

MERCED IRRIGATION DISTRICT UTILITY VAULT DISCHARGE POLLUTION PREVENTION PLAN

**PREPARED IN COMPLIANCE WITH THE NATIONAL POLLUTANT DISCHARGE
ELIMINATION SYSTEM GENERAL PERMIT FOR DISCHARGES FROM UTILITY
VAULTS AND UNDERGROUND STRUCTURES**

Water Quality Order No. 2006-0008-DWQ

General Permit No. CAG990002

Prepared for:

**Merced Irrigation District
744 West 20th Street
Merced, CA 95344-0288**

Prepared by:

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1. INTRODUCTION

The California State Water Resources Control Board adopted statewide general National Pollutant Discharge Elimination System (NPDES) Permit CAG990002 on July 19, 2006 for discharges from utility vaults to surface waters. The Merced Irrigation District (MeID) is applying for coverage under this permit for the discharge of water from utility vaults in its electrical distribution system.

MeID has filed a Notice of Intent (NOI) to use this general permit (Attachment A). As part of the conditions of the permit, MeID needs to file a Pollution Prevention Plan (PLAN) with the California State Water Resources Control Board and Central Valley Regional Water Quality Control Board (RWQCB) that addresses MeID's operating procedures for minimizing discharge of pollutants from utility vaults. The general permit also requires utilities to implement an annual monitoring program to analyze discharges from a representative number of utility vaults and submit this report to the RWQCB.

2. PLAN DEVELOPMENT

MeID developed this PLAN based on the characterization of the discharges normally experienced from the proposed facilities and considered by other utilities in other plans. MeID selected representative utility vaults, obtained samples of water, and analyzed the water for pollutants that MeID reasonably expects to occur in the water. Attachment B presents the vault-sampling plan used to characterize the discharges covered by this plan.

Attachment C, Case Study Sampling Results, presents a summary of the sampling data. This PLAN explains MeID's operational procedures for discharging water from utility vaults to comply with water quality standards and the provisions of the general permit.

MeID must amend the PLAN whenever there is a change in construction, operation, or maintenance, when the amendment is necessary to ensure compliance with Best Available Technology (BAT), Best Control Technology (BCT), or receiving water limits. In addition, MeID must amend the PLAN if it violates any condition of the permit or has not achieved the general objective of controlling pollutants in discharges to surface waters to comply with water quality standards.

This permit expires on July 19, 2011. At that time, MeID can re-enroll by resubmitting a copy of the PLAN to the RWQCB Executive Officer for approval or submit a Notice of Termination or Transfer (NOTT) if MeID no longer requires coverage under the permit.

3. DESCRIPTION OF UNDERGROUND FACILITIES

MeID operates underground electrical networks in the cities of Merced, Atwater, and Livingston. The underground electric facilities consist of utility vaults with either a solid cover or a locked hinged metal grate. Water accumulates to varying degrees in some utility vaults in the MID electrical system, primarily from storm water runoff.

3.1. MeID Electrical System

MeID is a local, public agency organized in 1919 under the Water Code and governed by elected board members. Section 22115 of the Water Code gives the District the right to "provide for the

acquisition, operation, leasing, and control of plants for the generation, transmission, distribution, sale, and lease of electric power including sale to municipalities, public utility districts, or persons.” MeID has owned and operated hydroelectric generating facilities on the Merced River since 1927. In 1995, MeID exercised its authority to sell power to retail electric customers. MeID offers its customers full electric service including power supply and delivery. Since 1996, MeID has connected over 7,500 customers to their electric system. Attachment D shows the MeID electrical system.

3.2. Underground Network

MeID has 1,081 utility vaults within its underground network. Most of the underground vaults are within the City of Merced, but the entire system contains vaults throughout. Attachment E shows the location of the utility vaults in the MeID system and the discharge points.

4. DISCHARGES

Generally, MeID discharges water from these structures when it is necessary to enter the vault for maintenance and repair activities. MeID manually pumps and discharges water that collects in the vaults during or after rainfall or other events that causes water to accumulate in the underground structures. Water trapped in the structure may have occasional traces of petroleum hydrocarbons, organic matter, mud, silt, or other pollutants, usually resulting from surface runoff. Attachment F describes the procedures used for discharging water from utility vaults.

4.1. Scheduled and Unscheduled Discharges

Discharges from vaults and manholes are associated with maintenance and repair activities and water accumulation. These activities are often unscheduled because the accumulated water remains in the structure until MeID personnel are required to enter the vault for maintenance or repair work.

Discharges are generally unscheduled, but may occur prior to scheduled maintenance.

MeID will manually pump utility vaults that accumulate storm water during maintenance and repair activities that require personnel to enter to vault. The total discharge from these vaults is highly dependent on rainfall and other surrounding water-related activities, and volume of discharges can range from a few gallons to a few thousand gallons. Discharges from utility vaults can take as long as two hours depending on the amount of water present.

MeID discharges the vault water to the adjacent land on the side of the road, where possible, but in many urban and residential locations, MeID must discharge to the storm water sewer system. MeID does not discharge directly to streams, creeks, or reservoirs.

