

RECEIVED
JUN 22 2015

DIVISION OF WATER QUALITY

ATTACHMENT E – NOTICE OF INTENT

ORDER WQ 2014-0174-DWQ
GENERAL PERMIT NO. CAG990002

STATEWIDE GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
(NPDES) PERMIT FOR DISCHARGES FROM UTILITY VAULTS AND UNDERGROUND
STRUCTURES TO WATERS OF THE UNITED STATES

I. NOTICE OF INTENT STATUS (See Instructions)

MARK ONLY ONE ITEM	1. <input type="checkbox"/> New Discharger	2. <input checked="" type="checkbox"/> Existing Discharger	WDID# 8000V000031
	3. <input type="checkbox"/> Change of Information: WDID#		
	4. <input type="checkbox"/> Change of ownership or responsibility: WDID#		

II. OWNER/OPERATOR (If additional owners/operators are involved, provide the information in a supplemental page.)

A. Name Anaheim Public Utilities		Owner/Operator Type (Check One)		
		1. <input checked="" type="checkbox"/> City	2. <input type="checkbox"/> County	3. <input type="checkbox"/> State
		4. <input type="checkbox"/> Gov. Combo	5. <input type="checkbox"/> Private	
B. Mailing Address 201 S. Anaheim Blvd., MS 1101				
C. City Anaheim	D. County Orange	E. State CA	F. Zip Code 92805	
G. Contact Person Ralph McCaffrey		H. Title Env Services Specialist	I. Phone (714) 765-4288	
J. Email Address rmccaffrey@anaheim.net				

Additional Owners _____

III. BILLING ADDRESS (Enter information only if different from II. above)

Send to: <input checked="" type="checkbox"/> Owner/Operator <input type="checkbox"/> Other	A. Name	B. Title		
	C. Mailing Address			
D. City	E. County	F. State	G. Zip Code	

IV. RECEIVING WATER INFORMATION

A. Attach a project map(s) that shows (1) the service area within the a specific Regional Water Board boundary and maps of(2) the corresponding major surface water(s) bodies and watersheds to which utility vault or underground structure water may be discharged. Map features must also include ASBS boundaries, MS4 discharge points to the ASBS, and major roadways.
See maps provided with the attached Pollution Prevention Plan.

B. Regional Water Quality Control Board(s) where discharge sites are located
List the Water Board Regions where discharge of wastewater is proposed, i.e. Region(s) 1, 2, 3, 4, 5, 6, 7, 8, or 9:
Region 8

V. LAND DISPOSAL/RECLAMATION

The State Water Resources Control Board's water rights authority encourages the disposal of wastewater on land or re-use of wastewater where practical. You must evaluate and rule out this alternative prior to any discharge to surface water under this Order.

Is land disposal/reclamation feasible for all sites? Yes No

Is land disposal/reclamation applicable to a portion of the total number of sites? Yes No

If **Yes** to one or both questions, you should contact the Regional Water Board. This Order does not apply if there is no discharge to surface waters. If **No** to either or both questions, explain: Discharges will mostly be in locations where drainage will lead to the City's storm sewer system. In situations where land disposal or reclamation is feasible, APU will will apply the water to land, or landscaping, or attempt to reclaim the water by other means.

VI. VERIFICATION

Have you contacted the appropriate Regional Water Board or verified in accordance with the appropriate Basin Plan that the proposed discharge will not violate prohibitions or orders of that Regional Water Board? Yes No

VII. TYPE OF UTILITY VAULT OR UNDERGROUND STRUCTURE (Check All That Apply)

Electric Natural Gas Telecommunications Other: _____

VIII. POLLUTION PREVENTION PLAN CONTACT INFORMATION

Each Discharger is required to provide a copy of their PLAN with their completed NOI. The PLAN requirements are provided in Section VII.C.3 of the Order. In the space below, provide the contact information for the person responsible for the development of the PLAN.

A. Company Name Anaheim Public Utilities		B. Contact Person Ralph McCaffrey	
C. Street Address Where PLAN is Located 201 S. Anaheim Blvd. Suite 1101		D. Title of Contact Person Env. Services Specialist	
E. City Anaheim	F. County Orange	G. State CA	H. Zip Code 92805
I. Phone (714) 765-4288		J. Email Address rmccaffrey@anaheim.net	

IX. DESCRIPTION OF DISCHARGE(S)

Describe the discharge(s) proposed. List any potential pollutants in the discharge. Attach additional sheets if needed.

Discharges will consist of water pumped from utility vaults.
If any potential pollutants are present in the vault water, the
pollutants will be removed prior to discharging the water.

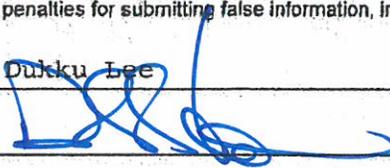
X. REMINDERS

- A. Have you included service territory/watershed map(s) with this submittal? Yes No
Separate maps must be submitted for each Regional Water Board where a proposed discharge will occur.
- B. Have you included payment of the filing fee (for first-time enrollees only) with this submittal? Yes No N/A
- C. Have you included your PLAN? Yes No

XI. CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment."

A. Printed Name: Dukku Lee

B. Signature: 

C. Date: 6/12/15

D. Title: Public Utilities General Manager

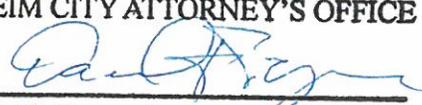
PLEASE SUBMIT THE NOI, FIRST ANNUAL FEE, PLAN, AND MAP
TO THE FOLLOWING ADDRESS:

UTILITY VAULTS NOI
NPDES UNIT
DIVISION OF WATER QUALITY
STATE WATER RESOURCES CONTROL BOARD
P.O. BOX 100
SACRAMENTO, CA 95812-0100

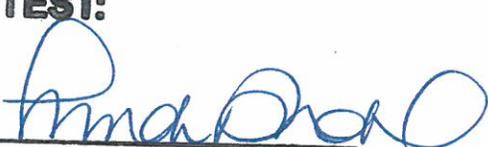
STATE USE ONLY

WDID:	Regional Board Office	Date NOI Received:	Date NOI Processed:
Case Handler's Initial:	Fee Amount Received: \$	Check #:	

APPROVED AS TO FORM:
ANAHEIM CITY ATTORNEY'S OFFICE

BY 
Daniel J. Payne, Deputy City Attorney

ATTEST:

