IMPERIAL IRRIGATION DISTRICT'S
DRAIN WATER QUALITY IMPROVEMENT PLAN

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Prepared by and for
Imperial Irrigation District
Resources Planning and Management

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1.1 INTRODUCTION

The Imperial Irrigation District (IID) delivers approximately 3.1 million acre-feet of raw Colorado River water to seven incorporated cities, three unincorporated communities, and nearly 500,000 acres of agricultural land in the Imperial Valley. This irrigation water is conveyed into the Valley by way of the All-American Canal. In conjunction with an irrigation network consisting of more than 1600 miles of canals, IID operates and maintains an agricultural drainage system consisting of more than 1400 miles of surface drains. These drains were designed to collect surface and subsurface discharge waters from the Valley's agricultural fields and convey them to the Salton Sea, either directly, or through the New and Alamo Rivers.

Water from sources other than agriculture are also transported by IID's drains and the New and Alamo Rivers into the Salton Sea. These sources include storm water flows, municipal wastewater treatment plant effluent, groundwater from the east and west mesas, and industrial effluent discharges. Highly contaminated waters from Mexico (five-year average of 150,000 acre-feet per year) enter the Imperial Valley via the New River. All of the aforementioned discharge sources contribute to the degradation of water quality within IID drains.

The State of California's Water Quality Assessment document, adopted by the State Water Resources Control Board on May 18, 1992 and by the California Regional Water Quality Control Board, Colorado River Basin – Region 7 (Regional Board) on January 18, 1994, classified the Alamo River, New River, and Salton Sea as water bodies impaired by agricultural nonpoint sources.

On December 21, 1993, the Regional Board's Executive Officer sent a letter to IID requesting "accelerated action to address degraded water quality conditions in Imperial Valley drainage ways". In a letter of response dated January 26, 1994, IID provided the Regional Board with a tentative time schedule for implementation of a proposed "Drain Water Quality Improvement Plan" (DWQIP). On April 6, 1994, the Regional Board responded with a letter addressing elements of concern they considered relevant to the preparation of a DWQIP. Through a cooperative effort of Regional Board and IID staff, and input from the April 6, 1994 letter, a DWQIP was prepared by IID.

On November 17, 1993 the Regional Board adopted Resolution No. 93-145 which approved the 1993 Water Quality Control Plan, Colorado River Basin – Region 7 (Basin Plan). This Basin Plan was subsequently approved by the State Water Resources Control Board on February 17, 1994 (Resolution No. 94-18). The California Office of

Administrative Law approved the adoption of the 1993 Basin Plan on August 3, 1994. The current Basin Plan includes amendments adopted by the Regional Board through March 2014 and supersedes the previous Plan. The Porter-Cologne Water Quality Control Act states that basin plans consist of Beneficial Uses, Water Quality Objectives and an Implementation Program for achieving water quality objectives. The Implementation Program is required to include:

- A description of the nature of actions which are necessary to achieve the water quality objectives, including any recommendations for appropriate action by an entity;
- A time schedule for actions to be taken;
- A description of surveillance to be undertaken to determine compliance with the objectives.

The Regional Board adopted an updated Clean Water Act Section 303(d) list in 2015, which identifies the water quality of the Alamo River, New River, Imperial Valley agricultural drains, and Salton Sea as being impaired by discharges of wastes from nonpoint sources, primarily of agricultural origin. These impairments are due to elevated levels of one or more constituents that do not support the designated beneficial uses that the Regional Board has identified for these water bodies, including contact and non-contact recreation, warm freshwater habitat, wildlife habitat, freshwater replenishment, and preservation of rare, threatened, or endangered species. Alamo River impairments include suspended silt, pesticides, and selenium. New River impairments include suspended silt, pesticides, nutrients, and several other impairments that are discharged from a combination of industrial point sources, wastewater, and out-of-state sources. Imperial Valley agricultural drain impairments include suspended silt, pesticides, and selenium. Salton Sea impairments include nutrients and salinity. Nonpoint source pollution in this region also originates from sources other than agriculture including, but not limited to, abandoned mines, stormwater runoff, boating activities, alterations to land (e.g. urban development), and animal production activities.

