

319 Projects in the Valley

Lower Rio Grande Valley Development Council
Watershed Protection Plan Meeting
Wednesday, July 15, 2020

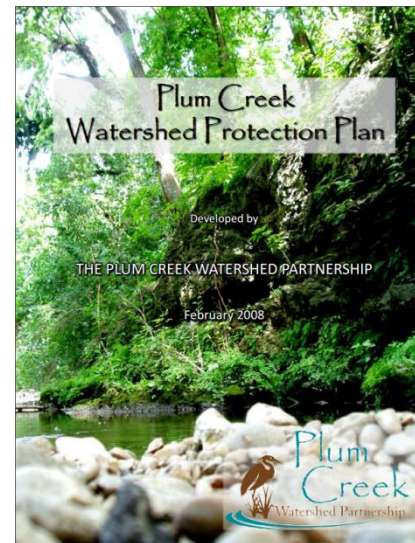


Agenda

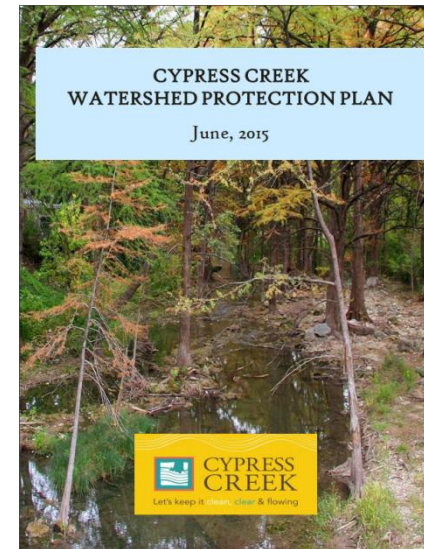
1. Welcome and introduction
2. Project Overviews- (5 slides
3. Lower Laguna Madre Brownsville Ship Channel
 1. Phase 1- Status
 2. Phase 2- Status
4. North and Central Watershed
5. Questions