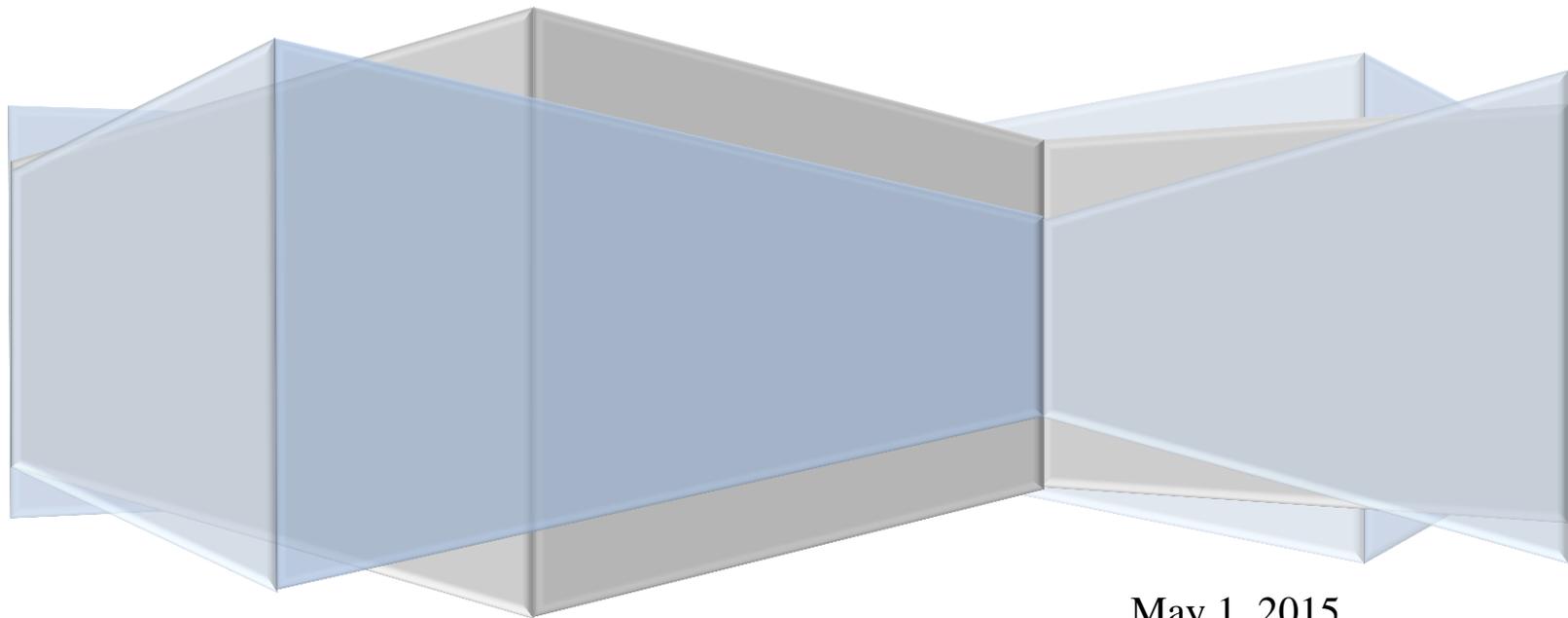
By 
Linda N. Andal
City Clerk

Anaheim Public Utilities

**POLLUTION
PREVENTION PLAN**

for Utility Vault Water Discharges

Order No. 2014-0174-DWQ



May 1, 2015

ANAHEIM PUBLIC UTILITIES
UTILITY VAULT WATER DISCHARGE
POLLUTION PREVENTION PLAN

Contents

1.0 Introduction..... 2

2.0 Water Discharges from Electric Utility Vaults 2

3.0 Pollution Prevention Plan Administration 4

 3.1 Pollution Prevention Team 4

 3.2 Employee Training..... 4

4.0 Sources of Potential Pollutants (Pollution Assessment) 5

5.0 Drainage Map..... 5

6.0 Procedures for Discharges from Utility Vaults and Underground Structures 6

7.0 Pollution Control Measures 6

8.0 Automated Critical Discharge and Emergency Dewatering 7

9.0 Best Management Practices (BMPs) 8

 9.1 Good Housekeeping..... 8

 9.2 Oil Absorbent Pads 9

 9.3 Filter Sock..... 9

 9.4 Fiber Rolls..... 9

 9.5 Gravel Bags..... 9

10.0 Monitoring and Reporting Program (MRP)..... 10

 10.1 Annual Routine Effluent Monitoring Requirements..... 11

 10.2 Annual Reporting..... 11

 10.3 Signatory and Certification 13

11.0 Annual Program Evaluation and PLAN Revision 14

Attachment A -- Checklist Procedures 15

Attachment C -- Procedures for Routine Vault Water Inspection and Sampling 18

Figure 1. Map of Service Area..... 19

Figure 2. Map of Vault Locations for Routine Sampling..... 20

1.0 Introduction

The City of Anaheim Public Utilities Department (APU) has developed this Pollution Prevention Plan (PLAN) to comply with the State Water Resources Control Board Water Quality Order No. 2014-0174-DWQ, General NPDES No. CAG990002, which permits water discharges from electric utility vaults and other underground structures to surface waters when performed in accordance with the established terms and conditions. This PLAN outlines the appropriate best management practices to be administered by APU to ensure vault discharges will not cause conditions in receiving waters that fail to meet water quality objectives. This PLAN is specific to electric utility vaults under normal operation and use.

2.0 Water Discharges from Electric Utility Vaults

Electric utility vaults include any enclosed underground structures that contain electrical equipment – transformers, switches, cable splices, conductors and other equipment. There are thousands of underground structures in APU’s service area, most of which are located in east Anaheim. The sizes of the vaults and underground enclosures vary in size. Some are shallow boxes, and some are the size of a large room. Most of the small underground enclosures have unlined bottoms, or open, gravel bottoms that typically allow water to drain into the underlying soil. However, APU’s larger vaults have concrete floors that accumulate water. Storm water is the main source of water that accumulates in underground utility vaults. Other sources include irrigation and ground water seepage. The water in a utility vault is generally pollutant free, and would pose little threat to receiving water conditions when discharged. However, on occasion, a vault may contain pollutants, such as sediment, or other contaminant originating from equipment in the vault, or from the surroundings.

The volume of water and duration of a discharge vary depending on the size of the vault, the amount of water that has accumulated, and the capacity of the pump. The largest vault APU might be expected to pump out could contain as much as 12,000 gallons of water, which could be pumped down in about an hour with a 200 gpm capacity pump.

APU’s vaults are typically located in city streets or in sidewalks along streets. Most water discharges from vaults will be to the curb and gutter, which lead to the City’s municipal separate storm sewer system (MS4). This PLAN ensures that the water in a vault is first inspected, then managed appropriately based on water quality observations. Only water that passes the water quality inspection parameters shall be discharged from a vault to the MS4 or receiving water. Note that all discharges per this PLAN will be within APU’s service area. In the eastern and some central portions of Anaheim, the receiving water is usually the Santa Ana River. In central and western Anaheim, the receiving waters include Carbon Creek or other flood channels, which lead to the San Gabriel River. Therefore, APU will ensure that vault water discharges do not cause an exceedance in the narrative or numerical receiving water limitations that have been established for either the Santa Ana or San Gabriel Rivers. Per permit requirements, this PLAN establishes policies and procedures to control and monitor the vault water to ensure that a discharge will not cause any of the following conditions in the receiving water:

