

Imperial Valley Canal Water Study

Community Workshop
August 2018



Agenda

Introduction to Project (20 min)

Discussion (15 min)

Comments (15 min)

Closing (5 min)



Goals of the Meeting

Share information

Express concerns



Ground Rules

In order to have a productive dialogue, we need some ground rules.

- **Respect** others' right to hold opinions & beliefs that differ from your own
- Challenge the ***idea*** not the person
- Be courteous: **don't interrupt** while others are speaking
- Step up, step back

Introduction to the Study

Study Partners - Who We Are



University of Washington



California State Water Resources Control Board



California Office of Environmental Health Hazard Assessment



California Environmental Protection Agency

Comite Civico Del Valle, Inc.



Background

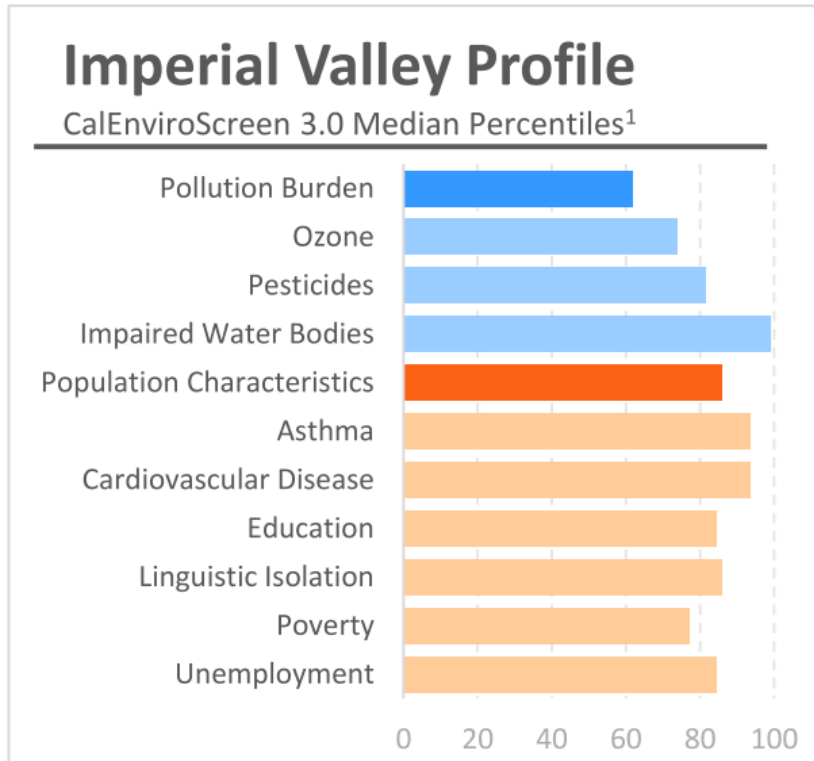


Figure 1. CalEnviroScreen percentiles demonstrate the cumulative pollution burden and susceptibility traits of Imperial County. Aggregate data is based on median census tract data.

Communities in the Imperial Valley are among the top 15% of environmentally disadvantaged communities in California (1).

Imperial Valley has high rates of poverty, emergency department visits due to asthma and cardiovascular disease, and other characteristics that make residents vulnerable to the adverse effects of contaminants

(1) California Office of Environmental Health Hazard Assessment. "CalEnviroScreen 3.0," January 2017. <https://oehha.ca.gov/calenviroscreen>.

Background

As of March 2018, approximately 2,679 households in Imperial Valley use canal water for domestic purposes, including bathing, dishwashing, and oral hygiene. (2, 3, 4)

The canal water is untreated. Canal water customers are required to purchase bulk or bottled water for drinking & cooking. (5)



(2) Imperial Irrigation District. "Safe Drinking Water Program Accounts." Geospatial Data. Imperial, California: Imperial Irrigation District, March 2018.

(3) Charlton, Stephen, Senior Program Manager, Agricultural Water Section, Imperial Irrigation District. Personal Communication, February 8, 2018.

(4) Charlton, Stephen, Senior Program Manager, Agricultural Water Section, Imperial Irrigation District. Email Communication, February 8, 2018.

(5) Safe Drinking Water Act, Title 42 § 300f(4) United States Code (1974).

