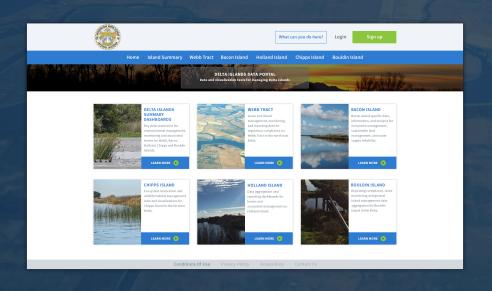


Proposal



- Develop a comprehensive data aggregation and management platform for Delta islands and levees
- Develop platform to support and automate regulatory compliance and reporting for island management
- Develop cyber infrastructure to support portions of California WaterFix
- ✓ Provide State with a platform and data reporting for demonstrating objectives for attaining the state's co-equal goals
- Facilitate collaboration between land owners, consultants, reclamation districts



Value of Island Management Platform

Management, monitoring and reporting topics include:

- Centralization of general island management data activity
- Management of Key Water Supply Reliability: Levee Management and Maintenance, Emergency Freshwater, Salinity Management
- Emergency Management Planning
- ✓ Habitat Restoration and Monitoring: Tidal Wetlands, Food Production, Flyways
- ✓ Monitoring Migration Pathways of Important Species: Salmon and Delta Smelt
- ✓ Regulatory Compliance and Reporting: Diversions (SB88), Water Quality
- ✓ Conservation
- Reducing Carbon Emissions
- ✓ Improve Air Quality
- ✓ California Water Fix





General Island Management

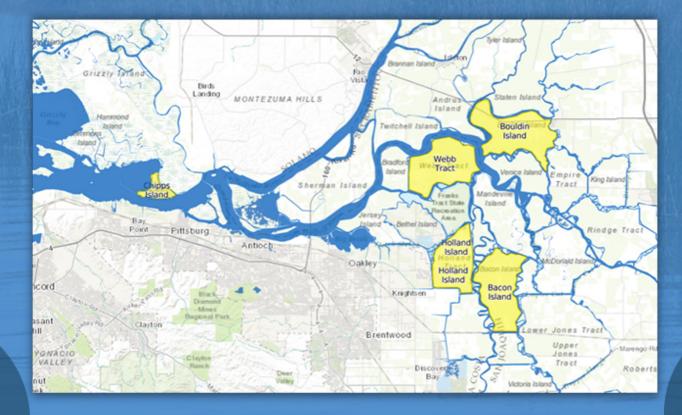
- Island Orientation
- Levee Monitoring
- Diversions and discharges to and from islands
- Flood protection
- ✓ Wildlife Habitat
- Water Supply and Quality
- Emergency Management and Planning





Island Background

- Bacon and Bouldin Island on proposed Delta Tunnels route
- ✓ Holland Island and Webb Tract help inhibit the inland migration of salinity
- Chipps Island could provide wildlife habitat with tidal wetland restoration
- ✓ All of the islands contain numerous points of diversion and discharge
- 4 of 5 islands purchased by MWD, excluding Chipps Island, are primarily used for agricultural purpose