1. Concentrations of dissolved oxygen (DO) in the receiving waters to fall below the DO objective in a Regional Water Board Basin Plan, or 5.0 milligram/Liter (mg/L), whichever is more stringent. When the receiving water DO is already below the applicable basin plan objective, the discharge shall not cause any further depression of the DO concentration.
2. Oils, greases, waxes, floating material (liquids, solids, foams, and scum), or suspended material to create a nuisance or adversely affect beneficial uses.
3. Alteration of the apparent color, taste, or odor beyond present natural background levels.
4. Bio stimulatory substances to be present in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.
5. Turbidity in amounts that adversely affect beneficial uses in the receiving waters. In no case shall turbidity increase more than 20 percent over background levels.
6. The ambient pH to fall below 6.5 or exceed 9.0.
7. Deposition of material that causes a nuisance or adversely affects beneficial uses.
8. Significant erosion or alteration of the watercourse.
9. The ambient receiving water temperature to be altered more than 5°F.
10. Total residual chlorine to be present at concentrations that are detectable using approved methods as specified in 40 CFR Section 136.
11. Taste or odor-producing substances that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin or cause nuisance or adversely affect beneficial uses.
12. Radionuclides to be present in concentrations that exceed maximum contaminant levels specified in title 22, California Code of Regulations, that harm human, plant, animal, or aquatic life, or that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.
13. Toxic pollutants to be present in the water column, sediments, or biota in concentrations that adversely affect beneficial uses that produce a detrimental response in human, plant, animal, or aquatic life, or that bio accumulate in aquatic resources at levels harmful to human health.
14. Violation of any applicable water quality objective for receiving waters adopted by the State or applicable Regional Water Board or applicable water quality criterion adopted by U.S. EPA pursuant to section 303 of the CWA

To confirm that vault water discharges do not cause pollution, a monitoring program that includes sampling of representative discharges will be performed, and the sample results will be reported annually. Water samples will be collected and tested for constituents of concern using procedures specified in 40 CFR Part 136. Depending upon the results of

the monitoring program, this PLAN may be amended to ensure protection of receiving water quality, as well as permit compliance.

3.0 Pollution Prevention Plan Administration

3.1 Pollution Prevention Team

The Pollution Prevention Team is responsible for the development of this PLAN, implementing the steps outlined, evaluating its effectiveness, and revising it as may be necessary. The Pollution Prevention Team for APU consists of the Environmental Services Specialist, the Electric Field Superintendent, and the Electric Crew Scheduler. The Environmental Services Specialist will provide training for staff, coordinate monitoring activities, and work with the laboratories to obtain the appropriate water sample analyses. The Electric Field Superintendent shall identify vaults that are prone to water accumulation, ensure employees are properly trained and equipped to comply with pollution prevention practices, and shall enforce the provisions of the PLAN. The Electric Crew Scheduler will ensure that staffing and any other resources are provided to field crews to meet the PLAN objectives.

For the purpose of regulatory agency liaison, APU's environmental contacts currently include:

1. Richard Wilson, Environmental Services Manager (714) 765-4277
2. Ralph McCaffrey, Environmental Services Specialist (714) 765-4288
3. Marie Newland, Environmental Services Specialist (714) 765-4166

3.2 Employee Training

APU shall implement a training program to ensure that employees who encounter water in vaults or underground structures are familiar with the aspects of this PLAN. These employees shall be knowledgeable of procedures to identify and evaluate potential pollutants that may be present in the water found in an electric utility vault. These employees shall be appropriately trained regarding how and when to use the BMPs identified in this PLAN, which minimize the potential for the release of pollutants to the storm drain system or subsequent receiving water. The training shall address topics such as good housekeeping, spill response, material management, and pollution control methods. Employees who dewater underground structures and utility vaults shall be trained to evaluate the quality of the water prior to a planned discharge from the structure, methods to remove pollutants from a water discharge, and procedures to collect water samples from the discharge. The training will be provided by the Environmental Services Specialist or other qualified individual. Training will be provided prior to performing a planned discharge during the term of the permit. Refresher training shall be provided to employees at intervals as needed to ensure there is an adequate understanding of the goals, objectives, and requirements of the Permit Order, and to ensure the procedures outlined in this PLAN are followed.

4.0 Sources of Potential Pollutants (Pollution Assessment)

Electrical Equipment: Some electrical equipment may contain oil. In electrical equipment such as transformers and switches, this is not lubricating oil, but rather a dielectric fluid. A common dielectric fluid is mineral oil, which is a petroleum product. Depending on conditions, oil-filled equipment may develop a leak that could pollute water within a vault structure. Water with any sign of oil or other petroleum product shall not be discharged unless steps are taken to prevent the discharge of the pollutants.

Surface Spills: A vault could contain contaminants resulting from a fuel or chemical release, or illegal dumping activity in the vicinity.

Chlorine: The domestic water system is treated with chlorine to control bacteria, keeping the water safe for human consumption. Ironically, the chlorine in tap water can be toxic to aquatic life, and is therefore considered a pollutant that must be controlled if present in discharges to receiving waters.

Debris, Trash, and Litter: Although not commonly found inside a vault, trash and litter can accumulate in the gutter or other water flow path. Any trash encountered should be swept up and removed from the flow path prior to discharging water. This helps to keep trash out of our streams, rivers, and ocean.

Urban Storm Water Run-Off: The list of possible pollutants in urban run-off contains many chemical compounds and toxic constituents, with the most likely pollutants to be oil and grease from roadways and parking lots. Low concentrations of fertilizers, pesticides, heavy metals, and other toxics may be present in urban storm water run-off. Fertilizers in run-off may promote aquatic growth (i.e. excessive algae) in receiving waters, which can disrupt the normal aquatic environment and cause other nuisance issues.

Mud, Silt, Sediment: Silt and suspended solids cause turbidity in water, which causes problems for aquatic species. Therefore it's important to control sediment in water discharges that might originate in a vault. Additionally water shall not be discharged in a manner that might cause soil erosion that could result in mud, silt, or sediment entering the storm drain system or waterway.

Industrial Pollutants: Industrial activities that are exposed to weather can cause polluted run-off. To control pollutants in at their sites, many industrial facilities are required to develop and implement their own Storm Water Pollution Prevention Plans (SWPPPs). Any pollutants that aren't captured may find a way into the run-off and possibly into underground vaults or structures.

5.0 Drainage Map

Attached are maps (Figures 1 and 2) showing Anaheim Public Utilities' service area within the boundary of the Santa Ana Regional Water Board's jurisdiction. Depending on the area of the city, water discharges in Anaheim would be within the Lower Santa Ana River Watershed Management Area or the Coyote Creek & Carbon Creek Watershed Management Area. Anaheim is also within the heart of the Orange County Ground Water Basin. The maps identify major roadways and major surface waters. Because

there are no MS4 discharge points to Areas of Special Biological Significance (ASBS) in the City of Anaheim, the map does not feature any ASBS.

6.0 Procedures for Discharges from Utility Vaults and Underground Structures

Any discharge from a utility vault or underground structure that would cause or contribute to an exceedance of an applicable water quality objective in the receiving water is not allowed. Where APU personnel determine that a discharge from a utility vault or underground structure may have a reasonable potential to cause or contribute to an exceedance of water quality objectives for the receiving water, and where BMPs and procedures implemented in accordance with this PLAN will be insufficient to adequately control pollutants in the discharge, APU shall arrange for offsite disposal of the vault contents at a wastewater treatment facility.

To determine the quality of the water prior to a planned (non-emergency, non-automated, or non-critical) discharge from a utility vault or underground structure, APU has developed a checklist of procedures outlined in Attachment A. The procedures include a visual and other sensory evaluation of the water and vault contents to determine whether pollutants may be present. The completed checklist provides a record of each vault discharge event, which shall be forwarded to the Environmental Services Specialist for reporting and record keeping purposes. The vault water management decision process flow chart is provided in Attachment B. The checklist and flow chart are tools that guide APU's employees assigned to determine the quality of water in a vault, and to help one determine whether the vault water may be discharged according to permitted guidelines, or whether other pollution control measures must be used based on site conditions.