Watershed Protection Plans

Meets the Nine Elements listed in EPA's
Handbook for Developing Watershed Plans



Restoration

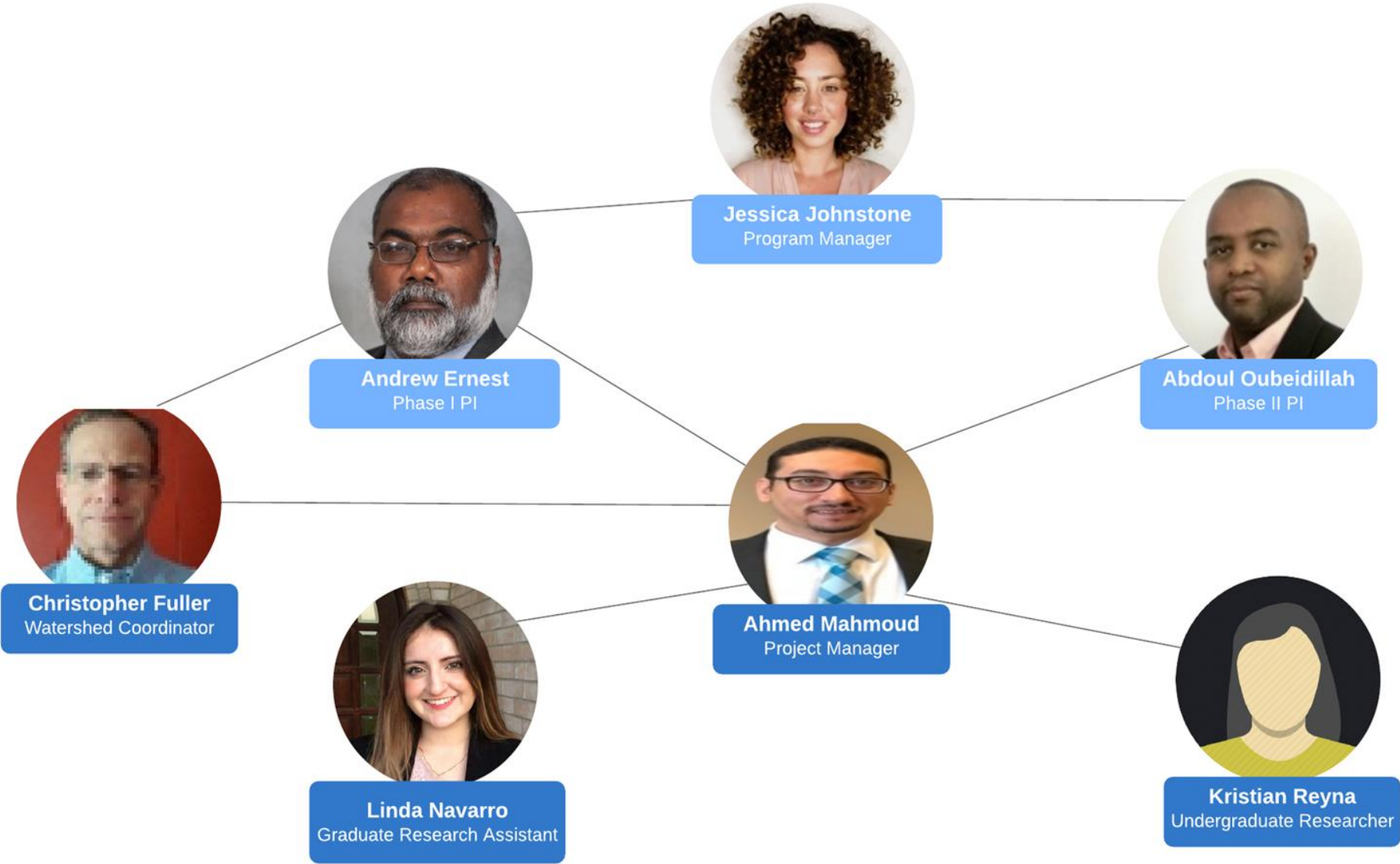


Protection

EPA's 9-Elements

- A- Identify **causes** and **sources** of pollution
- B - Estimate **pollutant loading** into the watershed and the **expected load reductions**
- C - Describe **management measures** that will achieve load reductions and targeted critical areas
- D - Estimate amounts of **technical and financial assistance** and the relevant authorities needed to implement the plan
- E - Develop an **information/education** component
- F - Develop a project schedule
- G - Describe the interim, measurable milestones
- H - Identify indicators to measure progress
- I - Develop a monitoring component

Project Team



LLMBSC WPP Steering Committee



Carol Vasquez
Environmental Coordinator
City of Brownsville



Tony Reisinger
County Extension Agent
Texas Sea Grant



Andrew Ernest
Professor
University of Texas Rio
Grande Valley



David A. Garza
Commissioner, Cameron County
Chairman



Jessica Johnstone
Program Manager
Texas Commission on
Environmental Quality



Joe Hinojosa
General Manager
Santa Cruz Irrigation District
#15



Kim Jones
Professor
Texas A&M University -
Kingsville



Boyd Blihovde
Manager
Laguna Atascosa Wildlife
Preserve



Ronnie Ramirez
Planner
Texas State Soil and Water
Conservation Board



Celina Gonzales
City Manager
City of Primera



Willy Cupit
Coastal Ecologist
Texas Parks & Wildlife
Department



Elisa Velador
Educator
Texas Wildlife Association



Sergio Vasquez
United States Fish & Wildlife
Service



Albert Barreda
General Manager
Cameron County Drainage
District #1



Blanca Davila
Director, Community &
Economic Development
Lower Rio Grande Valley
Development Council

2014 Integrated Report Water Quality Assessment

- Concern
- No Concerns or Impairments
- Impaired
- Concern
- Impaired
- No Concerns or Impairments
- Insufficient Data for Assessment

