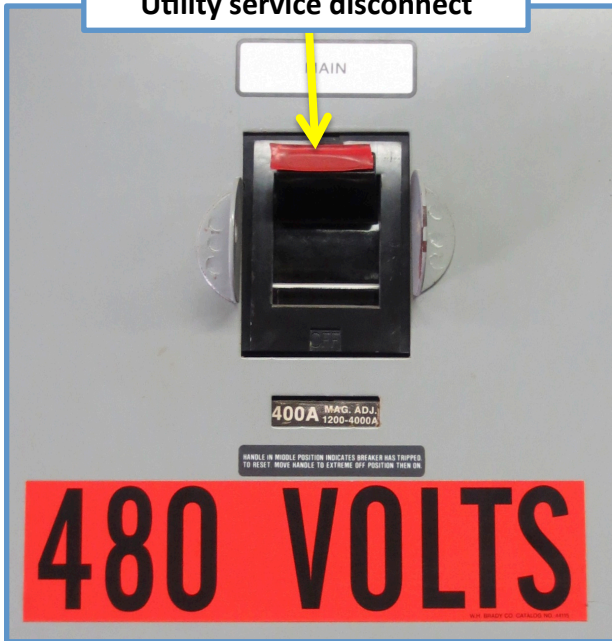


Done

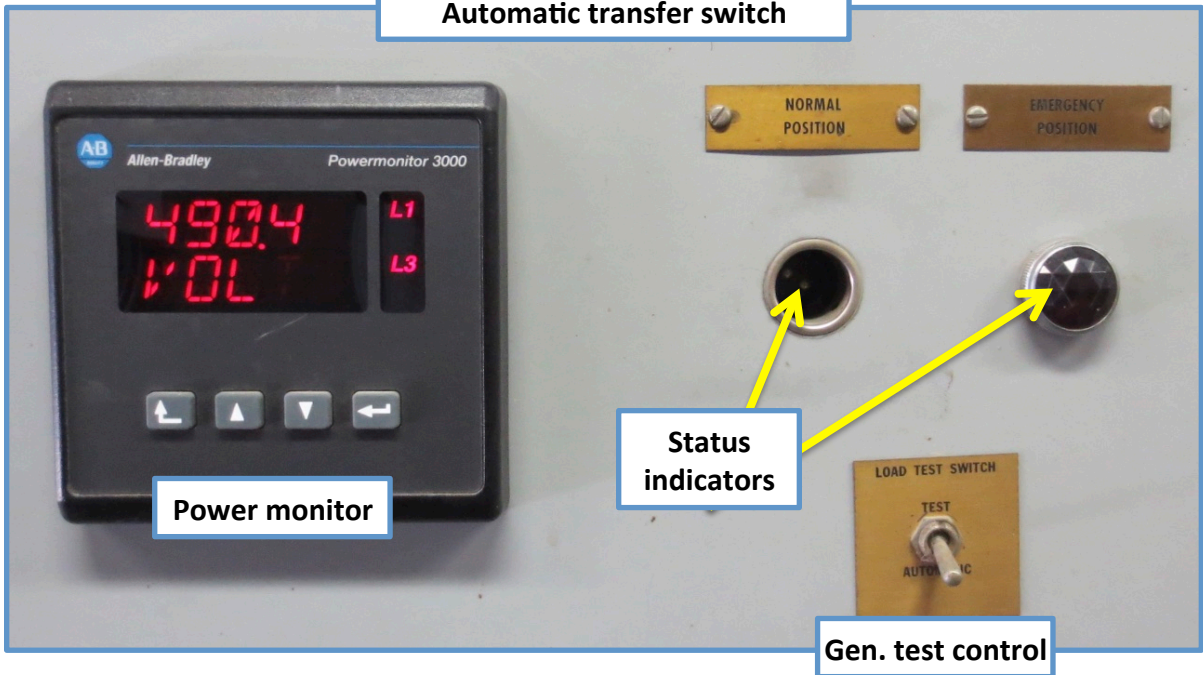
Pump Station Control System

System Controls & Panels

Utility service disconnect

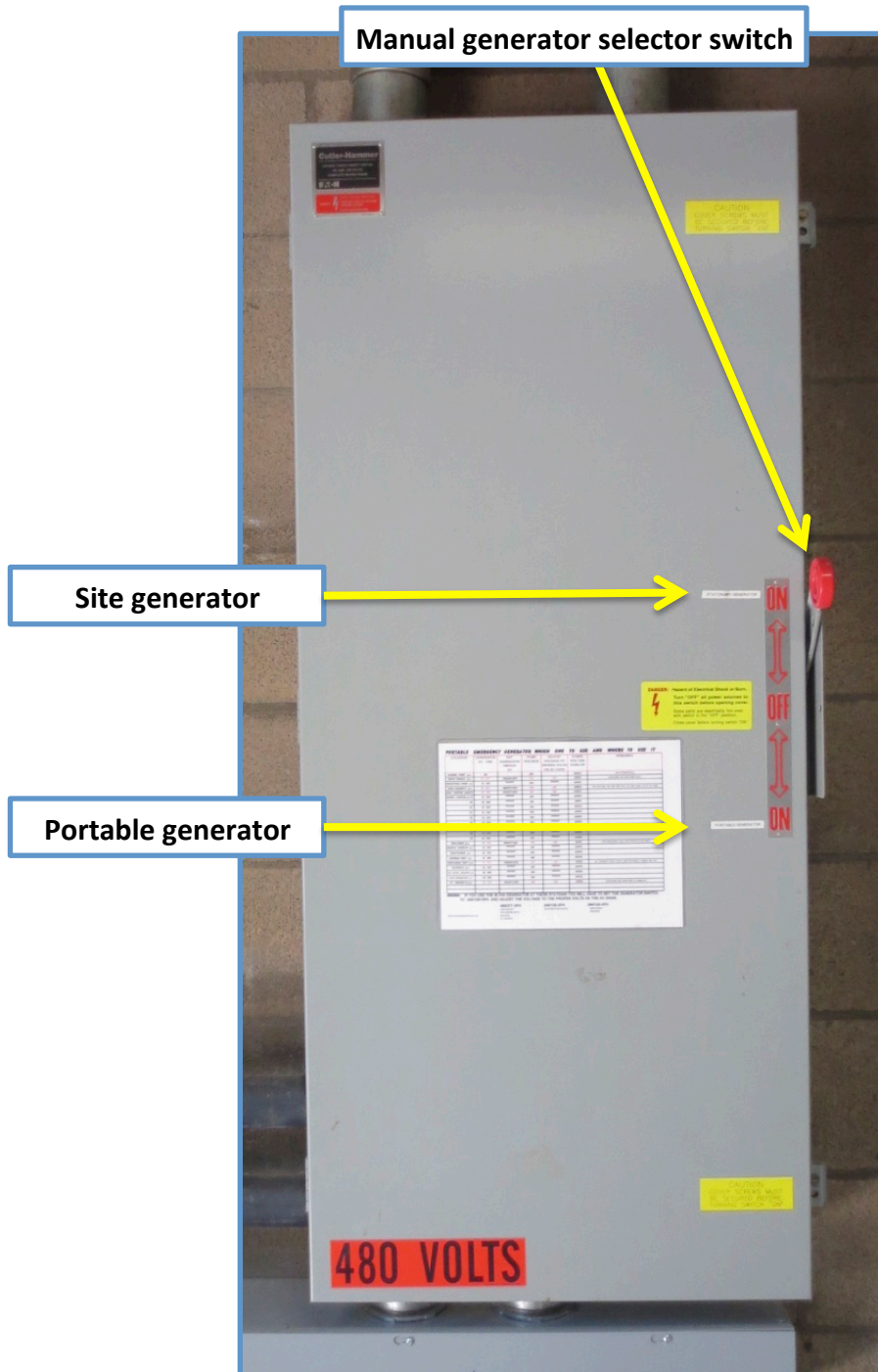


Automatic transfer switch



Next

Pump Station Control System - *Continued*

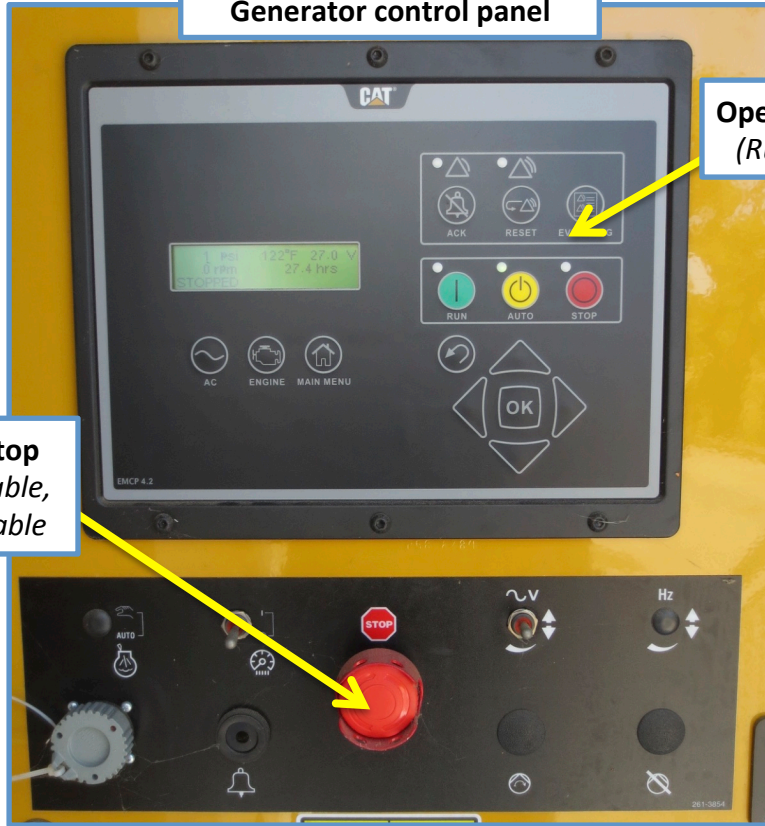


Next

Pump Station Control System - Continued

System Controls & Panels

Generator control panel



Operation selector
(Run-Auto-Stop)

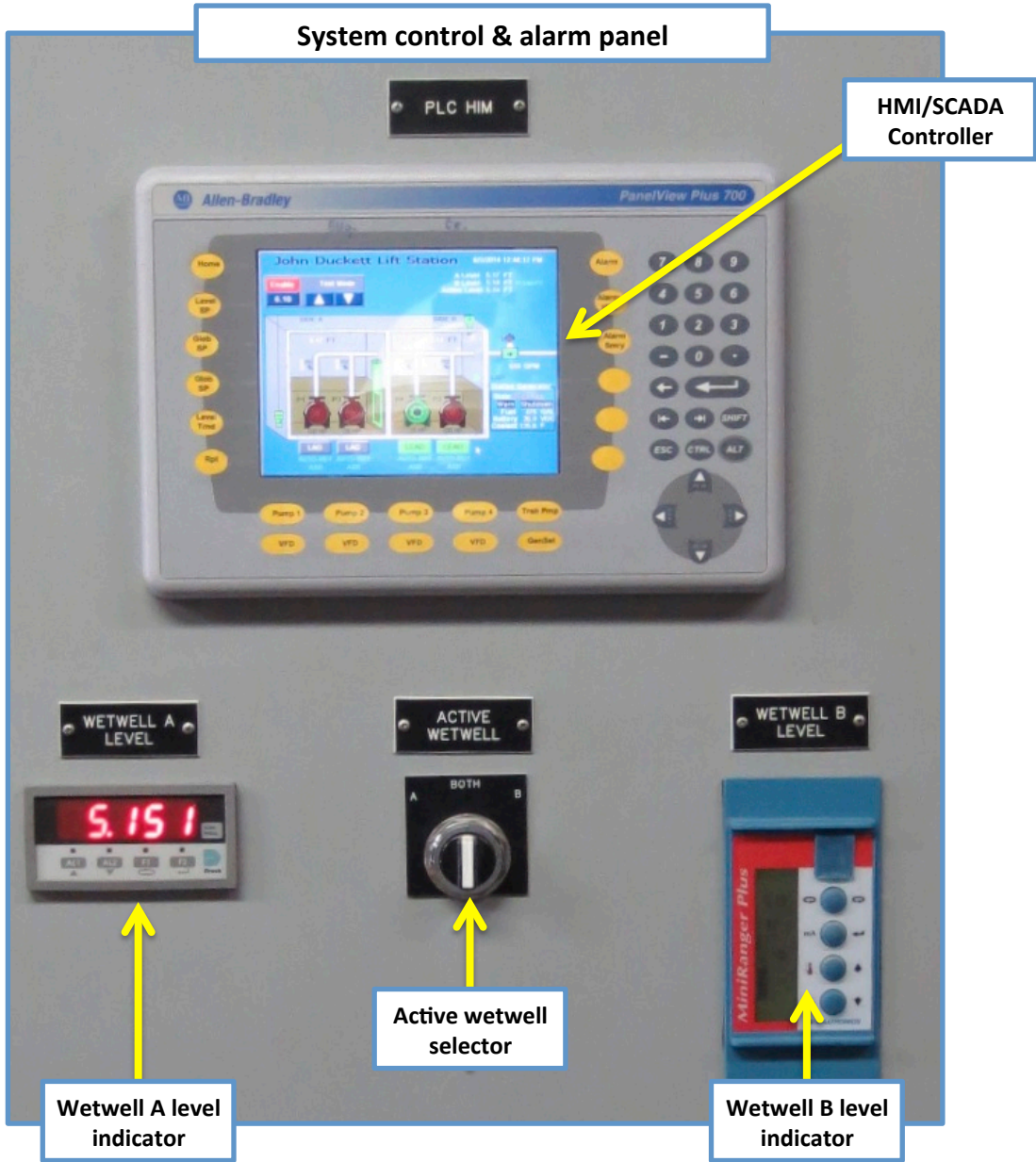
Emergency stop
Pull out to enable,
push in to disable