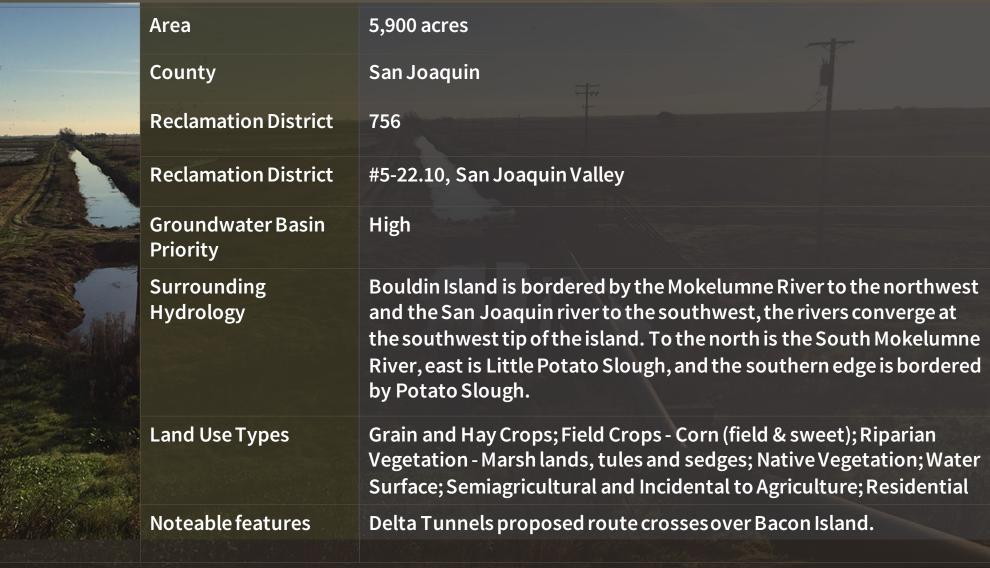




Bacon Island

	Area	5,400 acres
No.	County	San Joaquin San Joaquin
4	Reclamation District	2028
	Reclamation District	#5-22.15, San Joaquin Valley
	Groundwater Basin Priority	Medium
	Surrounding Hydrology	Old River borders the western edge; Middle River borders the eastern edge; Connection Slough borders the northern edge connecting the water between Old and Middle Rivers.
	Land Use Types	Field Crops (Including: Sunflowers, Corn (field and sweet), and Grain sorghum); Grain and Hay Crops; Idle (land not cropped the current or previous crop season, but cropped within the past three years); Barren and Wasteland; Native Vegetation; Water Surface; Semiagricultural and incidental to agriculture (farmsteads); Truck, nursery, and berry crops (including: Potatoes, melons, squash and cucumbers, asparagus); Industrial (fruit and vegetable canneries and food processing and storage and distribution)
	Noteable features	Delta Tunnels proposed route crosses over Bacon Island. Mokelumne Aqueduct pipeline lies to the south of Bacon Island
		SO TIAN WATER OF

Bouldin Island







Holland Island

	Area	4,250 acres
	County	Contra Costa Costa
	Reclamation District	2025
	Reclamation District	#5-22.15, San Joaquin Valley
	Groundwater Basin Priority	Medium
2	Surrounding Hydrology	Holland Island is bordered by Sand Mound Slough to the north and west. Rock slough borders the southern edge and the eastern edge is bordered by Old River on the southern half and Sheep Slough on the northern half.
	Land Use Types	Field Crops - Safflower and Corn (field & sweet); Grain and Hay Crops; Idle (Land not cropped the current or previous crop season, but cropped within the past three years); Riparian Vegetation (marsh lands, tules and sedges); Native Vegetation; Water Surface; Pasture (Mixed pasture); Urban; Commercial
NAME OF THE OWNER, OWNE	Noteable features	A portion of this island is not owned by MWD.





Webb Tract

Area	5,500 acres
County	Contra Costa
Reclamation District	2026
Reclamation District	#5-22.15, San Joaquin Valley
Groundwater Basin Priority	Medium
Surrounding Hydrology	The north and east edges of Webb Tract are bordered by the San Joaquin River, western edge is Fisherman's Cut, southern is bordered by False River, and the southeast corner is bordered by Old River.
Land Use Types	Field Crops - Safflower and Corn (field & sweet); Grain and Hay Crops; Idle (Land not cropped the current or previous crop season, but cropped within the past three years); Riparian Vegetation (marsh lands, tules and sedges); Native Vegetation; Water Surface; Pasture (Mixed pasture); Urban; Commercial
	The state of the s



Chipps Island

	Area	900 acres
	County	Solano
	Reclamation District	n/a
Black.	Reclamation District	#2-3, Suisun-Fairfield valley
	Groundwater Basin Priority	Very Low
	Surrounding Hydrology	Chipps Island is located in the west Delta and is within the Suisun Marsh legal boundary. Immediately to the northwest of the island is Honker Bay and to the south the water is considered to be part of Suisun Bay. The eastern edge of the island is bordered by Spoonbill Creek.
	Land Use Types	Native Riparian Vegetation; Water Surface
	Noteable features	Chipps Island is waterfowl habitat and was acquired with the intent of restoring tidal wetlands.
		CIAN WAYES