7.0 Pollution Control Measures

Control Measures for Petroleum Products in Vault Water

- 1) In cases where a visible, thick, layer of oil, grease, or other petroleum product is found in a vault, the petroleum pollutants shall be removed for offsite disposal. For small volumes overall, it may be appropriate to pump the contaminated vault water into drums or other containers for transport to a waste water treatment facility. For larger volumes, it might require a vacuum truck to pump and transport the load to an offsite treatment facility. Wash water resulting from cleaning a contaminated vault shall also be removed for offsite disposal in a similar manner.
- 2) For a light, yet visible sheen of oil, grease, or other petroleum product on the water surface, the pollutants may be controlled by pumping the water through a hydrocarbon absorbing filter sock that is attached to the end of the discharge hose. In certain cases (i.e. light oil film, or thin layer) it may be possible to first apply oil absorbing pads to the water surface to remove, or reduce the hydrocarbon layer to a light sheen, and then pump the vault through an oil absorbing filter. Specific procedures pertaining to the use of the pump and filter sock, as well as its limitations are outlined in Attachment C.

Control Measures for Surface (chemical) Spills or Illegal Dumping

In situations that suggest the vault has been impacted by a chemical spill or related hazmat incident, the pollutants shall be removed for offsite disposal. This can be accomplished by pumping into drums or other suitable containers for small volumes, or it might require a vacuum truck for larger volumes. Wash water resulting from vault cleaning shall also be removed for offsite disposal. These circumstances will require the services of one of APU's qualified hazmat cleanup contractors.

Control Measures for Chlorine

In situations where a vault is located in close proximity to receiving waters, and where the vault has been impacted with water from a recent domestic water system release, it may be necessary to test the water for chlorine. One condition of the permit is that total chlorine be non-detectable in a water discharge before it reaches a waterway. If suspected, the chlorine concentration shall be tested using a field test kit. (The test kits are available from Environmental Services or Water Services Division.) If detected, then chlorine can be removed by adding an appropriate amount of chlorine reducing agent to the water. Chlorine residual dissipates with time and upon contact with various organic substances, so it's not likely that chlorine will be a concern in vault water.

Control Measures for Debris, Trash and Litter

Where litter or trash has accumulated in the gutter or other discharge flow path, the trash encountered must be swept up, removed from the flow path, and properly contained prior to discharging water. If trash or other debris, or any floating material is found inside a vault, the trash or material shall be removed for proper disposal.

Control Measures for Industrial Pollutants in Urban Storm Water Run-Off

In circumstances where pollutants in vault water are suspected from nearby industrial facilities or activities, the pollutants shall be removed for offsite disposal in a manner similar to that identified for chemical spills, etc. Signs of pollutants might include that of a strange odor, or unusual color, or other unusual characteristic or appearance, or other field test that might suggest the presence of pollutants (i.e. high or low pH).

Control Measures for Mud, Silt, Sediment

To a limited extent, water with suspended solids (silt and sediment) can be pumped through a filter sock and discharged. Sediment will be trapped in the filter and clean water will flow through. Situations may arise where mud or larger volumes of sediment are encountered, or where sediment impacts the filter and the water can no longer be pumped through a filter sock. In these situations the options include changing out filters as needed, or calling for a suitable vacuum truck to pump the vault contents and transport to an authorized disposal location.

8.0 Automated Critical Discharge and Emergency Dewatering

In some cases it is necessary to protect electrical equipment within a vault from contact with water to the extent possible. This is to prevent damage to the equipment and to maintain a reliable supply of electric power. In these cases, timely water discharges are

critical – and necessary to ensure public safety, and to maintain essential public services, or to minimize the frequency and duration of power outages.

Timely vault water pumping is accomplished by configuring the vault with a dedicated sump pump that will start automatically when the water in the vault reaches a certain prescribed depth. The sump pump inlet is normally set at a height to avoid pumping settled sediment. In some vaults, the pump inlet is protected by a screen and filter fabric to trap sediment and ensure that only sediment-free water is discharged.

Some automated critical discharge pumping systems are equipped with an “oil-smart” or oil sensing switch that can detect petroleum products floating on the water. APU vaults incorporate different types of “oil smart” switches, but one currently stocked is manufactured by See Water, Inc. In the event oil or petroleum products are present, the pump does not operate, so no automated discharge occurs. Although not all of APU's existing vaults are configured with a sump pump and/or oil sensing switch, current vault construction standards incorporate these in their design. Also as non-oil sensing, automated discharge pumps are replaced, they are replaced with “oil smart” units.

In emergency situations – where human health is endangered, or where public safety is at risk, or when there's an urgent need to dewater a utility vault as soon as possible – prior to completing a thorough evaluation of water quality. Upon mitigation of the emergency condition, APU shall evaluate the water quality as outlined in this PLAN, and implement the prescribed best management practices to minimize any release of pollutants. In the event this occurs, the Environmental Services Specialist shall be notified, so that the discharge incident will be documented, and any necessary information will be reported to the Regional Board in a timely manner.



9.0 Best Management Practices (BMPs)

Several Best Management Practices (BMPs) have been identified to control the discharge of pollutants from utility vaults. APU may utilize the following BMPs as appropriate:

9.1 Good Housekeeping

To control the discharge of pollutants it is important to keep work sites tidy and to contain all sources of pollutants. APU shall employ good housekeeping by:

- (1) Maintaining areas surrounding utility vaults so that they are kept clean and orderly prior to dewatering.
- (2) Storing chemicals and related products in such a manner that if the container is ruptured, the contents will be controlled to avoid accidental release. No spilled products are to be washed into the storm drain system, or left to cause pollution.

- (3) Maintaining the cleanliness and orderliness of all areas that may be impacted by a vault discharge. This is usually accomplished with regular and scheduled street sweeping by Anaheim’s Department of Public Works. Prior to dewatering a utility vault or underground structure, and when feasible and safe to do so, the discharge flow path (e.g., gutter, street, roadway, storm drain inlet) shall be inspected and cleared of any trash, debris, and sediment to the extent feasible.

9.2 Oil Absorbent Pads

Oil absorbent pads (e.g., polypropylene based, “oil-only” pads) can be used to absorb oil or other petroleum product from the surface of water. These are quite effective at removing a hydrocarbon puddle or layer, as they absorb petroleum products, but they don’t absorb water. There are practical limitations to removing all traces of oil, as typically an oily sheen is left on the surface of the water after use.

9.3 Filter Sock

The filter sock for vault maintenance is a fabric filter that is about 6” in diameter and about four feet in length. It is attached to the end of an appropriately sized discharge hose to filter the water while pumping is performed. The filter sock is composed of a special “sandwich” of filter media that can trap fine sediment particles and also absorb hydrocarbons. The filter sock can remove greater than 99% of total suspended solids from water, and also remove oil, grease, and other hydrocarbons to non-detectable amounts. This filter sock is useful for sites where fine particles are suspended in the vault water, or where an oily sheen is observed on the water. One limitation with using the filter sock is that it can become saturated with hydrocarbons, and lose its hydrocarbon removal effectiveness. Another limitation is that it can become impacted with oil or sediment. While using the filter sock, the water effluent must be monitored, and if a sheen of oil is or other pollutant is observed in the effluent, the pumping must be halted and the filter changed out. Another limitation is that the filter can quickly become impacted with sediment. Evidence of an impacted filter is a slow discharge rate and a buildup of back pressure on the pump motor. Therefore the filter sock is not recommended where there is a significant amount of oil or sediment.