Generator disconnect switch



Next

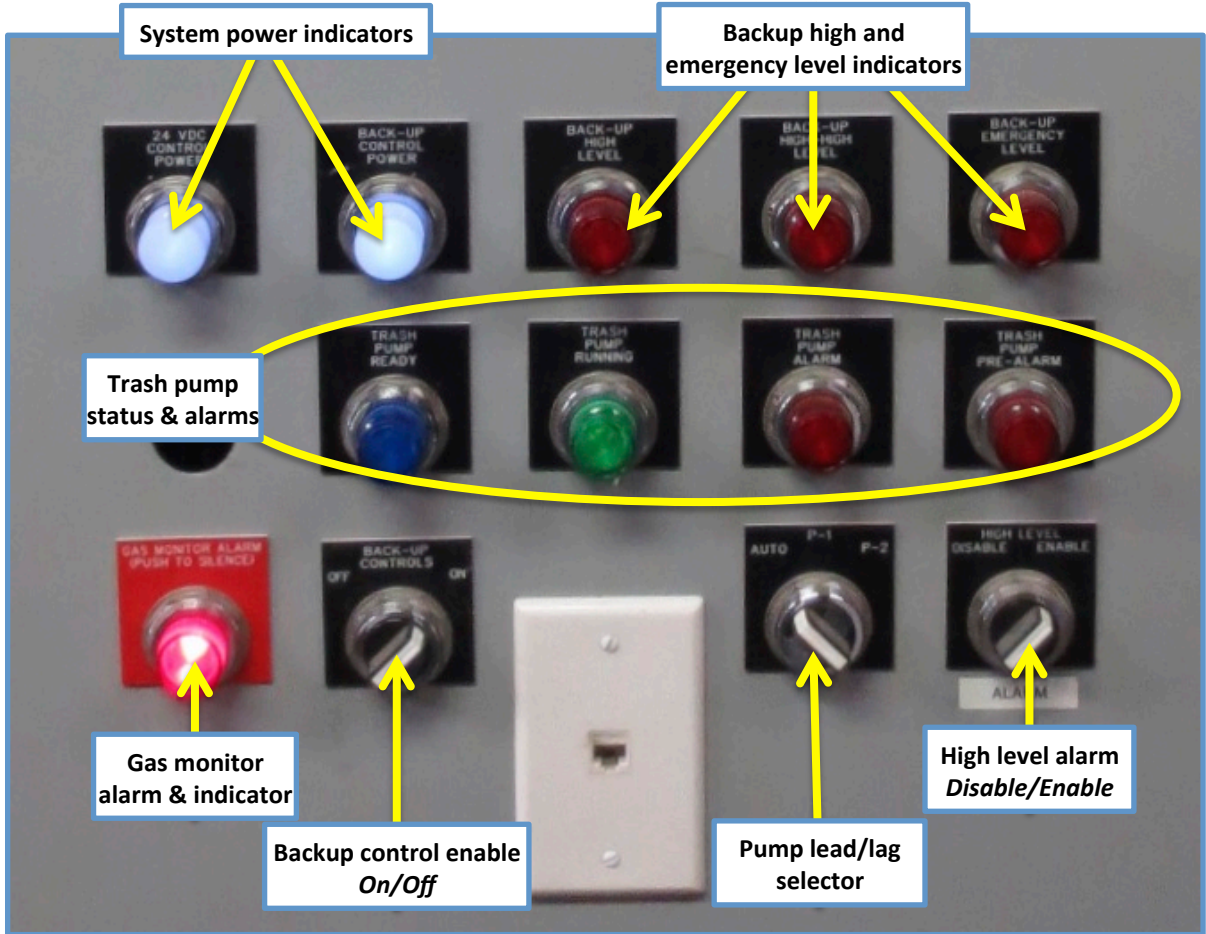
Pump Station Control System - *Continued*