4.2. Emergency Operation Discharges

MeID can apply the methods described in Attachment F of this PLAN to emergency discharges. However, in emergencies involving imminent threat to human life, serious property damage, or in cases of natural disaster or catastrophic events, MeID has the authority to take whatever action necessary to mitigate the immediate threat including the discharge of untested water. Once the emergency is under control, MeID will test the stormwater and report their findings.

5. POLLUTION PREVENTION TEAM

Table 5-1 presents the District's Pollution Prevention Team consisting of individuals that are responsible for developing this PLAN and assisting field crews with NPDES discharge training, emergency response activities, and vault decontamination activities.

TABLE 5-1

POLLUTION PREVENTION TEAM

Name	Title	Office Telephone	Mobile Phone
Steve Dunn	Spill Coordinator	(209) 722-5761	(209) 201-8106
Jim Duncan	1 st Alternate	(209) 726-4136	(209) 201-8136
Fernando Torres	2 nd Alternate	(209) 722-4136	(209) 201-8122

6. POTENTIAL POLLUTANT SOURCES

Potential pollutant sources include storm water runoff, vault equipment, and spills or leaks.

6.1. Types of Discharges

Discharges made from vaults in the MeID underground network are intermittent and usually related to storms or other events that cause accumulations of water. Discharges are dependent on either the necessity to discharge water to prevent compromising the electrical system or maintenance and repair activities.

6.2. Drainage Map

Attachment D, Location of Wet Vaults and Storm Water Discharge Points, contains a map of the underground vaults within the MeID service territory and corresponding discharge locations.

6.3. Inventory of Exposed Material

Table 6-1 identifies the types of materials that MeID handles and stores at the electrical underground vaults that potentially may be exposed to precipitation. The table also identifies the location of the materials, storm water best management practices (BMPs), structural controls, and storm water treatment for the potential pollutants.

See Attachment C for case study results on pollutants present in water from underground utility vaults. The case study results identified trace amounts of Total Petroleum Hydrocarbons in the diesel range (TPH-d) and Total Suspended Solids (TSS) in some of the representative vault samples. These constituents result primarily from runoff from road surfaces. The TPH-d is within the U.S. Environmental Protection Agency (EPA) Integrated Risk Information System (IRIS) reference dose for drinking water (0.056-0.140 mg/l), and TSS would be limited by using methods described in Section 7.5 to control sediment.

TABLE 6-1

INVENTORY OF EXPOSED MATERIALS

OIL AND GREASE RESIDUES ON ELECTRICAL EQUIPMENT	
Location:	<ul style="list-style-type: none"> All transformer oil is contained within the sealed and operating electrical transformers and switches. Transformers and electrical conduit are sealed to prevent damage from stormwater and/or groundwater seepage
Storm Water BMPs:	<ul style="list-style-type: none"> Inspection of all underground vaults every three years Maintenance and/or replacement of all leaking transformers Cleanup of all oil releases Evaluation of all water for the presence of oil sheens, odors, and discoloration prior to discharge
Structural Controls:	<ul style="list-style-type: none"> Structural controls – None Non-structural controls – See Section 7.1
Storm Water Treatment:	<ul style="list-style-type: none"> Emergency contractor services to remove any contaminated storm water prior to discharge

COPPER, LEAD, AND ZINC CONTAINED IN ELECTRICAL CABLES, CONNECTIONS, AND SHIELDING

Location:	<ul style="list-style-type: none"> Copper may be present due to a core of copper contained in most insulated cables. Excess cable is not stored in vaults and manholes. Lead may be present due to lead shielding on some cables. Zinc may be present as many of the fittings on electrical equipment and cables are galvanized.
Storm Water BMPs:	<ul style="list-style-type: none"> Inspection of all underground vaults every three years Removal of all metal debris from vaults and manholes upon completion of maintenance activities Insulation of all high voltage electrical wiring/cables
Structural Controls:	<ul style="list-style-type: none"> Structural controls – None Non-structural controls – See Section 7.1
Storm Water Treatment:	<ul style="list-style-type: none"> Emergency contractor services to remove any contaminated storm water prior to discharge

6.4. Spills and Leaks

During the three years prior to the implementation of this PLAN, MeID has not experienced any known or reported spills or leaks of oil or hazardous materials related to underground utility vaults.

6.5. Risk Identification and Potential Pollutant Sources

The pollutants most likely to be present in the utility vaults are petroleum hydrocarbons and suspended solids.

Suspended Solids

Suspended solids may result from the accumulation of dust, dirt, and leaves over time.

Petroleum Hydrocarbons

Petroleum hydrocarbons may be present due to leaking dielectric mineral oil used in electrical equipment for cooling purposes, petroleum lubricants used to aid in pulling electrical cables through ducts, or runoff from parking and road surfaces.

7. POLLUTION PREVENTION PRACTICES

Pollution prevention practices consist of good housekeeping and preventative maintenance, spill prevention, control, and countermeasure controls, employee training, spill response reporting, sediment and erosion control, and management of runoff.