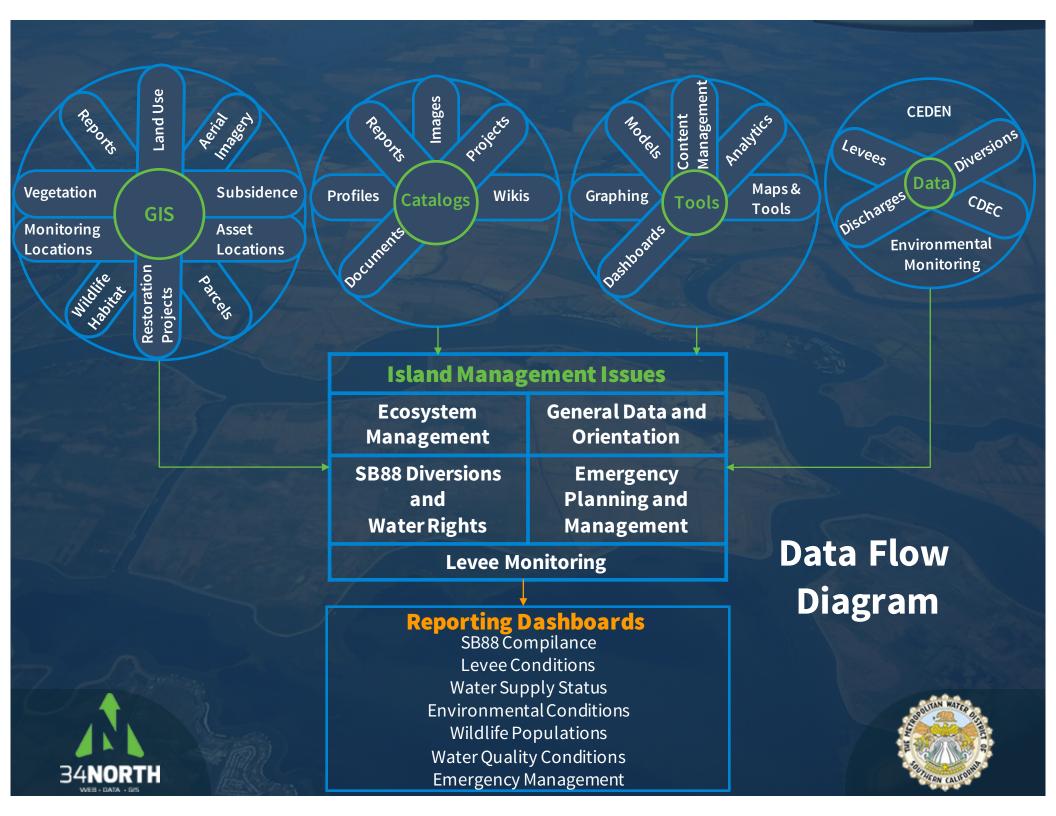


General Data – Island Orientation

Datasets				
*Land Use	*Vegetation	*Levees		
Diversion Locations	LiDAR	NAIP		
Parcels	Restoration Projects	Weather Forecasts		
*Geology and Soils	Subsidence	*Critical Habitats		
Asset Locations	*Flood Zones	*Wetlands		
*Hydrology features	*SWP and CVP	Discharges		
Monitoring Locations	Emergency Resources	*Fault Lines		
* = Data already acquired by 34 North				







Levee Management and Maintenance

- ✓ Levees are integral to maintaining freshwater supplies in California
- Levee function is a factor in flood management and planning
- Levees are subject to regulations and standards for asset and flood protection
- Maintenance is the responsibility of Reclamation District
- **✓ FEMAHMP**
- **✓ USACE PL 84-99**





Levee
Maintenance
and
Monitoring

US Army Corps of Engineers PL84-99

FEMA
Hazard
Mitigation
Planning

Levee Management Stakeholders

Delta Science Council Levee
Maintenance
and
Monitoring

Metropolitan Water District (Consultants)