Next

Pump Station Control System - *Continued*

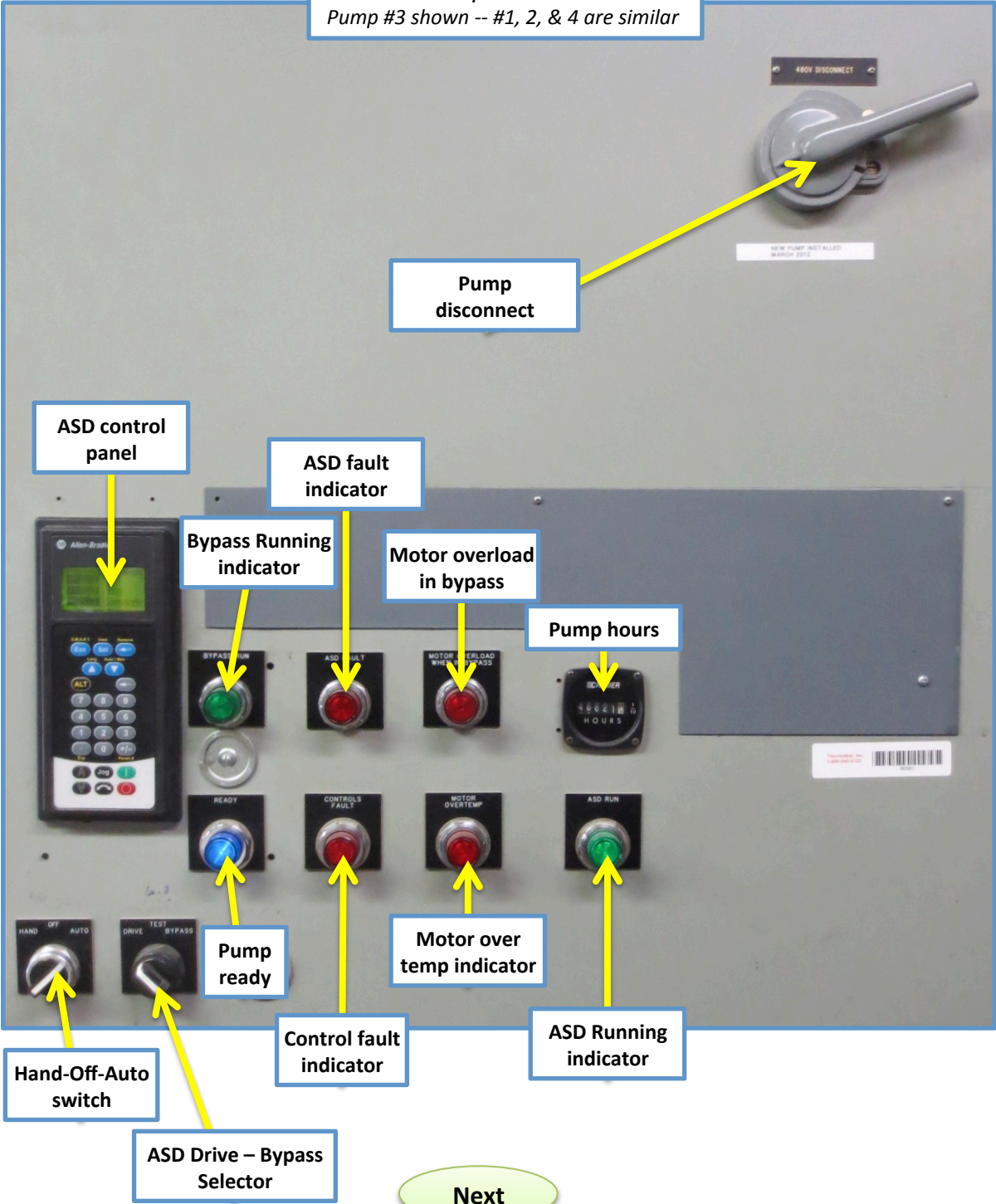
System control & alarm panel



Next

Pump Station Control System - Continued

Pump Controls
Pump #3 shown -- #1, 2, & 4 are similar

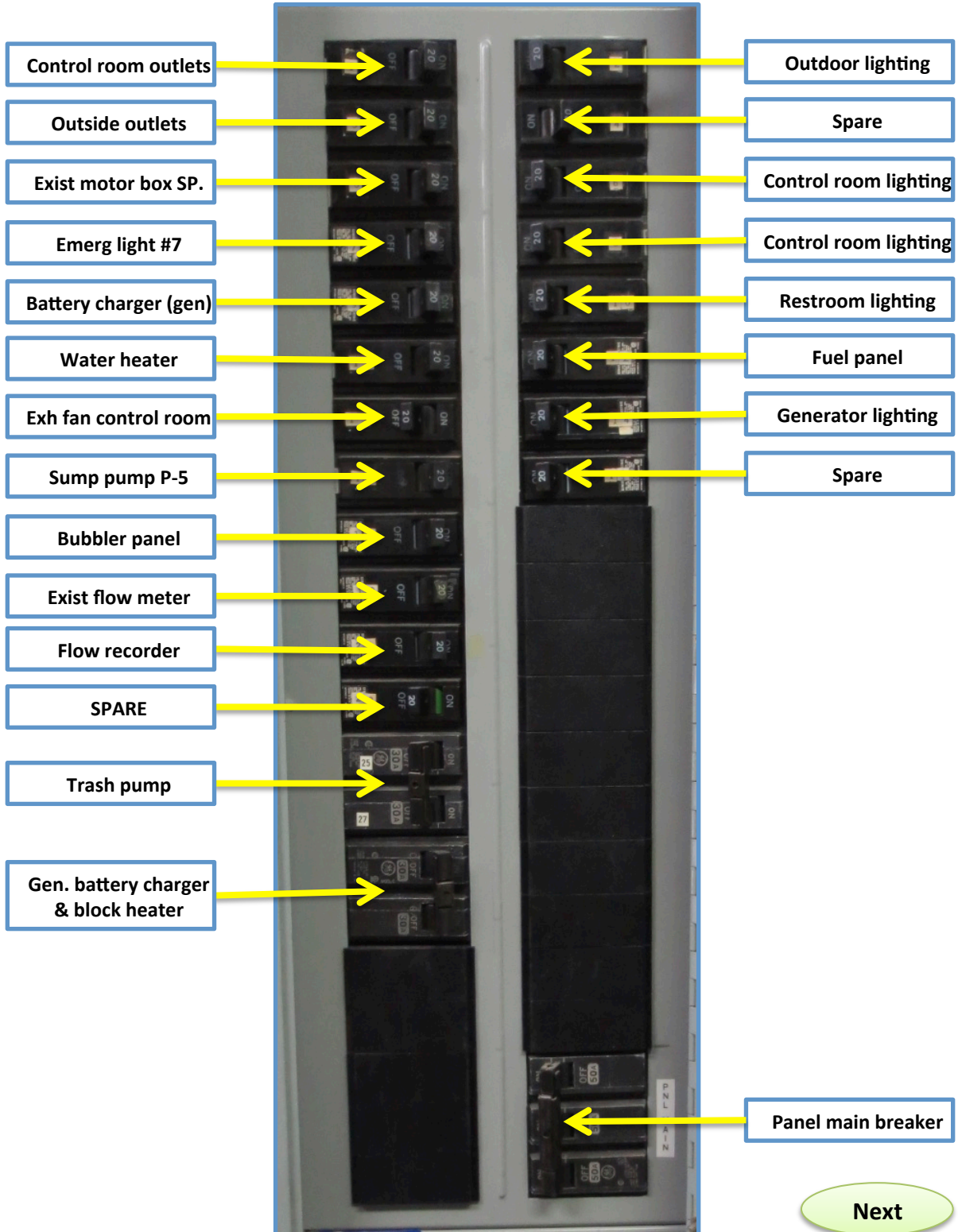


Pump Station Control System - Continued



Pump Station Control System - Continued

Distribution Panel



Next

Pump Station Control System - Continued

Distribution Panel

PANEL DIRECTORY			
1	Control Rm Receipts	2	Outdoor Ltg
3	Control Rm Receipts	4	Alarm Panel Ap.
5	Exist Mtr Bx S.P.	6	Control Rm Ltg
7	Gen. Bldg Recpts	8	Control Rm Ltg
8	Battery Chrgr Gen	10	Restrm Ltg
9	Water Heater	12	Gen. Bldg Ltg.
13	Exh. Fan Contr Rm	14	PLC Power
15	Sump Pump P-5	16	Spare
17	Bubbler Pnl	18	
19	Exist. Flow Mtr.	20	
21	Flow Ind. Recorder	22	
23	Spare	24	
25	TRASH PUMP	26	
27	TRASH PUMP	28	
29	GEN. BATT. / Block	30	
31	E. LIGHTS #7	32	
33		34	
35		36	
37	E. LIGHT #7	38	
39		40	
41		42	

Done

Lockout/Tagout Procedures

Entire Pump Station Electrical Shutdown

Electrical LOTO Process

The pump station has power provided by the electrical utility and an automatic generator. Care must be taken to disable all energy sources. Always test after locking out to verify that it is safe to work.