Background

In September, 2017, News Deeply reported that residents have expressed that the water has a foul odor, stains clothing, and has caused rashes in infants. (6)

Similar concerns have been expressed by residents to CCV staff during community outreach efforts.



Regulatory Framework

- In 1993, the Ninth Circuit Court *Imperial Irrigation District vs. United States Environmental Protection Agency* decided that IID is not a “public water system” according to the Safe Drinking Water Act (SDWA). (7)
- In 1996, Congress passed an amendment to SDWA, which redefined “public water system” and “connection.”



Regulatory Framework

“Public water system:

- a system for the provision to the public of water for human consumption through pipes or other constructed conveyances,
- if such system has at least 15 service connections or regularly serves at least 25 individuals.” (SWDA Section 1401(4)(A))

A connection...shall not be considered a connection, if

- alternative water that meets drinking water regulations is provided for residential or similar uses for drinking and cooking.
(SWDA Section 1401(4)(B)(i))

Therefore, IID is not considered a public water system because it does not have 15 or more service connections.

Existing Data on Canal Water

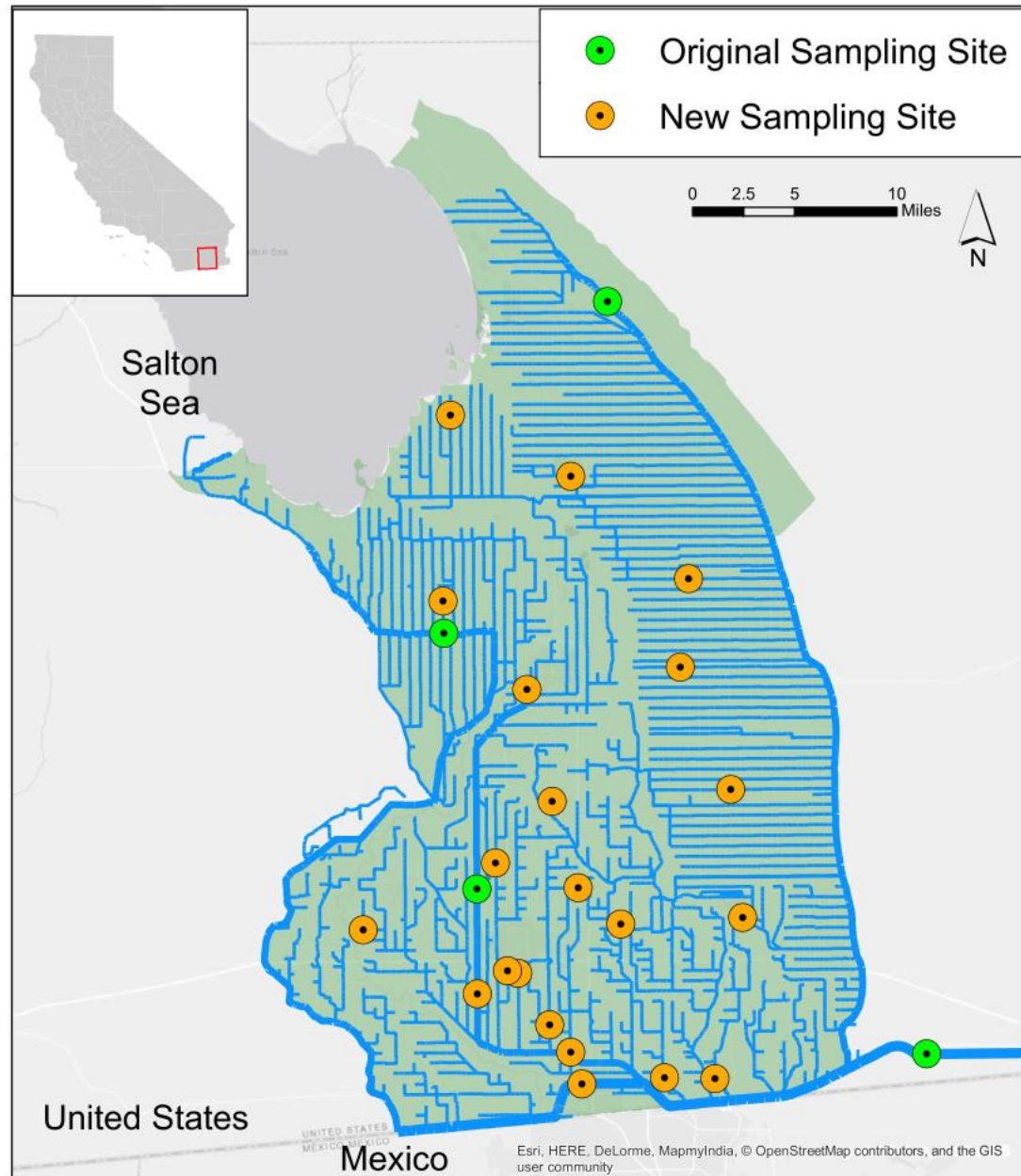
Joint Monitoring Plan between Imperial Irrigation District & public water systems that receive canal water.