In order to improve the water quality of impaired surface waters (i.e. streams, rivers, lakes, and bays) that do not meet water quality objectives, the Federal Clean Water Act requires states to develop Total Maximum Daily Loads (TMDLs). A TMDL is the amount of a particular material that a water body can absorb while remaining safe for people and wildlife. Water quality standards, which are comprised of beneficial uses and water quality objectives, are established in the Basin Plan.

1.2 REVISED DWQIP 2004-2015

A Sedimentation/Siltation TMDL for the Alamo River was adopted by the Regional Board on June 27, 2001, by the State Water Resources Control Board on February 19, 2002, the Office of Administrative Law on May 3, 2002, and the U.S. Environmental Protection Agency on June 28, 2002. In subsequent years, additional TMDLs for Imperial Valley waters have been adopted by the Regional Board, including the New River

Pathogen TMDL, the New River Sedimentation/Siltation TMDL, the Imperial Valley Drains Sedimentation/Siltation TMDL, the New River Trash TMDL, and the New River Oxygen TMDL. As a result of the Sedimentation/Siltation TMDLs, IID was required to revise the original DWQIP.

In September 2003, IID revised the DWQIP. The purpose of the revised DWQIP was to control and monitor water quality impacts caused by drain maintenance/dredging operations within the Alamo and New River and Imperial Valley drains.

From 2004 through 2015, monitoring occurred at fixed sampling sites on seven major and 18 minor Imperial Valley drains. Field measurements were collected (water temperature, pH, dissolved oxygen, electrical conductivity, and turbidity), and water samples collected and analyzed for general chemistry (TSS, turbidity, hardness, and alkalinity), as well as chemical species of nutrients (nitrogen, phosphorus, sulfur).

Since 2004, the IID has conducted routine monthly and quarterly water sampling events, and generated approximately 35,000 water quality data points. The water quality data collected by IID is a thorough record of conditions in a representative set of Imperial Valley drains. This monitoring program and the data generated from it can be utilized to verify that individual drains meet water quality standards, identify problematic areas, and to model and calculate the concentration of various chemical species.

1.3 DRAINSHEDS

Drainsheds were developed and incorporated into the updated DWQIP in an effort to more easily organize and differentiate the Imperial Valley's extensive drainage system. The term drainshed is used to describe a "watershed" that drains a portion of farmed land. In the Imperial Valley, the New River watershed is divided into the Upper New River (UNR), Central New River (CNR), and Lower New River (LNR) drainsheds. The Alamo River watershed is divided into the Upper Alamo River (UAR), Central Alamo River (CAR), Lower Alamo River (LAR), Central Drain System (CDS), Rose Drain System (RDS), and Holtville Main Drain (HMD) drainsheds. Imperial Valley drains that discharge directly to the Salton Sea comprise the Salton Sea (SS) drainshed. The organization of all Imperial Valley drains within these ten drainsheds helps to identify problematic areas and focus water quality control efforts on a more manageable scale.

1.4 REVISED DWQIP PROBLEMATIC AREAS

Analysis of the TSS data collected through the revised DWQIP identified problematic areas. The latest Annual Monitoring Report for the revised DWQIP (2015 data) showed that of the twenty-five drains monitored (seven major, and 18 minor drains), twenty of the drains are achieving the final Sediment TMDL Numeric Target of 200 mg/L, three are nearing the goal (over by 34 mg/L or less), and the remaining two are more

significantly impaired (over by greater than 34 mg/L, but less than 100 mg/L). The more significantly impaired drains are located in Alamo River drainsheds (Rose Drain, Central Alamo, and Upper Alamo drainsheds).

1.5 CONDITIONAL WAIVER

On January 15, 2015, the Regional Board adopted Order No. R7-2015-0008, which is a Conditional Waiver of Waste Discharge Requirements for agricultural dischargers and drain maintenance operators in the Imperial Valley. This Conditional Waiver Order applies to irrigated agricultural lands and drains in the Imperial Valley. As a result of this Order, IID is required to update the DWQIP.