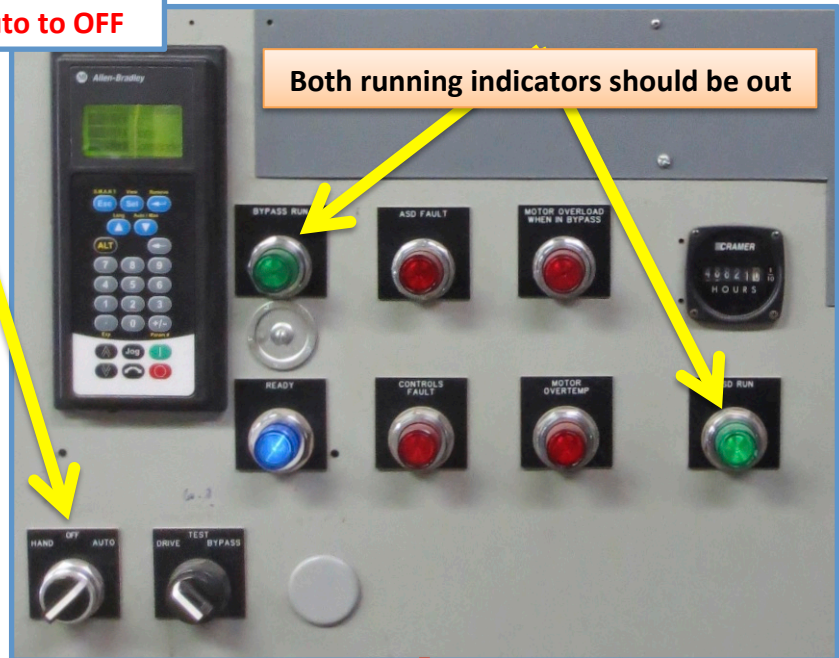
Summary: pump station LOTO process

1. Reduce the load from the pump station
2. Disable the generator & install a LOTO device and tag
3. Move the utility service disconnect to OFF
4. Lock with LOTO device & tag
5. Test for voltage at the work location

Begin

Reduce pump station load

Rotate the Hand-Off-Auto to OFF



Next

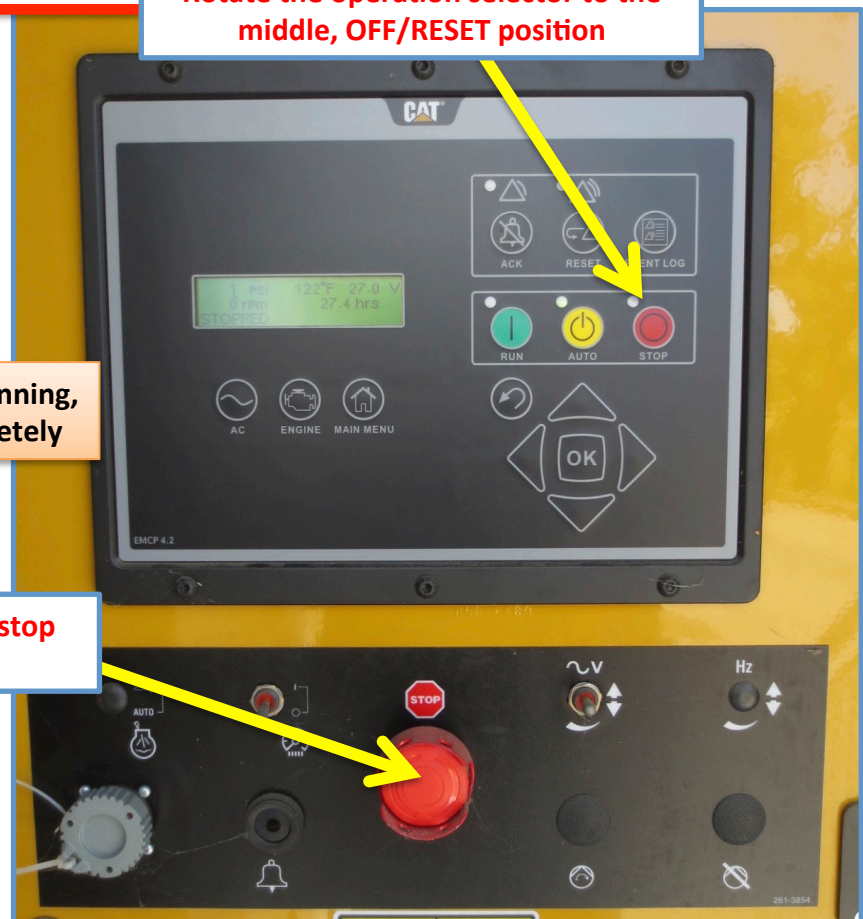
Lockout/Tagout Procedures - Continued

Rotate disconnect CCW to OFF



Repeat the previous two steps for pumps #1, 2 & 4
Pump #3 shown

Rotate the operation selector to the middle, OFF/RESET position



If the generator was running, allow it to stop completely

Press the emergency stop button in

Next

Lockout/Tagout Procedures - Continued

Open the generator disconnect
Move switch down



Install a LOTO device & tag



Typical LOTO Device

Install a LOTO device & tag



Typical LOTO Device

Move the main service down to OFF



Next

Lockout/Tagout Procedures - *Continued*

Always test for electrical voltage at the point of maintenance both before and after locking out the system to verify that it's fully locked out!