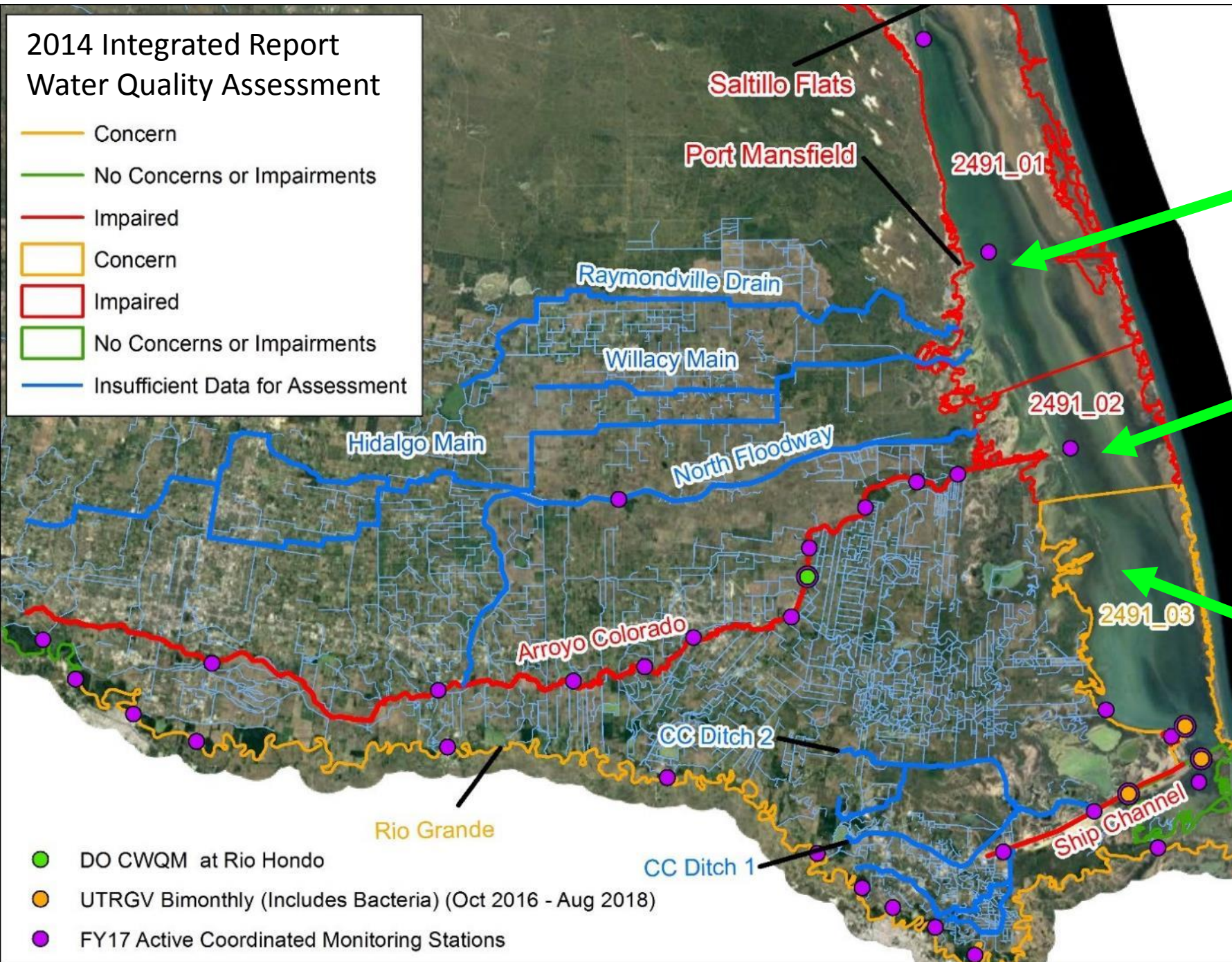
Laguna Madre (2491)

Low Dissolved Oxygen
Chlorophyll-a

Low Dissolved Oxygen
Bacteria
Ammonia
Nitrate
Chlorophyll-a

Low Dissolved Oxygen
Bacteria

- DO CWQM at Rio Hondo
- UTRGV Bimonthly (Includes Bacteria) (Oct 2016 - Aug 2018)
- FY17 Active Coordinated Monitoring Stations



LLM / BSC Subbasins

Primary Drainage Routes

Major Resaca Routes

Subbasin (Subwatershed)