7.1. Good Housekeeping and Preventative Maintenance

Trained MeID personnel inspect underground utility vaults every three years. The MeID Spill Coordinator is accountable for all inspections and record keeping. The inspections consist of observations of oil containing and secondary equipment, associated valves, and piping to identify any signs of deterioration, leaks, or accumulations of oil. MeID personnel will report visible oil leaks that cause an accumulation of oil to the Spill Coordinator for repair. Part of this maintenance activity includes cleaning out accumulated debris, leaves, sediment, and general refuse that has accumulated.

7.2. Spill Prevention, Control, and Countermeasure Controls

Based on the requirements set forth in 40 CFR 112, MeID has developed and implemented a spill prevention control and countermeasure (SPCC) plan for using and storing oil products in containers with a storage capacity greater than 55 gallons resulting in a total aggregate capacity of more than 1,320 gallons. MeID operates three substations and a transformer yard that use and store mineral oil for cooling interior coils and electrical insulation in their 115-12 kV and 115-21 kV power transformers. Transformers filled with mineral oil may be present in some underground vaults, which can contain greater than 110 percent of the oil. SPCC Plan components include spill contingency planning, potential spill prediction, drainage control and discovery, and prevention measures.

7.3. Employee Training

The Spill Coordinator conducts NPDES training to all personnel involved in the discharge of water from vaults during initial hiring orientations and provides annual refreshers. Training topics include the following:

- Overview of the permit and PLAN;
- Vault inspections;
- Record keeping;
- Water discharge evaluation and recording;
- Sediment and erosion control;
- Oil and effluent spill response reporting procedures; and
- Vault safety and personal protective equipment.

7.4. Spill Response Reporting

Spill response reporting will follow guidelines developed in the SPCC plan. The following presents procedures for spill response training and spill notification and the spill history.

7.4.1. Spill Response Training

The Spill Coordinator conducts SPCC training and safety meetings for plant operations personnel during initial hiring orientations and annual refreshers. Training topics include the following:

- Location and contents of the SPCC Plan;
- Revisions;
- Proper operation and maintenance of equipment to prevent spills;
- Proper procedures for routine handling of oil products;
- Proper procedures in the event of a spill;
- Discussion of past spill incidents;
- Potential spill situations; and
- Proper completion of inspection records and forms.

7.4.2. Spill Notification

In the event of an oil spill, MeID personnel will notify the Spill Coordinator (or alternate) once the spill is contained or if personnel cannot contain the spill quickly and safely. In the case of an emergency after business hours, on-site MeID personnel will call the 24-hour emergency hotline, which forwards to the MeID after-hours security company that will contact the on-call supervisor to notify the Spill Coordinator (or alternate).

For a reportable oil spill of over 1,000 gallons of oil or more, or spills of 42 gallons or more on two occasions within any twelve-month period, which reaches regulated water, the Spill Coordinator will immediately notify the RWQCB and report the information outlined in the SPCC. The Spill Coordinator, in consultation with the RWQCB, may notify the National Response Center, the California Office of Emergency Services, the Merced County Office of Emergency Services, and the California Department of Forestry and Fire Protection (CDF) Emergency Command Center. Within 60 days, MeID is required to submit a report to the Regional Administrator of the U.S. EPA in accordance with the SPCC. Table 7-1 lists the contact information for spill notification.

7.4.3. Spill History

During the past three years, no oil releases or releases of other hazardous materials entered MeID vaults.

TABLE 7-1

OIL SPILL NOTIFICATION CONTACT LIST

Contact	Office Telephone
Central Valley Regional Water Quality Control Board (Fresno Branch)	(559) 445-5116
National Response Center	(800) 424-8802
California Office of Emergency Services	(916) 845-8911
Merced County Office of Emergency Services	(209) 385-7548 (209) 385-7444 (after 5pm and weekends)
CDF Emergency Command Center	Radio – KAZ 429
Fire Department	(209) 385-6891
Police Department	(209) 385-6912
Hospital	(209) 385-7000
MID 24-Hour Emergency Hotline	(209) 722-2899

7.5. Sediment and Erosion Control

Identified vaults in the service area are located in urban development, rural residential, and agricultural areas. Visual inspections indicate a limited potential for soil erosion near MeID’s vaults.

If areas that are currently under development prevent a discharge to a storm water conveyance system, MeID will implement one of the following sediment and erosion control best management practices:

- Discharge to an approved sediment discharge basin. MeID will contact the developer or builder to discharge vault water in a developed sediment basin.
- Construct or install sediment control using straw waddles and gravel pads. MeID will pump discharge water across gravel pads and/or pass through a series of straw waddles to minimize suspended sediment erosion. MeID will reduce the discharge pressure by attaching a sediment control sock at the end of the discharge hose. The sock will diffuse the discharge water to minimize soil erosion.
- Notify oil spill cleanup firm to pump out the vault and dispose of the water properly.

7.6. Management of Runoff

Management of runoff is essential to reduce the discharge of pollutants from a vault location to waters of the U.S. Runoff management practices are adapted for developed and undeveloped areas.