Done

Lockout/Tagout Procedures - Continued

Individual Pumps – Electrical LOTO

On control panel for desired pump

1. Stop the pump (if running)
2. Shut down desired pump
3. Lockout & tag the pump disconnect
4. Test for voltage at the work location

Begin – At desired pump control panel

Rotate the Hand-Off-Auto to OFF

Rotate disconnect CCW to OFF

Both running indicator should be out

Next

Lockout/Tagout Procedures - *Continued*



Always test for electrical voltage at the point of maintenance both before and after locking out the system to verify that it's fully locked out!

Done

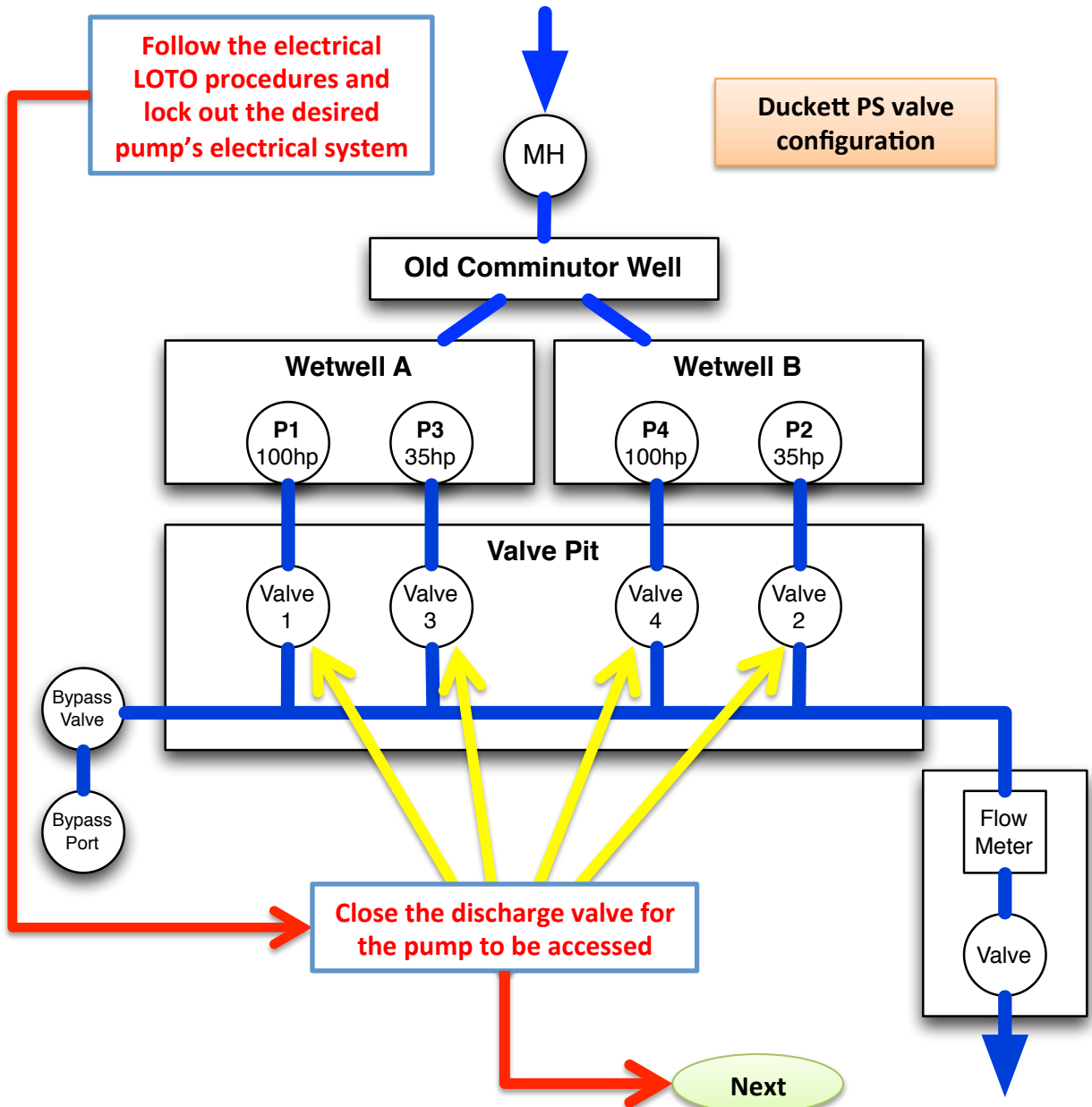
Lockout/Tagout Procedures - Continued

Hydraulic Pressure

Hydraulic LOTO Process

- Select the pump to work on & follow the Electrical LOTO guide
- Close the discharge valve for that pump
- Lock the discharge valve closed and attach a tag

Begin



Lockout/Tagout Procedures - *Continued*

**Attach LOTO device and tag
to the closed valve**



***Always test for electrical voltage & residual
pressure at the point of maintenance both
before and after locking out the system to verify
that it's fully locked out!***