Bahia Grande / Vadia Ancha

CCDD#1

Loma Alta

Lower Laguna Madre Subbasin

North Main Drain

Port Isabel

Port of Brownsville

Resaca del Rancho Viejo

Resaca de las Palmas

Resaca de los Cuates

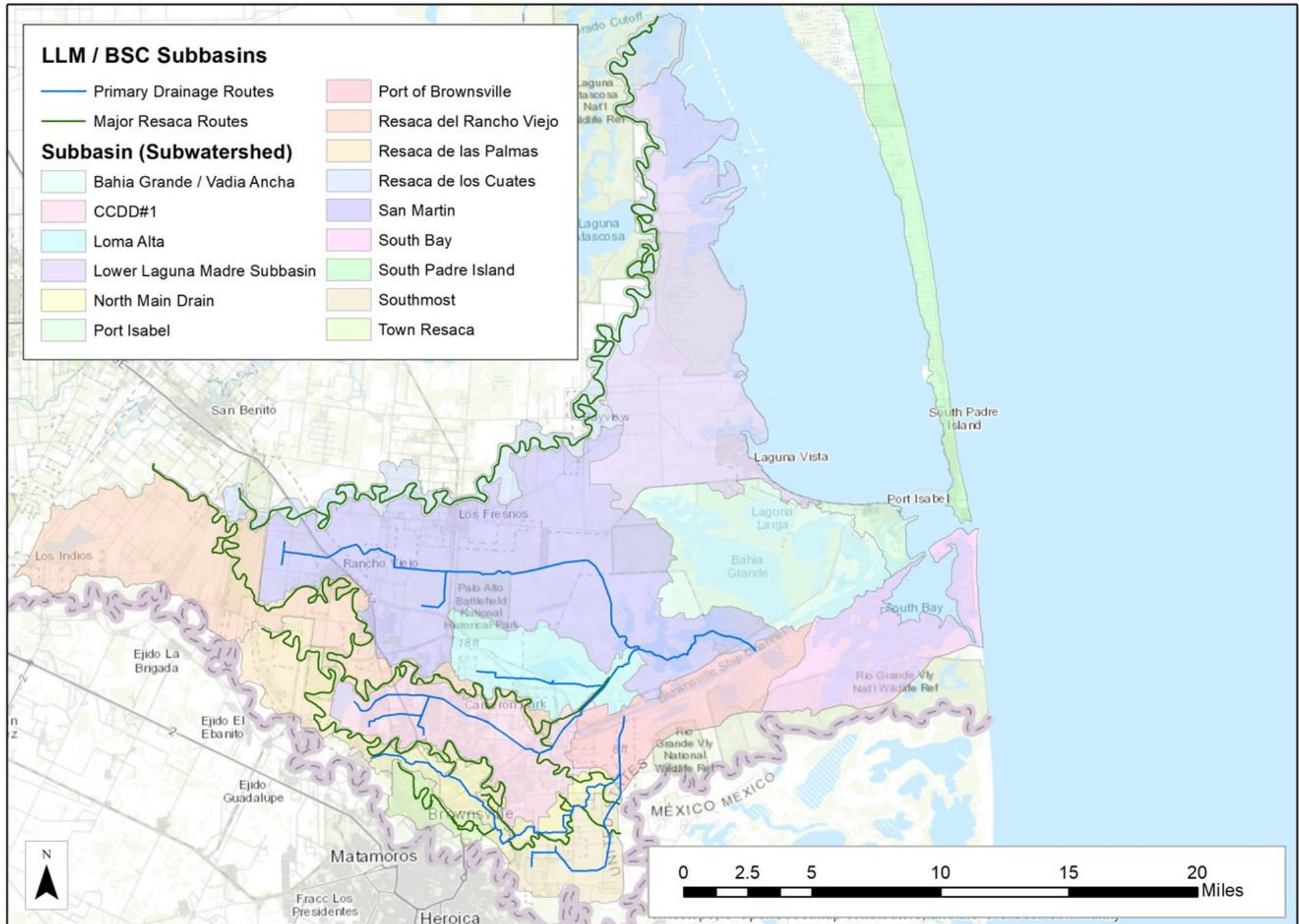
San Martin

South Bay

South Padre Island

Southmost

Town Resaca



Water Quality and Flow Data

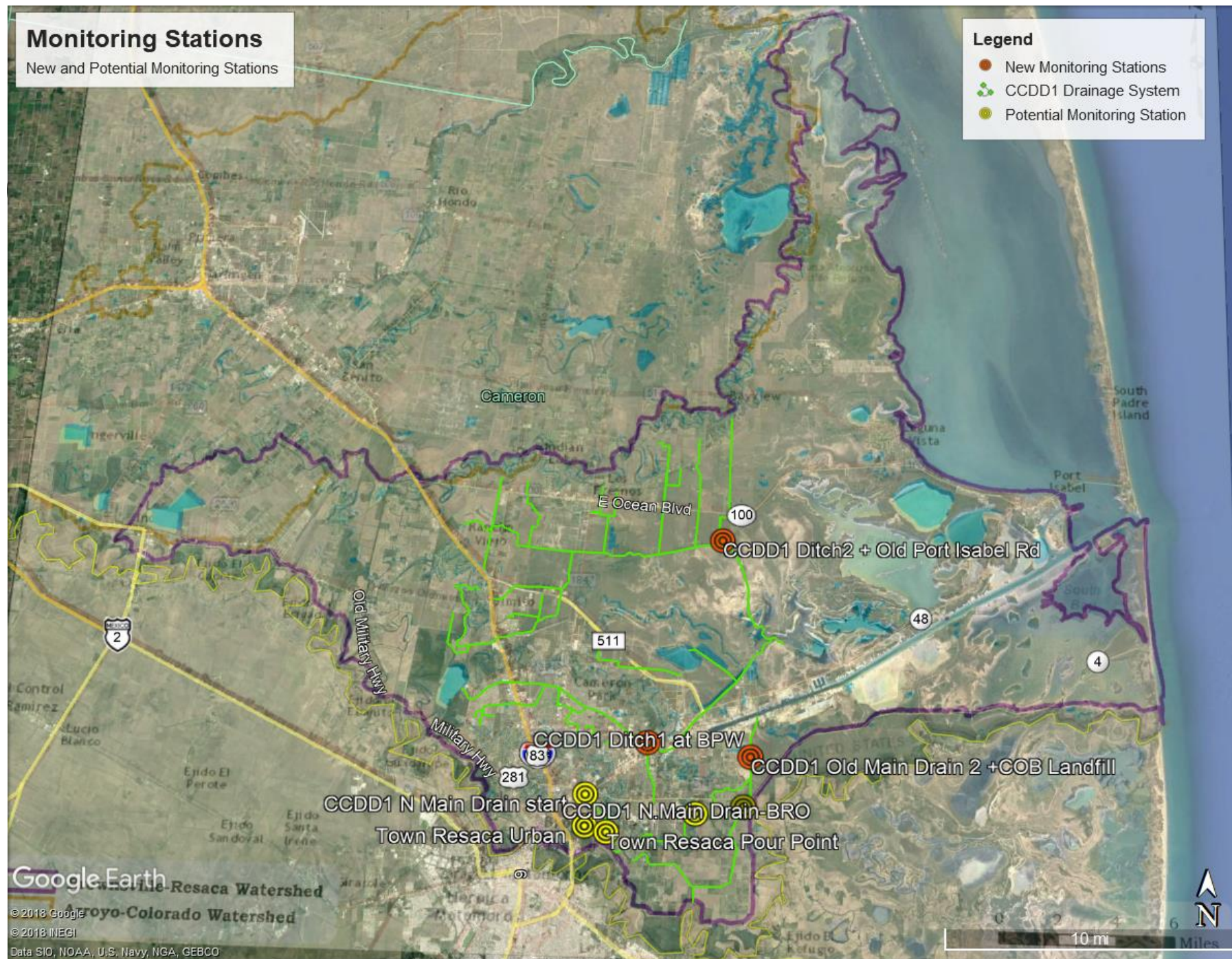
Site	Predominant Land Use	Status
CCDD1 Ditch No. 2 at the intersection with Old Port Isabel Rd. downstream of Bayview East lateral	Agriculture	Data Collection started summer 2019.
Ditch No. 1 at the Brownsville Public Works offices	Urban medium density	Data Collection started summer 2019
Old Main Drain 2 at the Brownsville Landfill	Agriculture and Urban	Data Collection started summer 2019