On March 23, 2015 the IID and Imperial County Farm Bureau submitted a joint Declaration of Intent to develop, implement, and co-lead a Coalition Group Compliance Program. IID agreed to perform the Surface Water Monitoring and Reporting Program for the Joint Coalition to satisfy Conditional Waiver Requirements, including the collection and analysis of samples from the IID's major drains as well as the New and Alamo Rivers.

1.6 UPDATED DWQIP AND SWMRP IMPLEMENTATION CRITERIA

The purpose of the updated DWQIP and Surface Water Monitoring and Reporting Program (SWMRP) is to specify the actions that IID will take to help monitor and improve the quality of water within Imperial Valley watersheds in an attempt to protect the beneficial uses of waterbodies that receive agricultural drainage flows.

As a result of the Conditional Waiver Order, Attachment B Section I.B states that the updated DWQIP include:

- A description of the drainage system, including problematic areas
- Description of drain cleaning and maintenance activities, including:
    a. criteria to be used to determine the mechanism(s) to be used to clean and/or maintain a particular drain, and an organizational chart identifying the key-decision makers for implementing said criteria and their contact information; and
    b. proposed or existing MPs to avoid impacts on sensitive resources
- Description of the monitoring protocols to be used to:
    a. assess effectiveness of MPs; and
    b. track overall efficacy of criteria used to determine the means used to clean and/or maintain the drains
- Proposed protocols for tracking and reporting the drains that are cleaned/maintained, the date(s) when maintenance/cleaning took place, an estimate of the total miles of drains maintained/cleaned, and the means used

for cleaning and maintaining the drain (e.g., excavator, pesticide application, biological cover, etc.).

Additionally, Conditional Waiver Order, Attachment B Section I.C states that the updated SWMRP include:

- Description of the drainshed areas to be monitored and their key features, including major tributary drains and problematic areas (e.g., areas with drains prone to unusual erosion)
- Description of receiving waters, including key hydrologic features (e.g., drop structures, seasonal flow, problem areas/segments, etc.)
- Proposed water quality monitoring program for receiving waters, including sample locations for the Alamo and New Rivers and a representative number of major and minor drains, sampling frequency, constituents and impairments of concern (i.e., nutrients, pesticides, silt, toxicity, selenium), baseline constituents (TDS, temperature, dissolved oxygen, pH), analytical methods, and results
- Proposed reporting program to determine overall effectiveness of drain MPs and overall water quality improvements and problematic areas
- Description of compliance with applicable TMDL requirements

The updated DWQIP will initiate a water quality monitoring program that will not only satisfy the requirements in the current Basin Plan, but will also satisfy the additional requirements of the Conditional Waiver Order.

1.6.1 MAINTENANCE OPERATIONS

The IID has contracted with the federal government to deliver Colorado River water to Imperial Valley water users. By federal decree, IID is allowed to convey discharge waters from agricultural land to the Salton Sea and use it as a drainage sink. In 1928, a Presidential Order (Executive Order of Withdrawal, Public Water Reserve No. 114 Ca no. 26, February 23, 1928) designated lands within the Salton Basin below elevation 220 feet below mean sea level as storage for wastes and seepage from irrigated lands in the Imperial Valley. In order to sustain a drainage system that will convey these discharge waters from the fields to the Sea, drain and river maintenance is required.

A typical drain maintenance operation uses an excavator to remove excess silt and vegetation from drains, and to grade the waterway so that water flows to the tributary drains and rivers. The excavator lifts accumulated silt and excess vegetation from the bottom of the drain channel, and deposits it on the drain banks.

Drain maintenance operations contribute to the re-suspension of the drain's bottom sediments into the water column. However, accumulation of sediments within a drain due to deposition from fields, bank failures, and several other factors, will eventually block flow completely if the sediment is not removed as it becomes problematic. It is the intent

of the IID to ensure that soil-disturbing maintenance operations are not conducted unnecessarily by its staff. At the same time, the IID must conduct any drain cleaning operations that are required in order to manage a properly functioning drainage system.