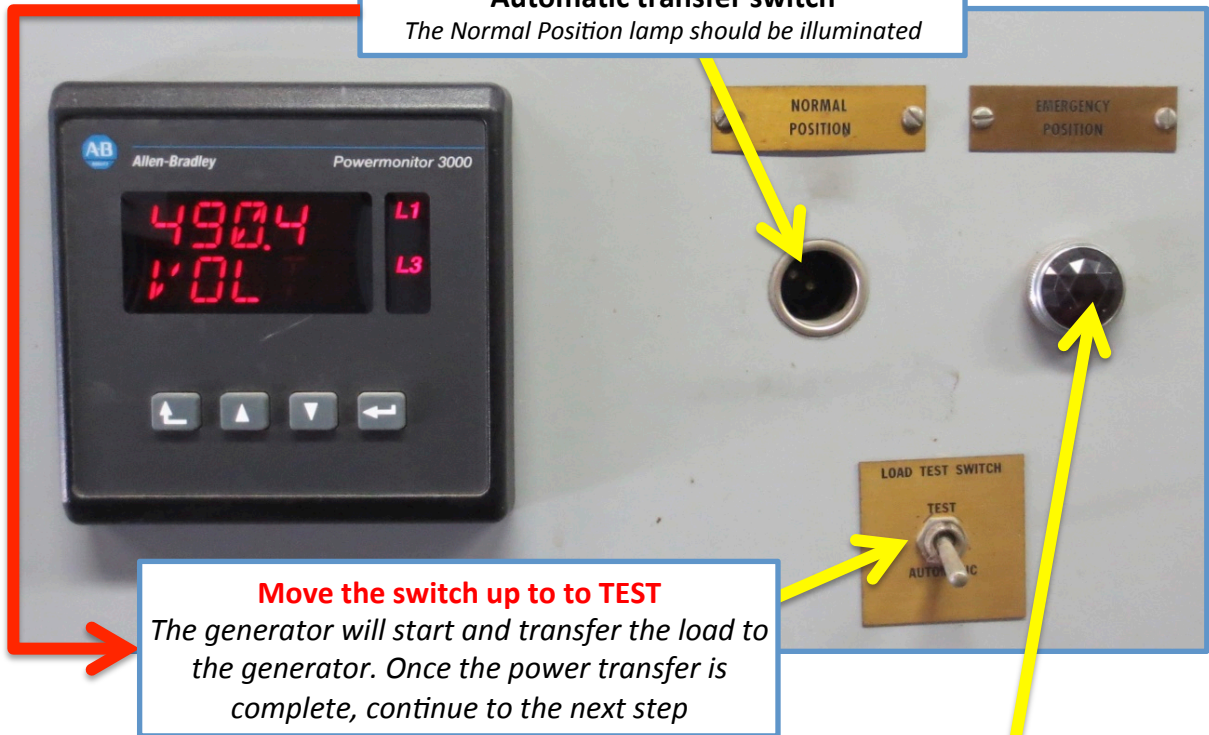
Done

Manual Generator Start Up Procedures

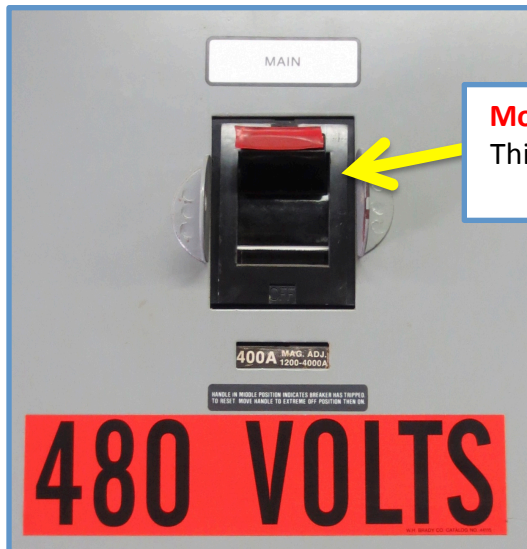
If utility power is available

Automatic transfer switch

The Normal Position lamp should be illuminated



The Emergency Position lamp should be illuminated



Move the main service breaker down to OFF
This prevents the load from transferring back to utility automatically

Next

Manual Generator Start Up Procedures - *Continued*

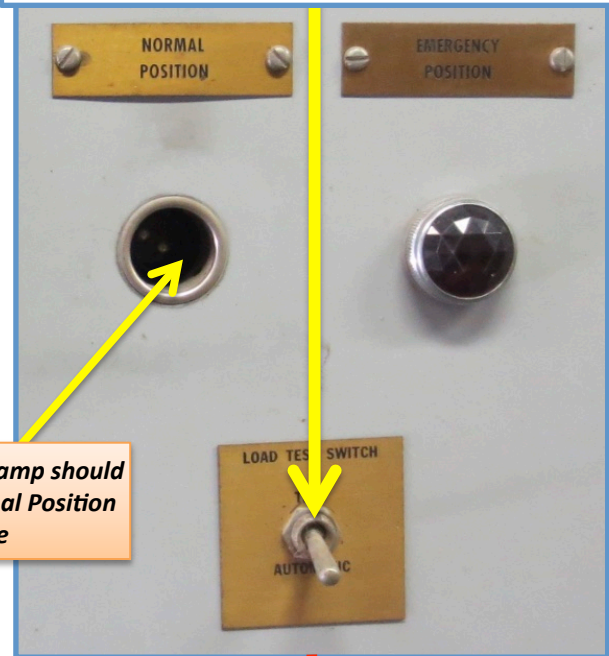
At this point, the station should be running on generator power and be completely independent of utility grid power

To return to utility power

Move the main service breaker up to ON



Move the load test switch down to Automatic



The Emergency Position lamp should extinguish and the Normal Position lamp illuminate

The power will transfer back to utility, the generator will run for awhile to cool and then shut down

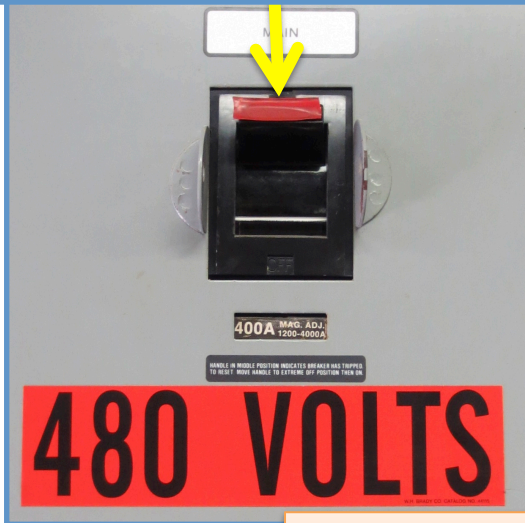
Done

Manual Generator Start Up Procedures - Continued

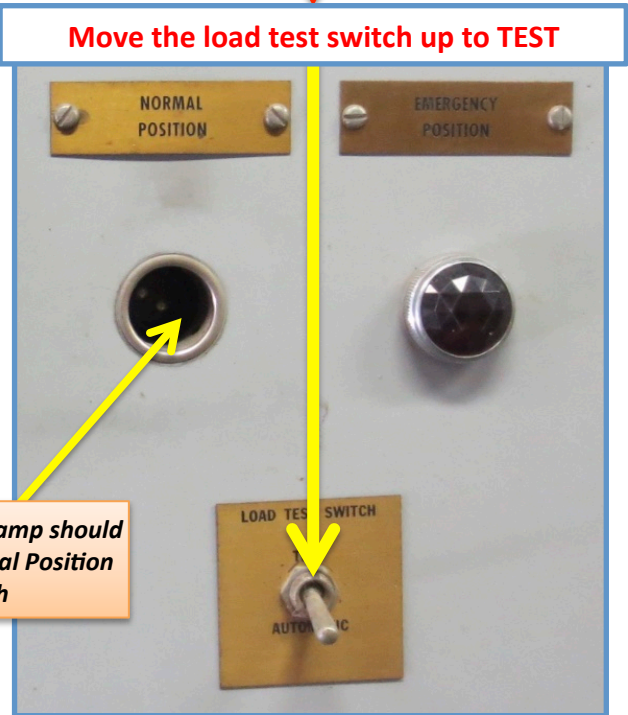
If utility power is NOT available and the generator has not started

Move the main service breaker to OFF

While this is not required, it's a good practice to avoid utility power bounces



Move the load test switch up to TEST



The Emergency Position lamp should illuminate and the Normal Position lamp extinguish

Verify the generator breaker is ON

Move switch UP



Next

Manual Generator Start Up Procedures - Continued

Verify that the Emergency Stop button is in the RUN position - Pulled out

Press the run button



The engine should start and the transfer switch will recognize power available and initiate the transfer.