- Annual sampling
- Analytes: Title 22 Drinking Water Contaminants
- Pre-2018: 4 monitoring locations
 - Locations: All American Canal, East Highline Canal, Central Main Canal, Westside Main Canal
- 2018: 21 additional monitoring locations
 - Locations: public water system intakes

IID JMP Monitoring Sites

The majority of sampling sites are upstream of residents that use canal water.

Water quality results from JMP sites may not be representative of water used by residents.



Monitoring Locations for the IID Joint Monitoring Program (JMP)

Author: Kori VanDerGeest, University of Washington. Date Published: 8/30/2018.
Data Sources: Imperial Irrigation District, CA State Water Resources Control Board

Existing Data on Canal Water

Original Monitoring Sites - 2016 Sampling Results

- Contaminants that **exceeded** the state standard for drinking water (MCL) are secondary drinking water contaminants.
- Secondary drinking water standards are established for aesthetic purposes

Exceedances of Drinking Water Standards in Imperial Canals

Contaminant	MCL (µg/L)	Westside Main (µg/L)	East Highland (µg/L)	Central Main (µg/L)	AAC Drop 4 (µg/L)
Aluminum	200	420	310	150	ND
Iron	300	490	440	190	ND
Turbidity	5 NTU	17 NTU	0.9 NTU	7.2 NTU	8.9 NTU

MCL: Maximum contaminant limit

ND: Not detectable

NTU: Nephelometric Turbidity Unit

Existing Data on Canal Water

Original Monitoring sites - 2016 Sampling Results

- Five primary drinking water contaminants that were detected:
 - Barium
 - Manganese
 - Uranium
 - Glyphosate
 - 2,3,7,8-TCDD

- The concentrations of these contaminants may increase downstream

Existing Data on Canal Water

Sampling Date: April 2018 (Initial sampling for new sites)

Pscore	Water System	Facility	Constituent	Result	MCL	DLR	Trigger	Unit
1300638-001	CalEnergy-Vulcan Power Plant	Vail Lat 4 - Gate 416A	Dichloromethane	0.97	5	0.5	0.5	µg/L
1310004-001	City of El Centro	(Primary) South Date - Gate 20B	Glyphosate	28	700	25	25	µg/L
1310003-001	GSWC - Calipatria	C-West Lateral - Gate 38	Dichloromethane	0.75	5	0.5	0.5	µg/L

Results indicate detections for two volatile organic chemicals (VOCs):

- Dichloromethane: an industrial solvent
- Glyphosate: an herbicide

Source: Sterchi, Sean, District Engineer, Division of Drinking Water, California State Water Resources Control Board. "Imperial Irrigation District, System No. 1310014. Imperial Valley Joint Monitoring Program Update." Letter. July 18, 2018.

Goals of Project

Information gathering

- How do people use canal water?
- What is the quality of the water used by residents in Imperial?

Public outreach

- Educate residents about
 - Water quality data
 - The appropriate uses of water
 - IID's discount water program



Project Steps

- Community mapping with domestic canal water users
- Community survey with domestic canal water users
- Sample canal water
- Education campaign



Use of Data

CalEnviroScreen (CES)

- CES is a mapping tool developed by OEHHA
- Tool used to distribute state funds for environmental health issues
- Data gap in Imperial Valley → loss of funds

Academic Publication

- Explore how to conduct community-engaged research & citizen science



Discussion