IID uses a number of MPs from the categories shown in Table 1 to avoid impacts on sensitive resources. The list is not exclusive; IID may determine what MP or combination of MPs is appropriate, regardless of whether the MP is listed. Proper selection and implementation of MPs is fundamental to water quality protection and enhancement.

Table 1: Drain Maintenance Management Practices

Drain Maintenance Checklist A checklist is completed prior to scheduling drain maintenance. The checklist documents the conditions that warrant the cleaning or maintenance activity. The goal of the checklist is to reduce unnecessary drain cleaning.
Vegetation Management Plan A Vegetation Management Plan was developed and implemented by the IID to train/advise heavy equipment operators, division supervisors, and weed spray contractors on the proper control of vegetation within drains. Implementation of the Plan is supervised by a certified pest control advisor, who advises/trains drain operators/supervisors/contractors to utilize the most effective herbicides and effective application rates, remove nuisance vegetation, and maintain beneficial vegetation. These efforts help to maintain drain bank stability, reduce suspended sediment caused by drain maintenance operations, and reduce unnecessary drain cleaning.
Excavator-mounted GPS Units GPS units allow excavator operators to conduct drain cleaning operations from upstream to downstream. As water flows downstream it is filtered by nuisance vegetation before the vegetation is removed. Also, the high level of accuracy afforded a GPS unit helps to eliminate over-excavation.
Regulation No. 39 Enforcement This tailwater regulation is a requirement that water users maintain a properly functioning tailwater box to prevent erosion at the tail end of their field and in the receiving drain.
On-Farm Conservation Verification Program *(formerly, Tailwater Education Program)* Through this program, delivery and tailwater monitoring are conducted to ensure that excessive tailwater discharge does not occur during irrigation events. Tailwater boxes are inspected to verify that they are in good repair, and must be replaced if they do not meet required IID specifications.

In order to prevent unnecessary soil-disturbing activities from being conducted, the IID has implemented scheduling and site evaluation procedures for drain maintenance operations. Key to this procedure is completion of a form (checklist) that the IID has created which assists maintenance supervisors in the evaluation of site conditions prior to the scheduling of drain maintenance activities. This checklist (an example is included in Appendix II) establishes a structured drain evaluation protocol and documents the conditions that warrant the scheduling or postponement of a cleaning or maintenance

activity. For example, if a supervisor inspects a drain and observes sufficient reason for cleaning, the reasons that justify the cleaning are listed on the form and the drain is scheduled for maintenance. If a supervisor inspects a drain but finds insufficient reason for cleaning, the lack of necessity is noted and maintenance will not be conducted until the operation is warranted. An organizational chart which identifies the key IID personnel responsible for coordination and implementation of drain maintenance activities has been developed and attached in Appendix III.

1.6.2 ASSESSING OVERALL EFFECTIVENESS OF DRAIN MANAGEMENT PRACTICES, WATER QUALITY IMPROVEMENTS, AND PROBLEMATIC AREAS

Tracking the overall efficacy of the MPs used to clean and/or maintain the drains will be accomplished by compiling a list of drain maintenance activities and comparing the extent of drain maintenance activities year after year in conjunction with water quality monitoring data.

It is anticipated that a reduction in maintenance operations will correspond to a reduction in TSS levels and other sediment bound constituents in the drains and rivers. The use of on-farm MPs by growers will further enhance the IID's ability to reduce the number of cleaning operations that are conducted because lower TSS levels and other sediment bound constituents from a grower's tailwater discharge will result in less sediment deposition into the drainage system. With the implementation of the IID maintenance checklist, utilization of drain maintenance MPs, and grower-implemented on-farm MPs, reduced pollutant concentrations should be apparent in the water quality monitoring program.

Problematic areas can also be found in the maintenance records and water quality data. Increased maintenance operations may correspond to elevated TSS levels and levels of sediment-bound constituents in the drains and rivers. Increased pollutant concentrations should be apparent in the water quality monitoring program.