7.6.1. Runoff Management in Developed Areas

A component of the Site Compliance Evaluation is to conduct a visual inspection of the proposed discharge locations. Prior to the discharge of water from a vault, MeID inspects the discharge location for the presence of debris, silt, or hazardous materials that may introduce pollutants into a storm drain or the environment. MeID removes all identified materials from the discharge area prior to the release of water from a vault or manhole. MeID records the results of the inspection on the inspection form.

7.6.2. Runoff Management in Undeveloped Areas

See Section 7.5, Sediment and Erosion Control.

8. SITE COMPLIANCE EVALUATION

The purpose of the Site Compliance Evaluation program is to inspect visually waters in vaults prior to discharge and verify the effectiveness the program through annual sampling.

8.1. Visual Inspections

MeID examines the accumulated water prior to discharge to determine if suspended solids or petroleum hydrocarbons are present to an extent that allowing discharge to the storm water drain system would be detrimental to the receiving water body. Examinations consist of sampling water with white bucket to determine the presence of these constituents. MeID records sensory observations and has verified the preliminary results from the representative vaults using chemical analysis. Based on the results of these case studies, MeID determined that using visual observations is a reliable method for determining whether water is suitable for discharge to storm drains.

MeID completes the Underground Vault Water Management Checklist prior to any discharges to storm drains. The checklist, included in Attachment F, Vault Water Discharge Procedures, consists of five sections that guide the inspection process.

8.1.1. Checklist Section I

Section I of the checklist requires that the date, time, vault number, estimated water depth, discharge volume, and discharge rate, as well as whether there have been any recent rains, be recorded.

8.1.2. Checklist Section II

Section II of the checklist requires MeID to visually examine the water to determine the presence of excessive amounts of suspended solids, abnormal colors or odors (i.e., odors from solvents and other petroleum products, sewage, or tars), and grease floating in the water. If MeID finds any of these contaminants, field supervisors will instruct crews not to pump the water to a storm drain, but instead arrange to have the water removed and contained for discharge into a sanitary sewer. In addition, this section also requires the MeID to inspect the discharge location for the presence of debris and contaminants prior to discharge. MeID will remove identified contaminants and debris prior to discharge.

8.1.3. Checklist Section III

Section III instructs crews to examine the water for the presence of an oil-sheen. Instructions in the checklist state that if an oil sheen is present, personnel may only pump the water present and may not discharge the oil sheet from the vault. Crews also have the option to place absorbent pads on

the surface of the water to absorb the oil, if suitable for the particular situation. If it is necessary to remove the oil sheen through pumping, field supervisors instruct crews not to pump the water to a storm drain, but instead arrange to have the water pumped out by an oil spill cleanup firm and contained for proper disposal.

8.1.4. Checklist Section IV

Section IV of the checklist requires MeID to examine the water during discharge and record all observations.

8.1.5. Checklist Section V

Finally, the responsible field supervisor signs the checklist in Section V.

8.1.6. Testing Records

MeID will retain testing records on file for a minimum of three years.

8.2. Annual Monitoring

To verify the effectiveness of the PLAN, MeID will sample water from a representative number of vaults and manholes in its service area annually. MeID will present the results of the monitoring program, evaluated and summarized in an annual report, to the RWQCB for review. Attachment B identifies the sites and locations of representative vault samples. Sample locations may change in the event of low rainfall years where MeID is unable to obtain water samples. In such instances, MeID will notify the RWQCB of sampling changes in its annual report. MeID conducts all sampling in accordance with the Monitoring and Reporting Program identified in Attachment E of the General Permit.

ATTACHMENT A

Notice of Intent

ATTACHMENT B – NOTICE OF INTENT FORM

**NOTICE OF INTENT (NOI)
 WATER QUALITY ORDER NO. 2006-0008-DWQ
 STATEWIDE GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
 PERMIT FOR DISCHARGES FROM UTILITY VAULTS AND UNDERGROUND STRUCTURES TO
 SURFACE WATERS OF THE UNITED STATES
 GENERAL PERMIT NO. CAG990002**

I. NOTICE OF INTENT STATUS (See Instructions)

MARK ONLY ONE ITEM	1. <input checked="" type="checkbox"/> New Discharger	2. <input type="checkbox"/> Change of Information – WDID #
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II. OWNER/OPERATOR (If additional owners/operators are involved, provide the information in a supplemental page.)