A filter sock can remove oil and sediment from water as it is pumped from a utility vault.

9.4 Fiber Rolls

Fiber rolls, sometimes called “straw wattle,” can be used to control soil erosion on earthen slopes. Fiber rolls may be needed when vault water is discharged to unpaved areas. These are used to create evenly spaced check-dams on slopes to slow the water flow. Straw wattle must be anchored securely to achieve satisfactory erosion control.

9.5 Gravel Bags

Gravel-filled bags are used to slow the flow of water and to hold back sediment. Gravel bags (and sand bags) can be used to slow or stop water flow, and can be used effectively

on paved surfaces. Gravel-filled bags may also be placed around storm drain inlets as a last line of defense when there is a threat of sediment or other pollutant intrusion.

10.0 Monitoring and Reporting Program (MRP)

In addition to a systematic program of visually inspecting discharges to verify the effectiveness of the enlisted BMPs, and to ensure that no pollutants are released to surface waters, monitoring that consists of water sampling and lab testing, will be conducted. Sampling and testing will be according to U.S. EPA test procedures approved under 40 C.F.R. part 136, or other test procedures specified by the Permit Order, the State Water Board, or Regional Water Board.

Certain APU staff shall be trained to collect representative water samples from the point of discharge during vault water pumping. As specified in the Permit Order, APU shall identify and monitor at least five representative utility vaults or underground structures in the Anaheim service area each year. The five vault locations selected for representative water discharge sampling during the first year of the Permit term are provided in Table 1.

Table 1. Routine (Annual) Pollutant Monitoring Locations				
Vault ID	Location	Vault Equipment (System ID Numbers)	Site Use/ Zoning	Vault Dimension
V-65	Center St. & Anaheim Blvd.	SGS-86, SGS-166	Residential	8' x 10' x 14'
V-277	1778 W. Lincoln Ave.	GSE-216, GSE-217	Commercial	8' x 10' x 20'
V-352	Miraloma @ 91 Freeway	GSE-292	Industrial	8' x 10' x 14'
V-369	Disney Way & Clementine	GSE-323, GSE-428	Commercial	8' x 10' x 20'
V-503	Oak Canyon & Serrano	PMC-159	Residential	8' x 10' x 7.5'

Sampling in subsequent years may be performed at these vaults, or if these locations cannot be sampled during the year (i.e. a vault is dry), alternative sampling locations may be used. Should there be a change to a pre-determined sample location the Regional Water Board shall be notified by means of APU's annual report covering monitoring activities. If there are less than five occasions to sample a vault discharge during a given year, then only the number of vaults with actual discharges must be sampled that year.

Samples will be taken to represent the volume and nature of the water discharge, and will be collected directly from the discharge, at a point following any treatment device or filter if used, or at a point before the water discharge comingles with another water source. The sample will be collected at a location where no other waste stream, body of water, or other substance might contaminate or dilute the water sample.

Should APU monitor vault discharges for pollutants more often, or for additional chemical analysis than are required by the permit, or as outlined in this PLAN, the results of the additional monitoring and/or analyses shall be included in the annual report.

As sampling is performed, a chain of custody document for the sample(s) will be completed. The chain of custody document will provide a record of the sampling, with the date, sample identification (vault ID), the address, sample collection point description, time of sampling, as well as the individual(s) who performed the sampling. In addition, the chain of custody form is used to instruct the laboratory of the requested analytical testing to be performed. All lab testing shall be performed by a laboratory certified to perform such analyses by the SWRCB.

Monitoring instruments and sampling devices used to fulfill the monitoring program shall be properly maintained and calibrated to ensure accuracy. If applicable, all flow measurement devices shall be calibrated at least once per year to ensure accuracy of the devices. Discharge volume may be estimated based on the pump manufacturer’s flow rate specifications multiplied by the duration of pumping (i.e. discharge volume = pump flow rate (gallons per minute) x minutes to pump).

10.1 Annual Routine Effluent Monitoring Requirements

For each vault water sample collected during the year, the following constituent concentrations and characteristics will be determined by the laboratory:

Table 2. Water Discharge Monitoring Requirements			
Parameter	Sample Type	Units	Test Methods (per 40 CFR part 136)
TPH - gasoline	grab	µg/L	624/8260 (M8015)
TPH – diesel fuel	grab	µg/L	625/8270 (M8015D)
Oil & Grease	grab	mg/L	1664
pH	grab	pH units	SM-4500-H-B
Total Suspended Solids	grab	mg/L	340.2

Laboratory reports shall include quality assurance and quality control data specific to the sample testing performed.

10.2 Annual Reporting

Each year a Site Monitoring Report (SMR) or “annual” report shall be prepared. The annual report shall summarize APU’s activities pertaining to compliance with the Permit conditions. The annual report shall be signed and certified as required by the Permit Standard Provisions. See the following section for signatory and certification requirements.

The annual report shall include a cover letter. The cover letter shall clearly identify violations of the Permit Order and any exceedances of the numeric action levels (NALs). The cover letter will also include information pertaining to any violation to a permit requirement, and discuss corrective actions taken or to be taken, and provide a schedule for implementation.

The annual report will include the results of the chemical analyses performed on the water samples collected from vault discharges during the year and other required information as outlined as follows:

1. An executive summary that includes a discussion of compliance with and/or violation(s) of the Permit Order and an evaluation of the PLAN’s implementation and effectiveness.
2. A summary of monitoring data generated.
3. A summary of relevant field observations. This shall include the dates, places, and times of site inspections, field sampling performed, visual observations, and/or measurements, indicating the individuals who performed the field observations.
4. A map showing the location of each monitored discharge location, with the location of ASBS potentially influenced by the discharges, if any.
5. A list of all monitored discharge locations (i.e. street address), the date when each monitored discharge occurred, the size and/or volume of vault, and the estimated flow rate, duration, and volume of utility vault water discharged.
6. A description of the sample collection methods, sample analysis (i.e. test methods), and quality control procedures, and the name and contact information for the laboratory, utility staff, or others who performed the analyses.
7. An estimate of annual volume discharged, or the estimated volume of each discharge from a utility vault or underground structure (gallons) with a description of the method(s) and assumption(s) used to derive the estimate.
8. Tabulated sampling results indicating the discharge location, collection date, name of constituent/parameter, results of the sample analyses, concentrations detected, minimum detection levels, method detection limits for each constituent, and a comparison with NALs as identified in the table below, and as described in the Permit limitations and discharge requirements. Data provided in the annual report shall be arranged in a tabular format so that the information is readily discernible. The data shall be summarized to clearly illustrate whether BMPs are protective of water quality, as demonstrated by compliance with the NALs:

Table 3. Numeric Action Levels (NALs) for Pollutants of Concern			
Parameter	Units	Numeric Action Levels	
		Minimum Daily	Maximum Daily
Oil and Grease	mg/L	---	25
pH	Std. Units	6.0	9.0
Total Petroleum Hydrocarbons-Diesel Range Organics	mg/L	---	2
Total Petroleum Hydrocarbons-Gasoline Range Organics	µg/L	---	5
Total Suspended Solids	mg/L	---	400

Note: Other NALs may be added based on the results of the Discharge Characterization Studies.