1.6.3 SURFACE WATER MONITORING AND REPORTING PROGRAM

Monitoring will be used to assess the effectiveness of drain maintenance and on-farm MPs. Environmental samples will be collected monthly, semiannually, and annually, and analyzed to obtain concentration levels for constituents of concern. Sampling locations include a background location, major drains, as well as sites on the New and Alamo Rivers at strategic locations in relation to drainsheds identified within the Basin Plan.

1.6.3.1 MONTHLY WATER QUALITY MONITORING

In order to determine the quality of water within a waterbody, samples must be collected and analyzed to obtain concentration levels for constituents of concern. To determine water quality trends over a period of time, such as a reduction in TSS levels, routine samples must be collected at designated sampling locations and at regular time intervals. The Regional Board has assessed the water quality of the Valley's rivers and drains and determined the frequency and type of analysis that should be conducted as part of the DWQIP. The following table lists the constituents that are to be monitored at each sample site on a monthly basis:

Table 2: Monthly Water Sampling Constituents and Methods

Constituent	Analysis Method[1]	Units
Total Phosphorus	SM 4500 P B E	mg/L
Total Nitrogen	calculation	mg/L
Ammonia-N	SM 4500 NH_3 H	mg/L
Nitrate-N	EPA 300.0	mg/L
Selenium	USEPA 200.7	µg/L
TSS	SM 2540 D	mg/L
E. Coli	SM 9223	MPN
BOD	SM 5210 B	mg/L
TDS	SM 2540C	mg/L
Hardness (CaCO3)	USEPA 130.2	mg/L
Alkalinity	USEPA 310.1	mg/L
Chloride	SM 4500-Cl	mg/L
Sulfate	USEPA 375.1	mg/L
pH	Field Measurement	pH Units
Temperature	Field Measurement	℃
Dissolved Oxygen	Field Measurement	mg/L
Flow	Field Measurement	cfs

[1]SM = Standard Method; EPA = Environmental Protection Agency Method

1.6.3.2 SEMIANNUAL WATER PESTICIDE MONITORING

Semiannual (twice yearly) pesticide sampling will be conducted in late March/early April, and late October/early November. Samples will be analyzed for organophosphorus and pyrethroid pesticides. The following table lists the constituents that are to be monitored at selected sample sites on a semiannual basis:

Table 3: Semiannual Water Sampling Constituents and Methods

Constituent	Analysis Method	Units
Chlorpyrifos	USEPA 8141A	µg/L

Constituent	Analysis Method	Units
Diazinon	USEPA 8141A	µg/L
Malathion	USEPA 8141A	µg/L
Bifenthrin	USEPA 8081A	µg/L
Cyfluthrin	USEPA 8081A	µg/L
Cypermethrin	USEPA 8081A	µg/L

1.6.3.3 ANNUAL WATER TOXICITY MONITORING

Annual (once yearly) toxicity sampling will be conducted in late October/early November. The following table lists the toxicity tests that are to be completed on samples collected from selected sample sites on an annual basis:

Table 4: Annual Toxicity Sampling Species and Methods

Test	Species	End Points	Duration	Method
Chronic	Fathead minnow (Pimephales promelas)	Larval survival and growth	7 days	USEPA 821-R-02-013 (Chronic)
Chronic	Water flea (Ceriodaphnia dubia)	Survival and reproduction	6-8 days	USEPA 821-R-02-013 (Chronic)
Chronic	Green algae (Raphidocelis subcapitata)	Growth	4 days	USEPA 821-R-02-013 (Chronic)

Municipal wastewater treatment plants are mandated to conduct chronic toxicity testing as a component of their state permitted Waste Discharge Requirements. Regional Board and IID staff agreed that a redundancy of sampling efforts conducted by two independent monitoring programs at the same location would not be an effective use of available resources. Therefore, it will be deemed acceptable for the IID to present toxicity results that have been collected by a WDR permitted facility as part of the DWQIP monitoring program. Specifically, chronic toxicity results collected by the City of Calexico may be presented as representative of the New River at Evan Hewes Highway, and chronic toxicity results collected by City of Holtville may be presented as representative of the Alamo River at Drop 10. In the event that chronic toxicity results are not available from one or both of the city wastewater facilities, the IID will conduct its own toxicity sampling from the New River at Evan Hewes Highway and Alamo River at Drop 10. Chronic toxicity samples will be collected by the IID from the New and Alamo River Outlets on an annual basis.