A. Name Merced Irrigation District		Owner/Operator Type (Check One) 1. <input type="checkbox"/> City 2. <input type="checkbox"/> County 3. <input type="checkbox"/> State 4. <input checked="" type="checkbox"/> Gov. Combo 5. <input type="checkbox"/> Private		
B. Mailing Address P.O. Box 2288				
C. City Merced	D. County Merced	E. State CA	F. Zip Code 95344-0288	
G. Contact Person Steve Dunn	H. Title AGM - Engineering and Operations		I. Phone (209) 726-7010	

ADDITIONAL OWNERS _____

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

Send to: <input 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. Receiving water(s): Atwater and Pardieta Drains; Hartley Slough; Merced River, Bear, Black Rascal, and Owens Creeks; Arena, Atwater, and Livingston Canals; Buhach, Doane, Garibaldi, Harment, McCoy, and Wakefield Laterals.	B. Describe the types of receiving waters affected: River, Creek, Canal, Lateral, Drain, Slough
C. Regional Water Quality Control Board(s) where discharge sites are located List all regions where discharge of wastewater is proposed, i.e. Region(s) 1, 2, 3, 4, 5, 6, 7, 8, and/or 9: 5	

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? Yes No

If **Yes**, you should contact the Regional Water Board. This Order does not apply if there is no discharge to surface waters. If **No**, explain: Land disposal/reclamation of discharge is not always geographically or economically feasible.

VI. VERIFICATION

Have you contacted the appropriate Regional Water Board or verified in the appropriate Basin Plan that the proposed discharge will not violate prohibitions or orders of that Regional Water Board? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

VII. TYPE (Check All That Apply)

Electric Natural Gas Telephone Other:

VIII. POLLUTION PREVENTION PRACTICES PLAN INFORMATION

A. Company Name Merced Irrigation District		B. Contact Person Steve Dunn		
C. Street Address Where PLAN is Located 744 W. 20th Street		D. Title of Contact Person AGM - Engineering and Operations		
E. City Merced	F. County Merced	G. State CA	H. Zip Code 95344-0288	I. Phone (209) 726-7010

IX. DESCRIPTION OF DISCHARGE

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

Discharge of storm water that collects in vaults. Potential pollutants include petroleum hydrocarbons and suspended solids.

X. VICINITY MAP AND FEE

A. Have you included vicinity map(s) with this submittal? Yes No
 Separate vicinity maps must be submitted for each Region 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 or 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 directly responsible for gathering the information, the information submitted is true, accurate, and complete to the best of my knowledge and belief. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. In addition, I certify that the provisions of the permit, including the criteria for eligibility and the development and implementation of Pollution Prevention Practices, if required, will be complied with."

A. Printed Name:
Steve Dunn

B. Signature: *Steve Dunn* C. Date: 12/09/09

D. Title:
AGM - Engineering and Operations

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

UTILITIES 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:
		Fee Amount Received: \$	Check #:

ATTACHMENT B

Vault Sampling Plan

Vault Sampling Plan

Facility No.	Location	Facility Type	Sampling ID	Size
V115	Gallo Dr. and Winton Pkwy., Livingston	Utility Vault	1144124	4' x 6'
V139	Spinnaker Dr. and Outrigger Dr., Atwater	Utility Vault	1144123	4' x 8'
V1078	Everson Ct. and Arrow Wood Dr., Merced	Utility Vault	1144121	5' x 5'
V1227	Foothill Dr. and "G" St., Merced	Utility Vault	1144122	4' x 8'
V1440	"M" St. and Barclay Way, Merced	Utility Vault	1144120	6' x 12'

ATTACHMENT C

Case Study Sampling Results

Handwritten mark

CASE STUDY SAMPLING RESULTS

Facility No.	Location	Date Sampled	Sample ID	TPH-g with BTEX (mg/L)	TPH-d (mg/L)	TPH-motor oil (mg/L)	pH	TSS (mg/L)
V115	Gallo Dr. and Winton Pkwy., Livingston	8/3/2009	1144124	ND	ND	ND	8.2	ND
V139	Spinnaker Dr. and Outrigger Dr., Atwater	8/3/2009	1144123	ND	0.13	ND	8.0	ND
V1078	Emerson Ct. and Arrow Wood Dr., Merced	8/3/2009	1144121	ND	0.052	ND	8.0	9.0
V1227	Foothill Dr. and "G" St., Merced	8/3/2009	1144122	ND	0.072	ND	8.2	ND
V1440	"M" St. and Barclay Way, Merced	8/3/2009	1144120	ND	0.083	ND	8.0	ND