Done

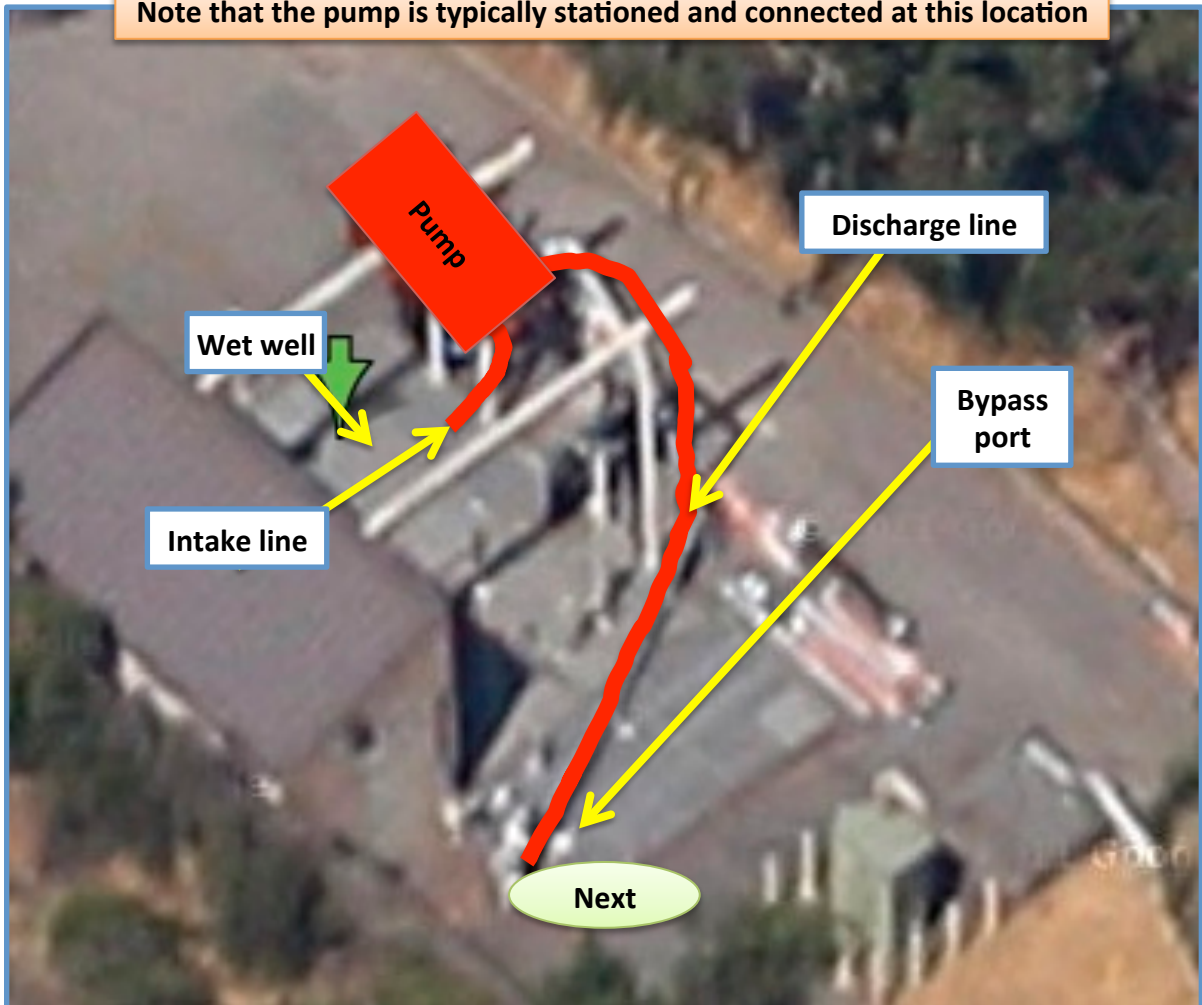
Bypass Configuration

If an external bypass pump is used:

Configure the station for bypass:

- Park & prepare the 12" trash pump
- Connect the intake line & route to the wet well
- Connect the discharge line and route to the bypass port
- Shut the station pumps down
- Close all four discharge valves & check the connections
- Open the bypass valve
- Follow the pump's operations SOP & begin bypass pumping
- Shut pump down, clean up and disassemble
- Return the station to normal operations

Note that the pump is typically stationed and connected at this location



Bypass Configuration - Continued

Back the pump up the driveway and park it along side the wetwell with the intake pointed rearward as shown



Connect a section of suction hose to the pump's intake port

Route the suction hose into the wetwell as shown

Verify that the bypass valve is closed

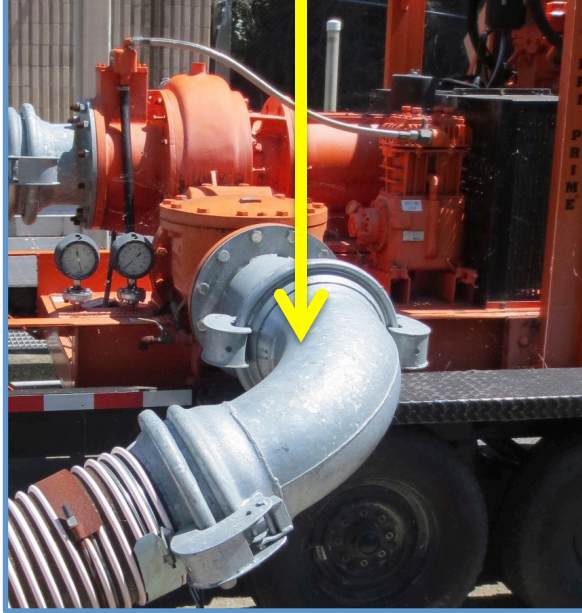
Connect the discharge hose to the coupler on the bypass port & route the hose to the pump