1.6.3.4 ANNUAL FISH TISSUE MONITORING

Annual (once yearly) fish tissue sampling will be conducted in late October/early November. The following table lists the constituents that are to be analyzed on trophic level 4 fish tissue samples from selected sample sites on an annual basis:

Table 5: Annual Fish Sampling Constituents and Methods

Constituent	Analysis Method	Units
Chlordane	USEPA 8081BM	ng/g ww
DDT	USEPA 8081BM	ng/g ww
Dieldrin	USEPA 8081BM	ng/g ww
PCBs	USEPA 8082 M	ng/g ww
Toxaphene	USEPA 8081BM	ng/g ww

The collection, preservation, and holding times of all samples will be in accordance with U.S. EPA-approved procedures. All analyses will be conducted by a laboratory certified by the SWRCB's Division of Drinking Water (Formerly the California Department of Health Services' Drinking Water Program, Environmental Lab Accreditation Program (ELAP)) to perform such analyses.

IID will retain records of all monitoring information, including all calibration and maintenance records for a period of at least five years from the date of the sample, measurement, or report. Records of monitoring information will include:

- The date, exact location, and time of sampling or measurement;
- The name(s) of the person(s) who performed the sampling or measurement;
- The date(s) analyses were performed;
- The name of the person(s) who performed the analyses;
- The results of the analyses.

1.6.3.5 SITE SELECTION

A monitoring program must include a representative number of sample locations in order to determine if all areas within a watershed are meeting water quality objectives. The sites that have been selected for this DWQIP include a background location on the All-American Canal (AAC), major drains, which are designated as such by reason of highest average annual flow as determined in the previous DWQIP, as well as sites on the New and Alamo Rivers that the drains discharge into.

The River sampling locations are carried over from existing TMDL compliance programs designed to address sediment and organophosphate impairments in Imperial Valley waters. For these TMDLs the sampling locations are at the bottom of the drainsheds. This arrangement continues our commitment to comply with existing TMDL requirements, and helps to identify problematic areas in the Valley.

The background site, seven major drains, and Rivers will be sampled on a monthly basis. Samples will be collected semiannually from the Alamo River at Evan Hewes Highway, from the New River at Drop 10, and the outlets of the New and Alamo Rivers,

and analyzed for organophosphate and pyrethroid pesticides. Samples will be collected annually from the Alamo River at Evan Hewes Highway, from the New River at Drop 10, and the outlets of the New and Alamo Rivers, and analyzed for chronic toxicity. Fish tissue samples will be collected annually at the river outlet sites. All data collected is considered critical to this project.

All routine water quality monitoring will be evaluated on an annual basis. Sites with repeated negative or consistently recurring results will be considered for replacement, elimination, or sampling on a less frequent basis.

In order to determine the pollutant contribution from a specific drain, the source water must be tested so background concentrations can be subtracted from the total value. Background concentration refers to the amount of pollution that is found in the water before it is received by the water user. Once the background concentration is determined, this value can be removed from the total pollutant load leaving only contributions from those that discharge into the drain. The following table identifies the sample sites which have been selected according to the criteria just described. For a map of the sample site locations, see Appendix I.