Monitoring Stations

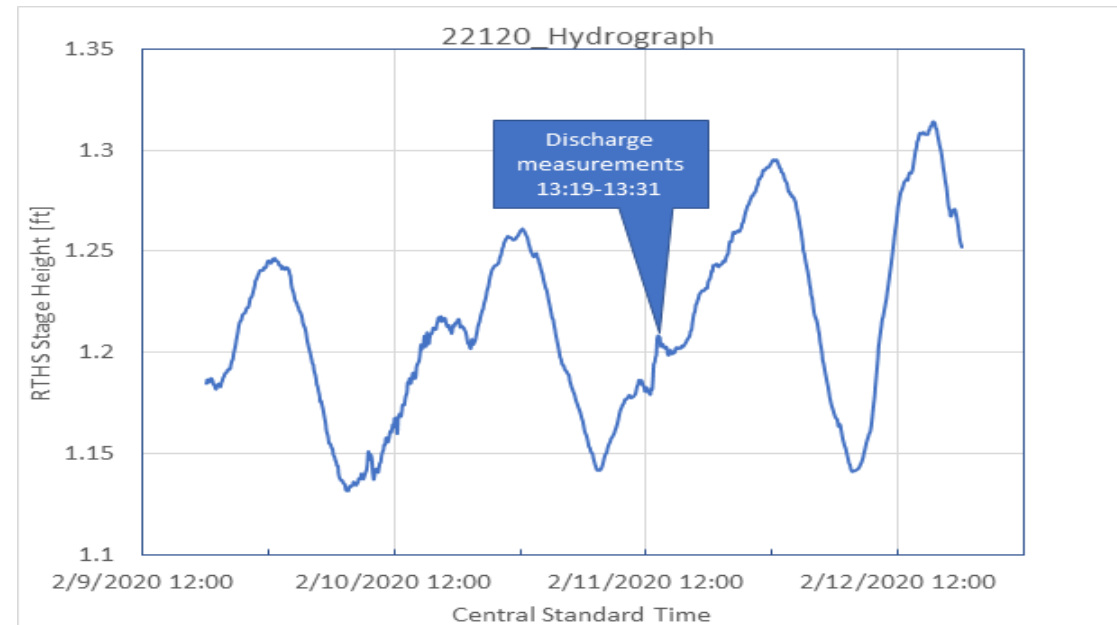
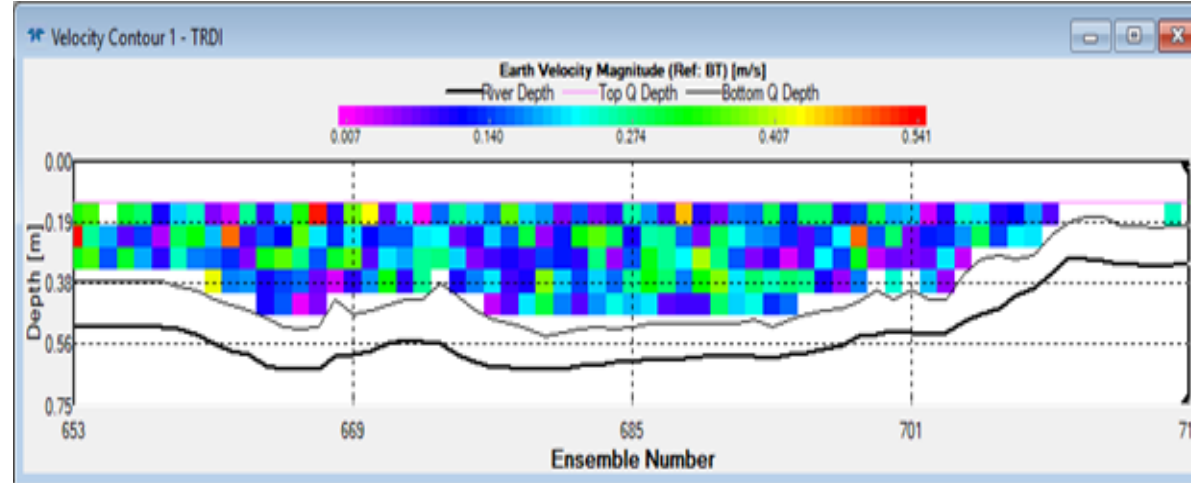
New and Potential Monitoring Stations