Next

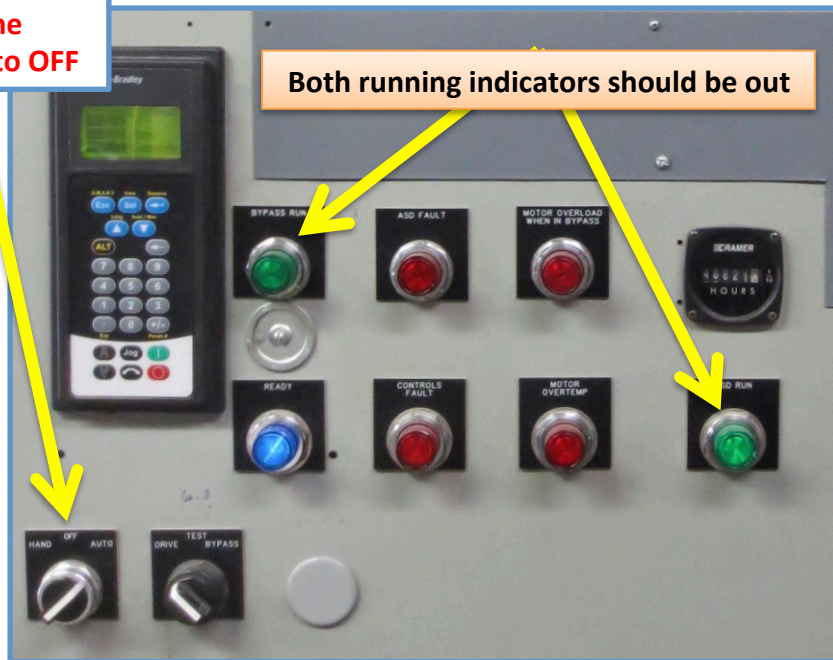
Bypass Configuration - Continued

Connect a discharge hose to the pump's discharge port



Rotate the Hand-Off-Auto OFF

Both running indicators should be out



Next

Bypass Configuration - Continued

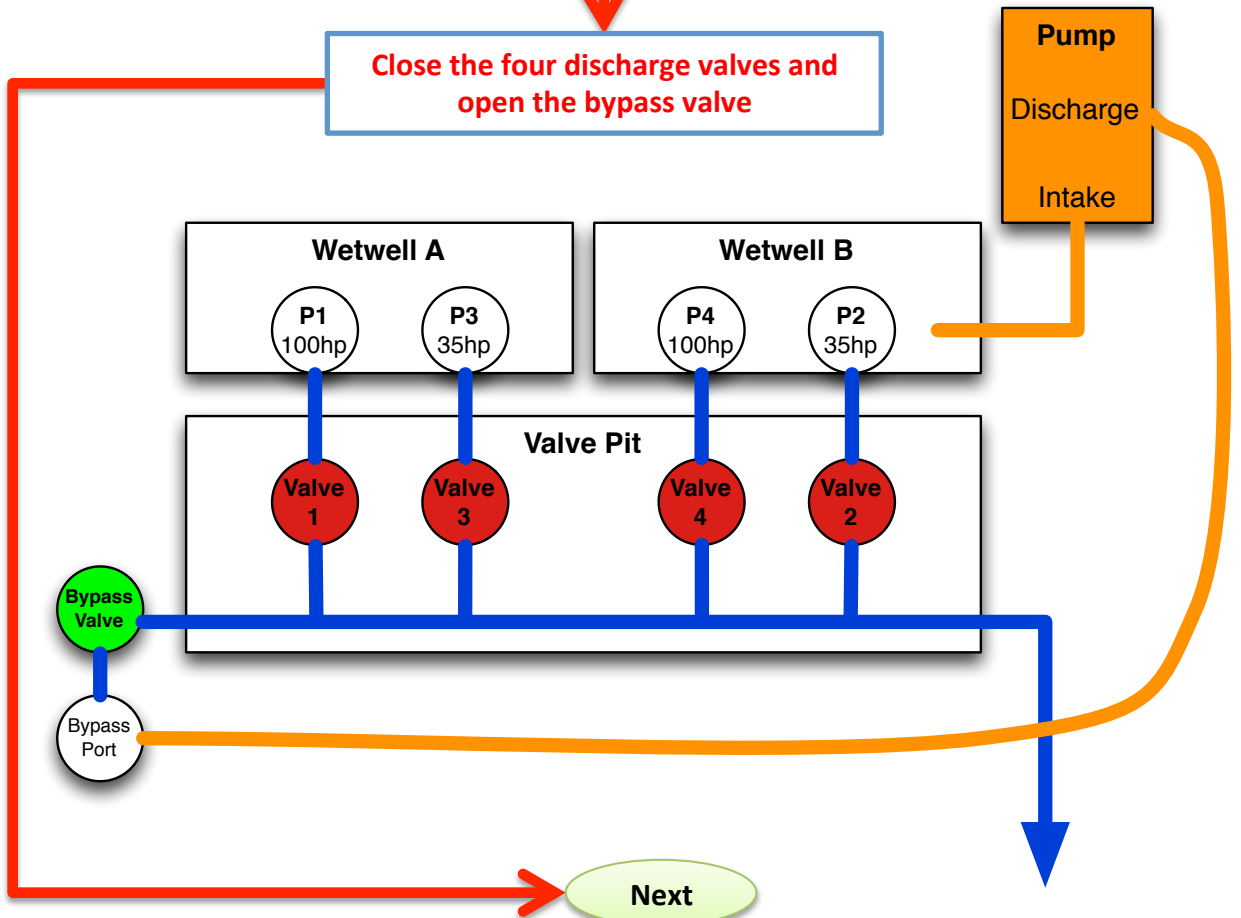
Rotate disconnect CCW to OFF



Repeat the previous two steps for pumps #1, 2 & 4
Pump #3 shown

Verify all hose connections before continuing

Close the four discharge valves and open the bypass valve



Bypass Configuration - *Continued*

Follow the pump's Use SOP for operation:

- Prime the pump if necessary
- Start the pump
- Adjust the pump speed to set the desired pumping rate



Pump Shutdown and Clean Up

When finished, be sure to account for any residual pressure in the discharge line.

Follow these steps for shutdown and discharge hose disconnection:

- Shut down the trash pump and allow the engine to stop completely
- Close the bypass valve & relieve any residual pressure in the *discharge* line
- Carefully disconnect, drain & stow the discharge line
- Remove, clean and stow the intake hose
- Open the four pump discharge valves & restart the pumps (as desired)
- Return the station to normal operations
- Clean up and depart



Done

Contact Information

Contact Information	
Las Gallinas Valley Sanitary District	
Main Office (6:30am – 3:30pm)	(415) 472-1734
Main Office Answering Service (3:30pm – 6:30am)	(415) 472-1734

Sewer Backups, Spills and Collection System Related Emergencies	
Call First → COLLECTION PAGER NUMBER	(415) 258-5080
Collection System Manager	415-747-7026
Leadsman	415-747-7036
Line Crew R.F.	415-747-7042
Line Crew B.J.	415-747-7046
Line Crew C.G.	415-747-7032
General Manager	707-372-2165
RotoRooter	415-454-7281

For any Pump Station or Plant related call <i>Including alarms or police calls after 3:00 PM and before 6:30 AM on weekdays and anytime on Saturdays, Sundays and holidays</i>	
Plant Manager	415-747-2840 cell 415-258-5056 pager
Operator C.C.	415-755-0570 cell 415-258-5004 pager
Operator G.W.	415-747-7040 cell 415-258-5203 pager
Operator J.S.	415-747-7030 cell 415-258-5161 pager
General Manager	707-372-2165
Operator J.B.	415-747-7034 cell 415-458-4107 pager
Operator J.M.	415-747-7048 cell 415-258-5034 pager

Contact Information - *Continued*

Vendor Contact List

Company	Contact
Bypass Pumps, Pipe & Hose	
Baker Corp 2700 California Ave Pittsburg, CA 94565 <i>Full service</i>	Office Phone: 925-252-2400 Contact: Jason Carstairs 24hr Phone: 925-787-6067
DW Pumps 14855 Wicks Boulevard San Leandro, CA 94577 <i>Small crew available for setup</i>	Office Phone: 925-371-1515 Contact: David Lang 24hr Phone: 510-774-7642
Cleaning Companies (For residential flooding)	
TMB	800-413-2999
Restoration Management	707-750-6326
Construction Companies	
Rain-4-Rent	800-742-7246; 831-422-7813
Team Ghilotti 2531 Petaluma Blvd. South Petaluma, CA 94952 <i>Full Service Construction Company</i>	Office Phone: 707-763-8700 Contact: Glen Ghilotti 24hr Phone: 415-720-5936
Linscott Engineering 397 Smith Ranch Road San Rafael, CA 94903 <i>Small Construction Company</i>	Office Phone: 415-479-5667 Contact: Rob Linscott 24hr Phone: 415-457-5669
Power & Telemetry Issues	
PG&E	800-743-5000
AT&T Phone	800-750-2355 or 800-332-1321

To Start and Stop Stormwater Pumps During a Spill

Agency	Contact
City Stormwater	415-485-3375
County Stormwater	415-499-6528

Contact Information - *Continued*

Company	Contact
Pumping Companies	
<p style="text-align: center;">Pacific Sanitation <i>5,000 gallon</i></p>	<p>877-698-8473 Windsor</p>
<p style="text-align: center;">NRC Environmental <i>5,000 gallon</i></p>	<p>510-749-1390 Alameda/San Francisco</p>
<p style="text-align: center;">Clean Harbors <i>5,000 gallon</i></p>	<p>707-747-6699 Benicia</p>
Service Technicians & Manpower	
Pumps	
SCADA	Pete Cooke
Electric	
General labor	

Contact Information - Continued

Company	Contact
Standby Generator(s)	
<p style="text-align: center;">All Star Rents 875 Olive Avenue Novato, CA 94945 <i>Rental Only</i></p>	<p>Office Phone: 415-892-4621 Contact: Brian 24hr Phone:</p>
Portable Fuel Tank(s)	
<p style="text-align: center;">DW Pumps 14855 Wicks Boulevard San Leandro, CA 94577 <i>Small crew available for setup</i></p>	<p>Office Phone: 925-371-1515 Contact: David Lang 24hr Phone: 510-774-7642</p>
Traffic Control	
<p style="text-align: center;">Hertz Equipment Rentals 5750 Paradise Drive Corte Madera, CA 94925 <i>Rental & Delivery</i></p>	<p>Office Phone: 415-924-4444 Contact: Keith Getty 24hr Phone: 415-596-1402</p>

System Map