Table 6: Sample Site Locations

Source Water (sampled monthly)

Site Name	Discharge Point
All-American Canal Drop 4	Growers (background concentration)

Major Drains (sampled monthly)

Site Name	Discharge Point
Verde Drain	Alamo River
South Central Drain	Alamo River
Central Drain	Alamo River
Holtville Main Drain	Alamo River
Rose Drain	Alamo River
Greeson Drain	New River
Rice 3 Drain	New River

Rivers (sampled monthly)

Site Name	River
Evan Hewes Highway	New River
Drop 2	New River
Outlet at the Salton Sea	New River
Drop 10	Alamo River
Drop 8	Alamo River
Drop 6A	Alamo River

Drop 6	Alamo River
Drop 3	Alamo River
Outlet at the Salton Sea	Alamo River

Rivers (sampled semiannually/annually)

Site Name	River
Evan Hewes Highway	New River
Outlet at the Salton Sea	New River
Drop 10	Alamo River
Outlet at the Salton Sea	Alamo River

Drain water samples will be collected from the last accessible drain weir before the drain outfalls to a river or directly to the Salton Sea. River water samples will be collected at locations upstream of a disturbance (upstream of drop structures, bridges or culverts). Source water samples will be collected from the cat-walk located immediately upstream of the All-American Canal Drop 4 generation plant inlet.

1.6.4 REPORTING

No later than 60 days following the Executive Officer's approval of the final draft of the revised DWQIP, the IID will submit to the Executive Officer a Quality Assurance Project Plan (QAPP) prepared in accordance with *Requirements for Water Quality Assurance Project Plans for Environmental Data Operations*, EPA QA/R-5, 1994 for the revised DWQIP.

No later than 30 days following the Executive Officer's approval of the QAPP, the IID will implement the QAPP and submit quarterly and annual monitoring reports to the Executive Officer. The quarterly reports will be submitted on the 15th day of the month following the calendar's quarter and will include a summary of the results for the previous three months. The annual reports will be submitted on March 1, and will summarize the year's data, quality control reports, and any trends in the data. The first annual report will be submitted on March 1, 2017.

No later than March 1, 2017, and on an annual basis thereafter, the IID and ICFB will submit to the Colorado River Basin Water Board an Annual Report for the Coalition Group as described in Item I of Attachment B in the Conditional Waiver Order. The annual report is for the previous calendar year (January 1 through December 31).

No later than March 1, 2017, and on an annual basis thereafter, the IID will submit to the Colorado River Basin Water Board an Annual Report summarizing its drain operation and maintenance activities and MPs. The reports must specify the drains that were maintained, the means used to maintain them, the date when maintenance took place, the

main issue/problem that triggered its maintenance, and MPs used to prevent and/or address water quality problems.

No later than October 28, 2016, and on an annual basis thereafter, the IID will submit to the Executive Officer information[1] on agricultural dischargers. This information will include the following details listed by canal and gate:

Owner(s), Owner(s) Mailing Address, Tenant(s), Tenant(s) Mailing Address, APN, legal description, net acreage, tailwater box latitude/ longitude, and the drain associated with the tailwater box.

[1] The information provided to the RWQCB as per this requirement should not be considered public and is provided pursuant to California Government Code Section 6254.16. Imperial Irrigation District makes no representation as to the accuracy of the information and the user is cautioned to perform an independent evaluation of the information.