Sample results greater than or equal to the reporting limit (RL) shall be reported as measured by the laboratory. Sample results less than the laboratory's method detection limit (MDL) shall be reported as "<" (less than) followed by the MDL. Sample results found less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected but Not Quantified" or "DNQ", or "J-flag" and the estimated concentration of the sample shall be reported. For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to the abbreviation, "DNQ" or prefaced by the letter "J". The laboratory may include numerical estimates of the data quality for the reported result, expressed as a percent accuracy (plus or minus a percentage of the reported value), numerical range (low to high), or any other appropriate means. APU shall require the laboratory to establish RLs according to the lowest concentration calibration standard. The laboratory shall not present analytical data derived from extrapolation beyond the limits of an applicable calibration curve.

The annual report will be submitted to the Executive Officer of the Santa Ana Regional Water Quality Control Board by June 1st of each year following the annual reporting period, which extends from May 1, to April 30 of each year. The requirement to electronically submit annual reports and related data to the California Integrated Water Quality System (CIWQS) is expected during the permit term. The State Water Board will inform all dischargers when electronic submittal to CIWQS is required. Should CIWQS not allow for tabular data entry within the system, the report data shall be submitted electronically in tabular format as an attachment.

APU will notify the Regional Board staff within reasonable time of becoming aware of any vault discharge activity or incident that poses a risk to public health or the environment. Information regarding the incident will be provided initially by telephone to (951) 782-4381 or by email. A written submission that contains a description of the discharge, the apparent cause, and the dates and time periods of any non-compliant condition, and steps taken to prevent recurrence of the non-compliant discharge will be provided.

10.3 Signatory and Certification

As specified in the permit conditions for a municipality or other public agency, the annual report must be signed by either a principal executive officer or ranking elected official. For APU, the principal executive officer is the General Manager. The General Manager may duly authorize another individual (or position) with responsibility for the overall operation or activity as an authorized representative. APU's Environmental Services Manager, with responsibility for environmental matters, has been duly authorized to sign the annual report, permit application, NOI, etc. Should it be necessary to authorize a different individual or position as signatory, the new authorization must be submitted to the Regional Water Board prior to, or together with, any reports, information, or applications that are signed by the so authorized representative.

Any person signing and submitting a report or other document under the Permit Standard Provisions shall make the following certification: "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in

accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

APU shall retain records of all annual routine monitoring (i.e., annual sampling) information including all calibration and maintenance records, copies of all reports required by the Permit Order, and records of all data used to complete the application for the Permit Order for a period of at least five years from the date of the sampling, measurement, report, or application. This retention period may be extended by request of the State or Regional Water Board.

11.0 Annual Program Evaluation and PLAN Revision

APU shall evaluate the effectiveness of this MRP to control the discharge of pollutants during a vault discharge event at least annually. The PLAN shall be updated, revised or replaced as necessary to address procedures and BMPS found to not be effective in minimizing the discharge of pollutants. The PLAN evaluation shall include the following:

- Determination of whether measures to reduce pollutant loadings are adequate.
- Determination of whether source control measures, sediment and erosion control measures, and other structural BMPs are properly implemented in accordance with the terms of the permit Order.
- Determination of whether additional control measures are needed.
- Determination of whether BMPs identified in this PLAN are being utilized as described, and operating and functioning satisfactorily.
- Determination of whether equipment needed to implement this PLAN is operating and functioning correctly.

If the results of the monitoring and reporting program indicate an exceedance of one or more of the NALs, then APU shall evaluate the potential cause(s) of the NAL exceedance(s). This evaluation shall include an assessment of the potential source(s) of the pollutant and whether the procedures and BMPs contained in the PLAN need to be revised to address the identified source(s) in future discharges.

Attachment A -- Checklist Procedures

Discharge of Water from Utility Vaults
(Attachment B provides the decision tree flowchart)

✓ Check-off as completed:

_____ Vault ID Number _____

_____ Street Address: _____

_____ Date: _____ Time: _____

_____ Crew Supervisor: _____

_____ Open vault. Inspect vault interior for presence of water.

_____ Describe Vault: Dimensions: _____ Depth of Water: _____

_____ Note any unusual odor or appearance: _____

_____ Collect a sample of water using bailer/container. Describe water clarity, or pollutants present (i.e. oil), and select appropriate course of action below:

_____ Water sample has odor of sewage, or fuel, or solvents, or other chemical. Notify Electric Operations / Environmental Services. **Do not pump contaminated water to storm drain.** Arrange for offsite treatment or disposal.

_____ Water shows an oil layer. Notify Electric Operations / Environmental Services. Verify concentration (ppm) of PCBs in the oil per FEI database. **If PCBs are present in the oil, arrange for pumping by environmental contractor.** If no PCBs, use oil absorbent pads to remove oil layer. If oil is a light sheen, attach oil absorbing “filter sock” to discharge hose. Inspect and remove trash or debris from water flow path leading to drain inlet or surface water prior to pumping.

_____ Water shows suspended sediment (cloudiness). Allow water sample to sit to determine if cloudiness settles -- like dirt, sand, clay, or silt. If sediment appears to settle out, attach “filter sock” to discharge hose. Inspect and remove trash or debris from water flow path prior to pumping. If cloudiness persists, arrange for offsite treatment or disposal.

_____ Water sample is clear. Water is safe to pump to storm drain. Inspect and remove trash or debris from water flow path. Do not pump vault bottom sediment. If necessary, pump water through the appropriate filter sock to trap sediment.

Attachment A (cont.)

If vault water is clear and clean in appearance and does not contain evidence of oil or other pollutants, the water may be discharged. If the water evaluation indicates that contaminants or pollutants may be present in the vault water, **the water shall not be discharged to the storm drain system or surface water.** If pollutants can be removed from the vault water by filtering or by implementing other appropriate BMPs, the water may be pumped to the storm drain system. The vault water must be clear and clean in appearance and without evidence of oil or other pollutant when discharging to the storm drain or surface water.

If pollutants found in vault water appear to be non-hazardous (residual oil, grease, sediment, or sewage), APU field crews may contact Public Works, Facilities Maintenance – Streets and Sanitation at (714) 765-6145 to request a vacuum truck to pump the liquid out. Only non-hazardous waste shall be pumped in this manner. Wastewater meeting parameters for the Orange County Sanitation District may be discharged to the sanitary sewer. Smaller volumes of contaminated water may be pumped into drums and transported via flatbed truck to EUC. The Environmental Services Specialist is to be notified of incidents such as oil spills, chemical spills or sewage spills, and at any time waste items or waste water is returned to the EUC yard.