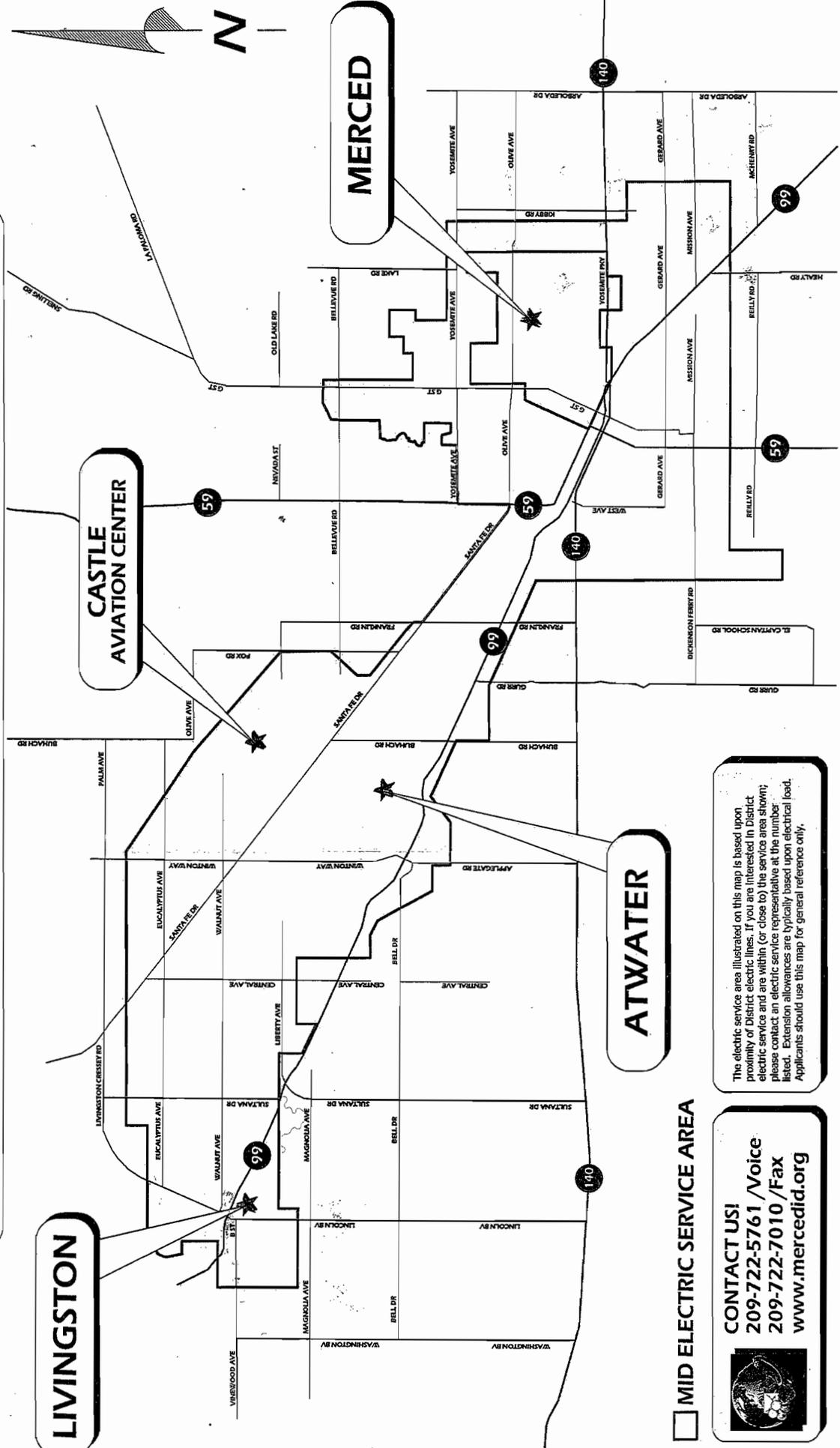
Note: In lieu of sampling for oil and grease, Castle Analytical Laboratory analyzed samples for total extractable petroleum hydrocarbons.