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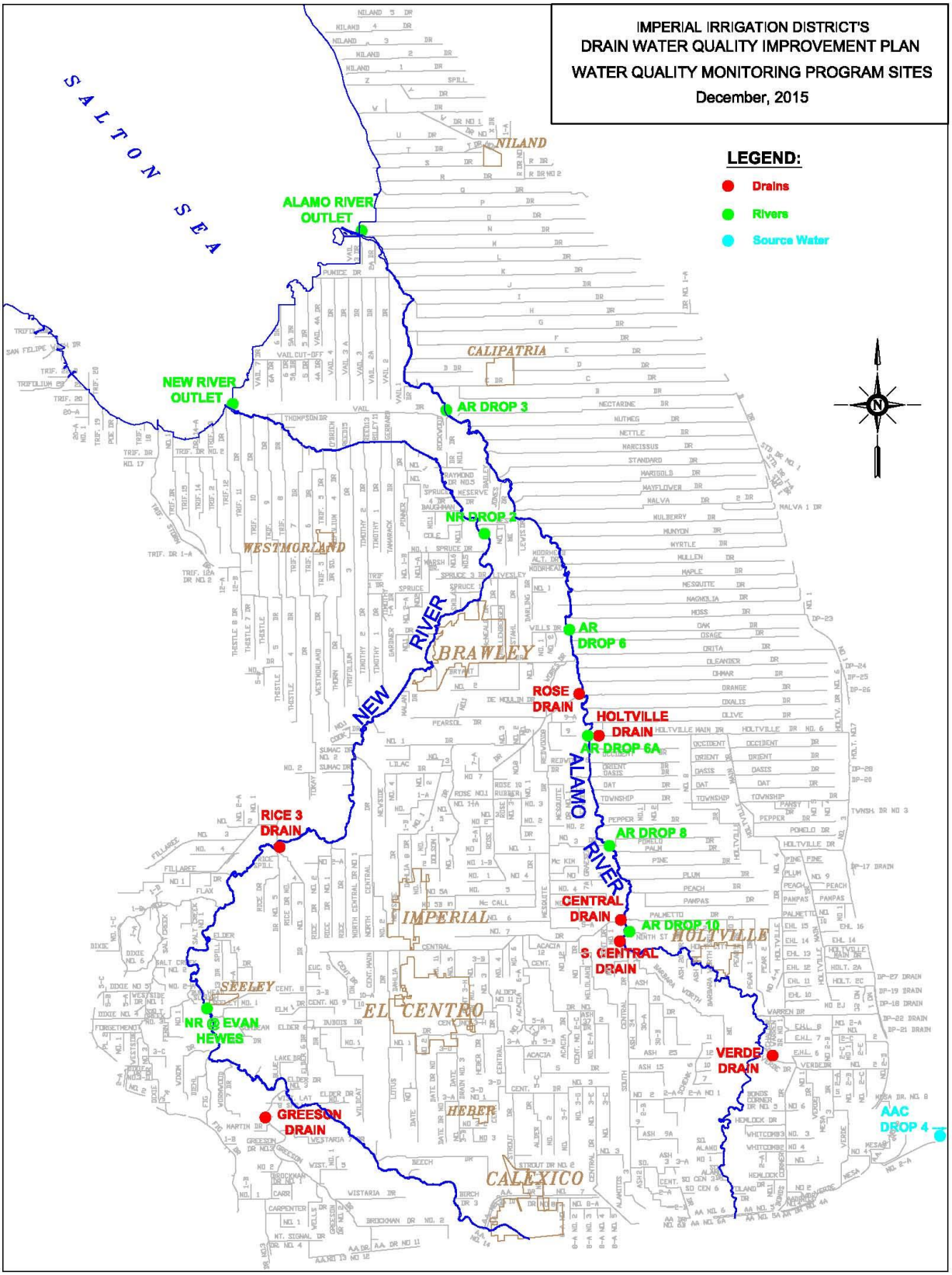
APPENDIX I, PROJECT LOCATION AND SAMPLE SITE MAP



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APPENDIX II, DRAIN MAINTENANCE CHECKLIST

Drain Cleaning Inspection Form

Drain Name: Fern

Date: 4/13/2005 **Completed by:** Fred Pumphrey

Action Taken: IID personnel inspection, action will be taken

Re-Visit or Scheduled Cleaning: May

Structure Functional Location

Starting: D-Fer-Sec01

Ending: D-Fer-Sec03

Total Distance: 2.41 Rating: 1=Immediate 2=High 3=Medium 4=Low

Drain Cleaning Justifications	Cause By	Type of Cleaning	Priorty Rating	Date of Last Cleaning
1. Restrictions Due To:				
A) Embankment Failures				
B) Wash Out and Sand Bars				
C) Excessive Weed Growth	seasonal	excavating	2	
D) Excessive Sediment	irrigation	excavating	2	
2. Reasons for Depth Increase:				
A) Tile Line Outlet Submerged				
B) Re-grading Flow-line				

Comments:

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APPENDIX III, DRAIN MAINTENANCE ORGANIZATIONAL CHART