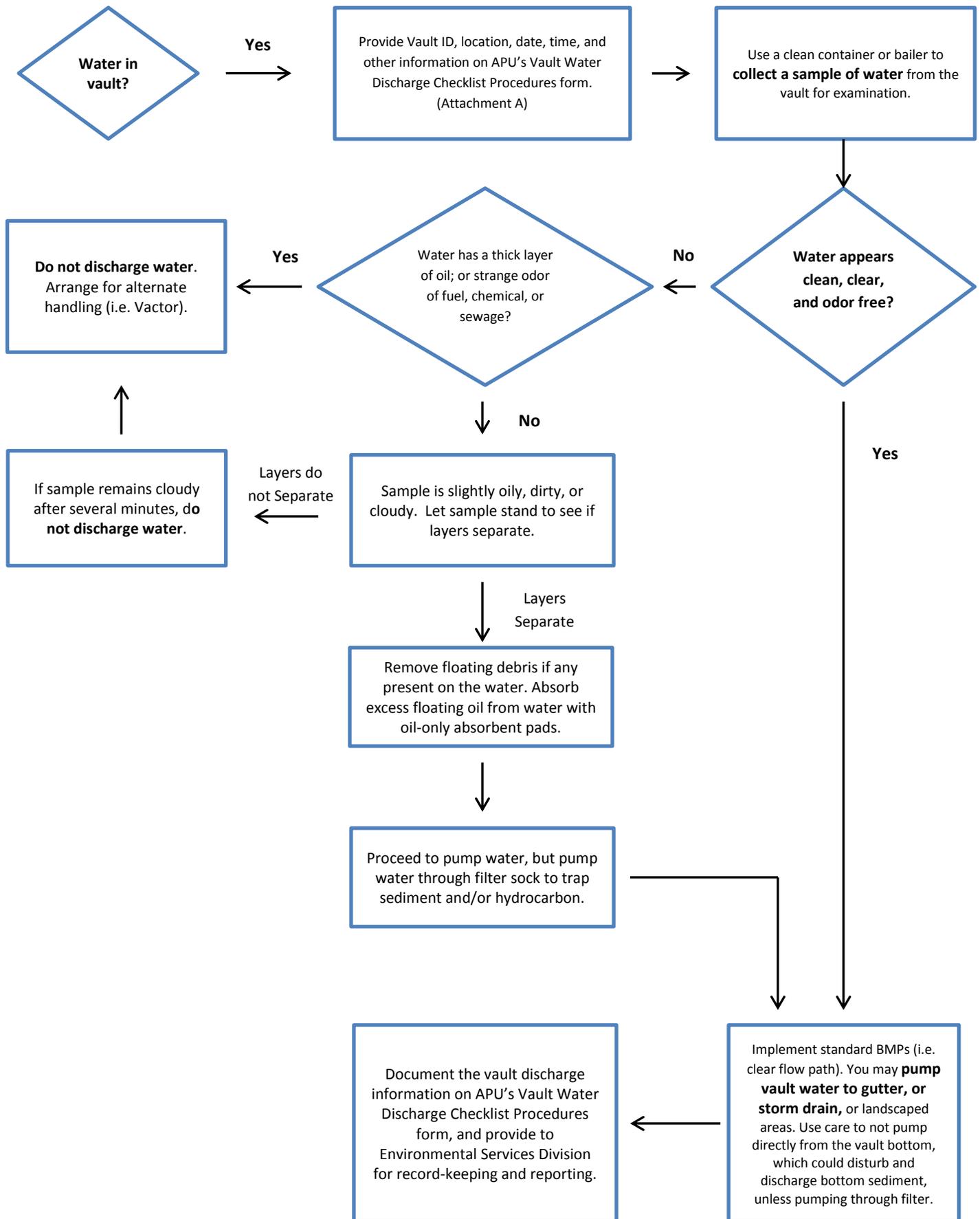
If oil-filled electrical equipment appears to be the source of oil contamination, APU's Department Order detailing response measures for oil spills (D.O. 511) shall be implemented. For oil-filled electrical equipment, it is necessary to determine whether the oil may contain PCBs. Records of PCB test data can be accessed through the Field Equipment Inventory (FEI) database. If PCBs are suspected, an outside contractor will likely be called to remove contaminated materials for appropriate disposal and to decontaminate the vault. For non-PCB incidents, APU staff may remove oil and oil-affected material for transport to the yard.

The vault and equipment affected with oil, grease, or other pollutants should be cleaned of residual material. Any soiled cleaning materials and wash water must be collected and returned to the yard for proper waste management.

The completed checklist (Attachment A) documenting the discharge shall be provided to the Environmental Services Specialist.

Attachment B

ANAHEIM PUBLIC UTILITIES: UTILITY VAULT WATER DISCHARGE DECISION FLOWCHART



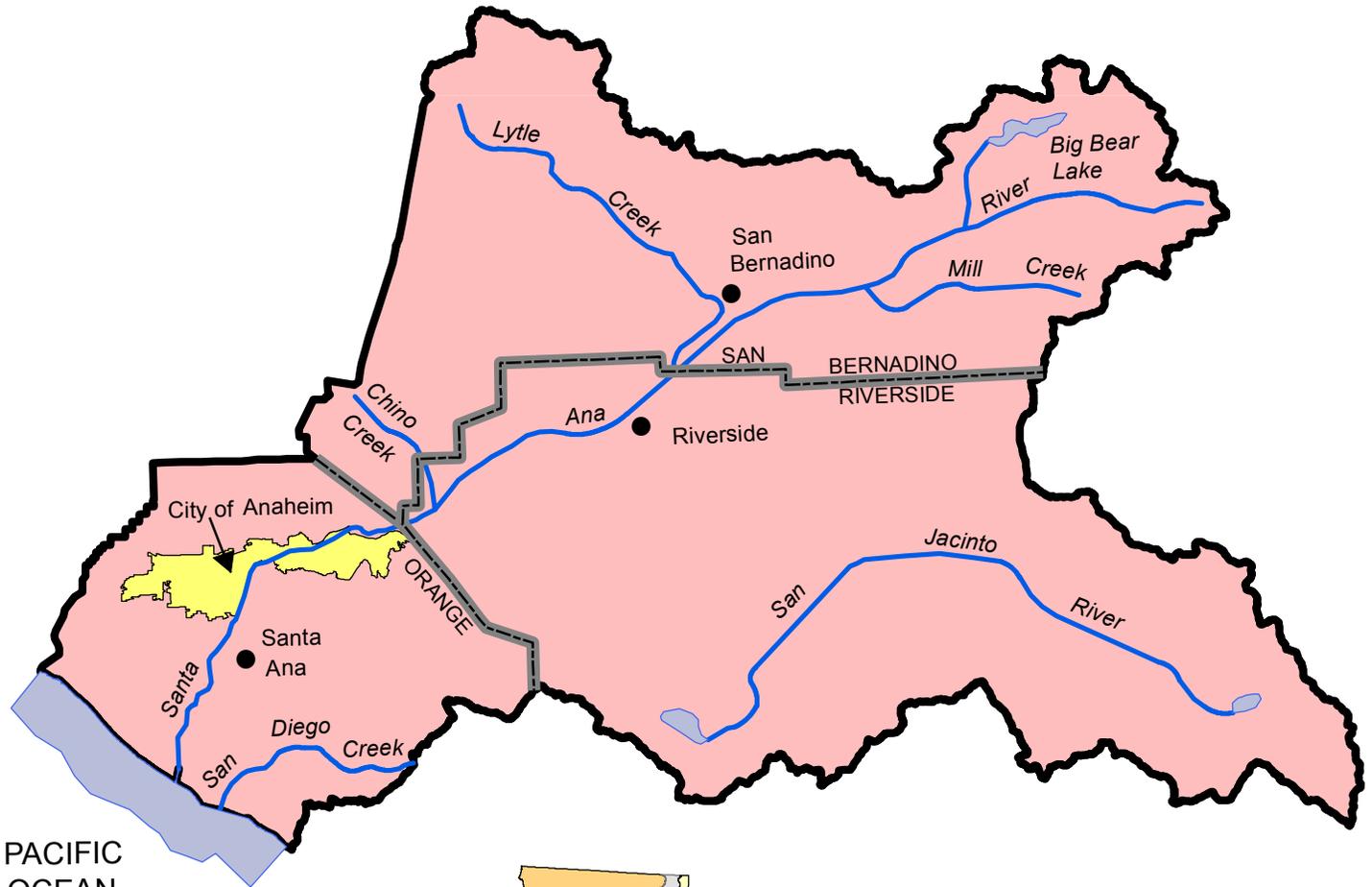
Attachment C -- Procedures for Routine Vault Water Inspection and Sampling

Supplies needed for vault water evaluation and vault water sampling include: sample bailer with cord, clear container, amber-colored glass bottles, cooler, ice packs, labels, sharpie pen, and chain of custody form, checklist (Attachment A), gloves, traffic control devices, and tools to open the vault.