ATTACHMENT D

Map of MeID Service Territory

Reds

MERCED IRRIGATION DISTRICT MID ELECTRIC SERVICE AREA MAP - 2008



LIVINGSTON

CASTLE AVIATION CENTER

MERCED

ATWATER

MID ELECTRIC SERVICE AREA

CONTACT US!
 209-722-5761 /Voice
 209-722-7010 /Fax
www.mercedid.org

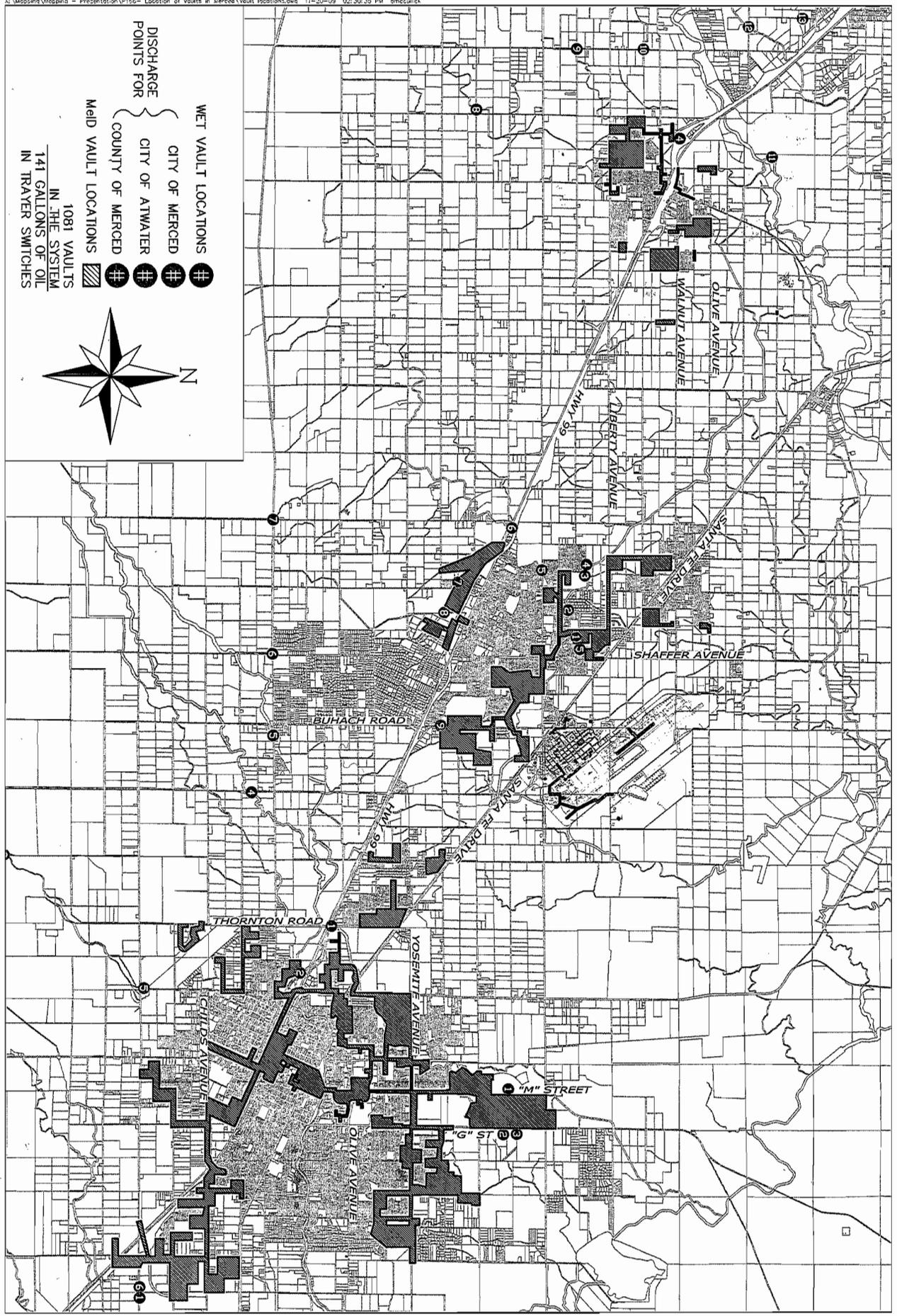
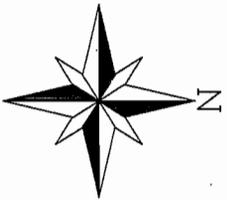
The electric service area illustrated on this map is based upon proximity of District electric lines. If you are interested in District electric service and are within (or close to) the service area shown; please contact an electric service representative at the number listed. Extension allowances are typically based upon electrical load. Applicants should use this map for general reference only.

ATTACHMENT E

Map of Underground Network

WET VAULT LOCATIONS
 CITY OF MERCED
 CITY OF ATWATER
 COUNTY OF MERCED

DISCHARGE POINTS FOR
 COUNTY OF MERCED
 1081 VAULTS IN THE SYSTEM
 141 GALLONS OF OIL IN TRAYER SWITCHES



Sheet:
1 OF 1

Scale:
NTS

MID
MERCED IRRIGATION DISTRICT
 ELECTRIC SERVICES
 Phone: (209) 722-5761 Fax: (209) 724-7010
 744 W.20th Street P.O. Box 2288 Merced, Ca 95341

Filed by: _____ Date: _____
 Drawn by: _____ Date: _____
 Checked by: _____ Date: _____

**LOCATION OF WET VAULTS
 STORM WATER DISCHARGE POINTS**

CALIFORNIA

P-166

ATTACHMENT F

Utility Vault Discharge Procedure

MERCED IRRIGATION DISTRICT

Utility Vault Discharge Procedure

1.0 PURPOSE

The purpose of this procedure is to provide direction on the monitoring of water discharges from MeID-owned utility vaults.

2.0 SCOPE

This manual covers all MeID vaults and similar underground enclosures where MeID removed water and discharges it to a storm water drain.

3.0 REFERENCE

NPDES General Permit CAG90002, Discharges by Utility Companies to Surface Waters

4.0 RESPONSIBILITIES

The Spill Coordinator is responsible for implementing the provisions of this policy and ensures that there is compliance with requirements of the NPDES Permit. It is the responsibility of the Spill Coordinator to conduct the annual monitoring that is required by the permit, and to submit that information to the RWQCB.

5.0 APPLICABILITY

This procedure is applicable to all manual discharges of water from underground vaults to storm drain systems.

This procedure does not apply to the discharge of water to land, sanitary sewer, and combined sanitary and storm water sewer systems. This procedure does not apply during emergencies.

6.0 PROCEDURE

MeID will follow the following procedure to discharge water from a vault to a storm drain.

6.1. Prior to Discharge

MeID will obtain a sample of water from the vault or manhole using a clean white bucket.