Legend

- New Monitoring Stations
- CCDD1 Drainage System
- Potential Monitoring Station

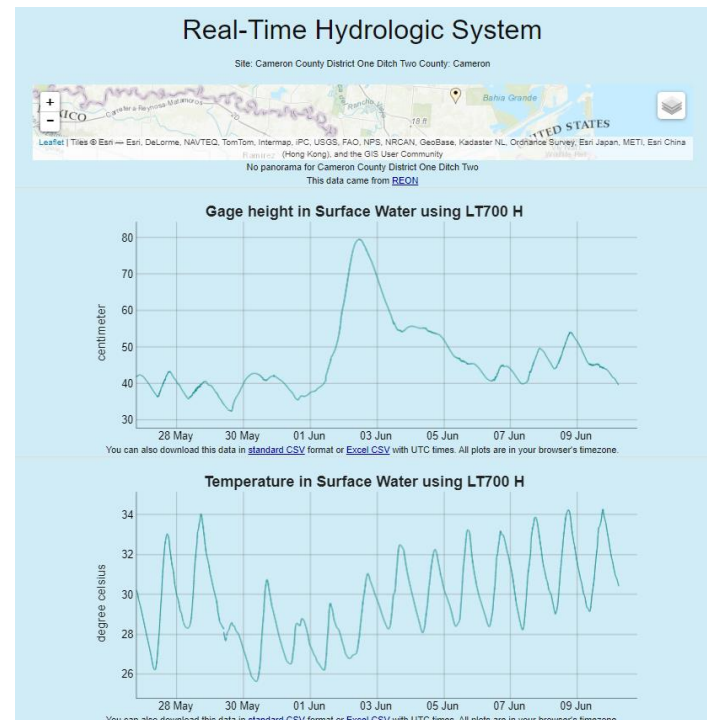


Data Collection



Continuous RTHS Measurements

1. River and Estuary Observatory Network (REON)-
<http://rths.us>
2. Real Time Hydrologic Station
 - a. Stations online in Feb (Prior to Q1 sampling event)
 - b. Continuous data at 5 minute resolution



Sampling Event

	Brownsville Public Works (22120)	Cameron County DD 1- Ditch #2 (22118)	City of Brownsville Landfill (22121)
Date	Feb. 11, 2020	Feb. 12, 2020	Feb. 12, 2020
Flow	0.25 m ³ /s	0.9 m ³ /s	0.2 m ³ /s
Gage Height	1.2 ft	0.84 ft	0.28 ft
Water Temp	25.5°C	17°C	18.2°C
SpC	6,808 uS/cm	12,128 uS/cm	6,026 uS/cm
D.O.	5.68 mg/L	7.72 mg/L	8.22 mg/L
pH	7.5	8.2	8.0
<i>E. coli</i>	<i>1120 CFU/100ml</i>	<i>648 CFU/100ml</i>	<i>980 CFU/100ml</i>
TKN	0.67 mg/L	2.2 mg/L	64 mg/L
NO ₂ +NO ₃	<i>12 mg/L</i>	<i>5.8 mg/L</i>	<i>1.1 mg/L</i>
Total-P	<i>2.9 mg/L</i>	<i>1.8 mg/L</i>	0.12 mg/L

Phase I : Grant Status

- Monitoring QAPP (Approved July 2019)
- RTHS (Real-Time Hydrological System) (Installed August 2019)
- Watershed Characterization Report (Approved September 19)
- 1st Sampling Event (February 2020)
- Data Uploaded SWQMIS (April 2020)
- Modeling and Geospatial QAPP (In progress)
- Steering Committee Meeting (June 2020)

San Martin Lake Monitoring

- It receives freshwater flow from 2 of the main 3 ditches in the LLM/BSC watershed and is connected to the Ship Channel and saltwater flows into the Lake daily.
- 6 domestic permitted wastewater outfalls and 1 groundwater desalination wastewater outfall with TPDES/NPDES permits that discharge 20.85 MGD into the lake.
- Lack of detailed water quality information on San Martin Lake and the various drainage networks.
- Second phase of funding from the CWA 319(h) program focuses on characterizing flows in/out of the Lake into the Ship Channel