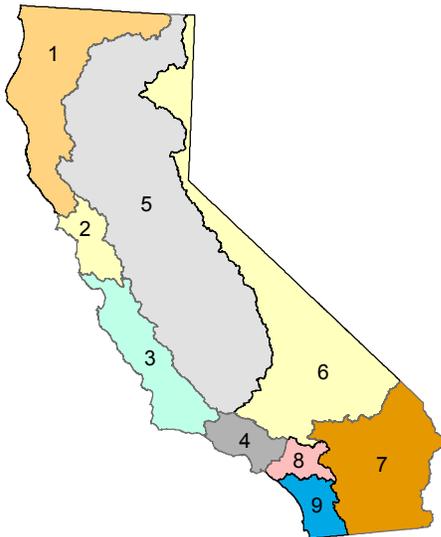
1. After opening the vault and discovering water, begin to complete checklist - **Discharge of Water from Utility Vaults** (Attachment A). Lower clean bailer or suitable container into water surface, and withdraw a water sample by an attached cord.
2. Pour contents of bailer into clear container. Examine for presence of oil, etc. and evaluate water conditions. Indicate observations on checklist (Attachment A).
3. Confirm that vault water is suitable to pump to surface water, and that any necessary BMPs (i.e. clear water flow path of litter, attach filter sock) are in use. For laboratory testing, it is necessary to collect the water sample at a point after it has been discharged from the vault (i.e., from the end of the discharge hose after filtration or other BMPs).
4. Fill two (2), 1-liter amber glass bottles with water having been pumped from the vault but prior to vault water mingling with other material or flow. It is appropriate to fill sample bottles with water after BMPs have been used to remove any pollutant. This best represents the quality of water that might eventually reach surface water.
5. Label the sample bottles with the date, vault number, time of sampling, and name of the person collecting sample. Use sharpie pen or similar marker.
6. Place water samples in cooler with ice packs.
7. Complete the chain of custody form (AETL). Note the vault ID, the date, time, vault location, and the type of equipment in the vault or other underground structure on the chain of custody.
8. Sign the chain of custody form as sampler where indicated.
9. Bring samples (in cooler) and chain of custody form to the Environmental Services office at EUC. Call or leave a message at ext. 4288 that samples have been left.
10. The Environmental Services Specialist shall arrange for sample analysis and delivery of water samples to the lab. Analyses will include the pollutants of concern identified in Table 3. The Environmental Services Specialist shall ensure that samples are delivered to the laboratory in a timely manner so as not to exceed any specified holding times. The Environmental Services Specialist may add preservatives to the samples as directed by the laboratory personnel.



**City of Anaheim within
Santa Ana Regional Water Quality
Control Board (Region 8) Jurisdiction
Figure 1.**



PACIFIC OCEAN



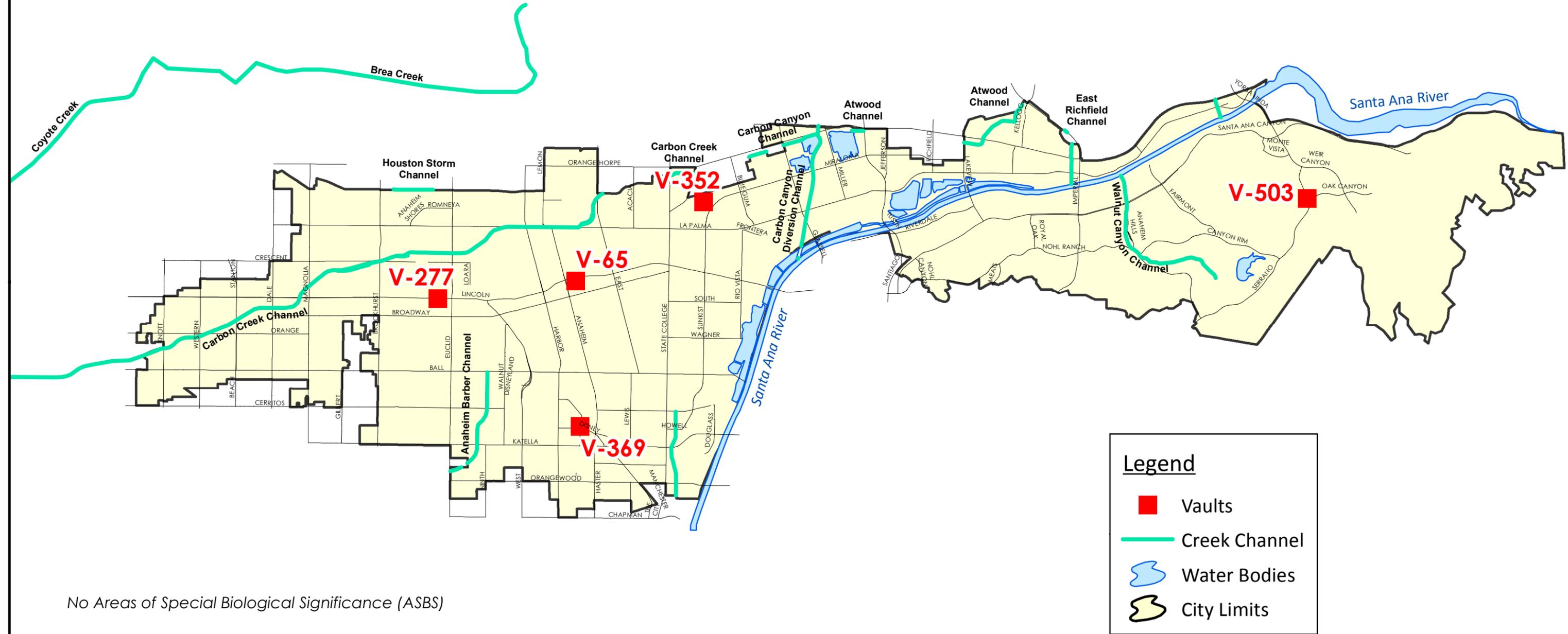
1 inch = 240 miles
0 60 120 240 360 Miles
VN - 4/23/2015

**Utility Vault Water Discharges
Order No. WQ 2014-0174-DWQ**



Anaheim Public Utilities Service Area

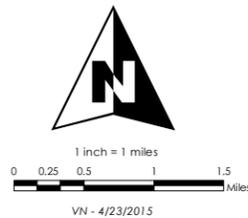
Figure 2.



Legend

- Vaults
- Creek Channel
- Water Bodies
- City Limits

No Areas of Special Biological Significance (ASBS)



Utility Vault Water Discharges
Order No. WQ 2014-0174-DWQ