MeID will examine the water for the presence of the following:

- Visible tar;
 - Increase in turbidity of more than 20% above background levels in receiving waters;
 - Unusual Discoloration; and
 - Unusual odors, such as solvents, petroleum products, or sewage.
- If any of the above is present, do not discharge to a storm drain.
- Contact the oil spill cleanup firm and request that they pump the vault or manhole into a tanker truck. If sewage is present, call the City of Merced (209) 385-6800, the City of Atwater (209) 357-6300, the City of Livingston (209) 394-8044, or Merced County (209) 385-7601 and request that the sewage be removed.

- Do not attempt to work in or pump water from vaults contaminated with sewage or petroleum hydrocarbons (i.e. solvents, gasoline, paint, diesel, fuel, etc.) until personnel contact the Spill Coordinator to provide guidance.

6.2. Completion of the Underground Vault Water Management Checklist

The checklist consists of five sections to determine if it is safe to discharge water from the underground vault.

6.2.1. Checklist Section I

Record the date, time, vault number, estimated water depth, and indicate if there has been a recent rain (within the last 48 hours).

6.2.2. Checklist Section II

If the answers to all of the questions in Section II are no, then proceed to Section III of the Underground Vault Water Management Checklist.

If the water shows excess turbidity (more than 20% above background levels in receiving waters) and the answers to all the other questions in Section II are no, the water may be discharged to land or filtered through waddles. If the answer to any of the other questions in Section II is yes, do not pump and contact the Spill Coordinator for assistance in removing the water.

6.2.3. Checklist Section III

Determine if there is an oil sheen on the water prior to completing Section III. If there is an oil sheen on the water, MeID may remove the water from the vault if the oil layer is not disturbed and not released into the storm drain. If it is necessary to remove the remaining water, contact the oil spill cleanup firm so they can remove the water for you.

If there is no oil sheen on the water then MeID may pump the water into the storm drain.

6.2.4. Checklist Section IV

Observe the water as it is flowing into the storm drain and record all observations.

6.2.5. Checklist Section V

The supervisor will provide a signature in Section V regardless of whether crews could pump water into the storm drain or not.

7.0 ANNUAL SAMPLING AND REPORTING

MeID will collect and report annual sampling data in a Self-Monitoring Report (SMRs) to the RWQCB by the 20th day of March for the preceding calendar year. MeID will submit the initial case study as the first annual report. At any time during the term of this permit, the State Water Resources Control Board or the RWQCB may notify MeID to submit electronically SMRs using the State Water Board's California Integrated Water Quality System (CIWQS) Program website (<http://www.waterboards.ca/gov/ciwqs/index.html>). In addition, the U.S. EPA may request a Discharge Monitoring Report (DMR), which shall be completed and submitted on the date specified by this request.

7.1. Sampling

MeID will conduct sampling in accordance with the following procedures.

7.1.1. Parameters

The NPDES permit requires that MeID sample and analyze up to five representative vaults, manholes, and other underground structures for the following:

- Total Petroleum Hydrocarbons (TPH)
 - TPH as Gasoline (TPH-g) – Report Benzene, Ethylbenzene, Toluene, and Xylene
 - TPH as Diesel (TPH-d)
- Oil and Grease
- pH
- Total Suspended Solids (TSS)

In lieu of sampling for oil and grease, Castle Analytical Laboratory analyzed samples for total extractable petroleum hydrocarbons.

7.1.2. Sampling Locations

MeID sampled the following vaults, manholes, and underground structures:

- Vault 115 located at Joseph Gallo Dr. and Winton Pkwy., Livingston
- Vault 139 located at Spinnaker Dr. and Outrigger Dr., Atwater
- Vault 1078 located at Everson Ct. and Arrow Wood Dr., Merced
- Vault V1227 located at Foothill Dr. and "G" St., Merced
- Vault V1440 located at "M" St. and Barclay Way, Merced

7.1.3. Sampling Methodology

All samples are grab samples. MeID will lower a white plastic bucket into the underground structure and capture a sample of the water. MeID will pour the sample into one-liter amber glass bottles. Two sample bottles per location are required for TPH, oil and grease, pH, and TSS analysis. MeID will affix a label to the bottle indicating sample number, date, and sampler's initials. MeID will place the samples in a cooler on ice. No preservative is required. MeID will deliver the samples to the laboratory immediately upon completion of the sampling.

MeID will also obtain and analyze a duplicate sample from one of the locations and a field blank from one location for the parameters listed in Section 7.1.1.

While taking the sample in the white bucket, MeID personnel will write down their observations about the water in the Underground Vault Water Management Checklist.

MeID will complete a chain of custody for the sampling. In addition, MeID will complete the Underground Vault Water Management Checklist for each location where they obtain the samples.

7.1.4. Reporting

MeID will submit a report on the sampling results to the RWQCB by the 20th day of March for the preceding calendar year. The report will consist of a cover letter conveying the analytical results and checklists. In addition, the analytical results will have a cover sheet with the following statement:

**MERCED IRRIGATION DISTRICT
(Year) ANNUAL REPORT
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 managed the system or those persons directly responsible for gathering the information, the information we 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.

Signature

Date

AGM - Engineering & Operations