Reclamation District Farmers and Residents of the Islands





Levee Monitoring

Key requirements for levee monitoring:

- ✓ Daily, weekly and monthly visual inspections
- Profile surveys with CORS GPS
- ✓ Piezometer and inclinometer readings
- ✓ Terrestrial 3-D scanning
- Aerial LiDAR and photogrammetry
- ✓ GIS analyses



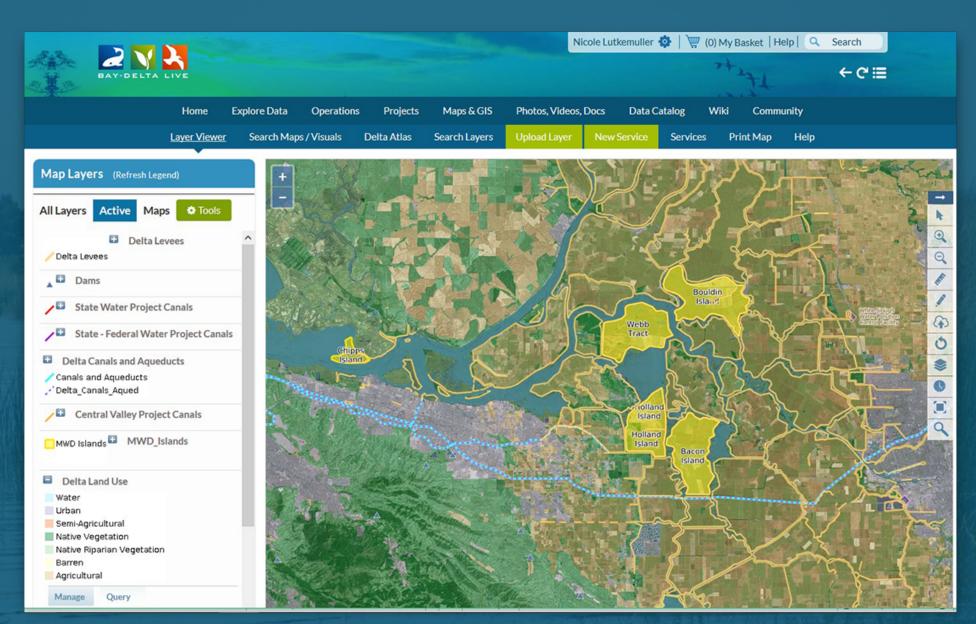


Plan Element	Dataset	Source	OpenNRM Application
Daily Visual Inspections	Images, Reports, Documents	Farmer, Leasee, Reclamation District, DWR, Army Corps	Catalog, Projects, Fillable Form, Compliance and Reporting Dashboard
Profile and Cross- sections Surveys	plan drawings	MWD	Catalog, Projects, Documents, Web Map,3-D model
Piezometers	Images, Reports, Excel	Farmer, Leasee, Reclamation District, DWR	Catalog, Projects, Fillable Form, Compliance and Reporting Dashboard, Data Analytics
Inclinometers	Images, Reports, Excel	Farmer, Leasee, Reclamation District, DWR	Catalog, Projects, Fillable Form, Compliance and Reporting Dashboard, Data Analytics
Survey Monuments and GPS CORS	GIS, Documents, Reports	Consultant?	Web Map, Catalog, Projects, Compliance and Reporting Dashboard, Data Analytics
Terrestrial 3D Scanning	Point Cloud Data, GIS, Imagery, Documents	MWD, Consultant	Web Map, Catalog, Projects, Compliance and Reporting Dashboard, Data Analytics, 3-D Models
Aerial LiDAR, Photogrammetry	Raster Imagery, GIS	DWR,MWD,Consultant	Web Map, Catalog, Projects, Compliance and Reporting Dashboard, Data Analytics, 3-D Models
Acres of Agricultural Land	GIS, Reports, Documents	DWR, Local jurisdiction, Land Owner	Web Map, Catalog, Projects, Compliance and Reporting Dashboard, Data Analytics,



Levee Data Use Cases

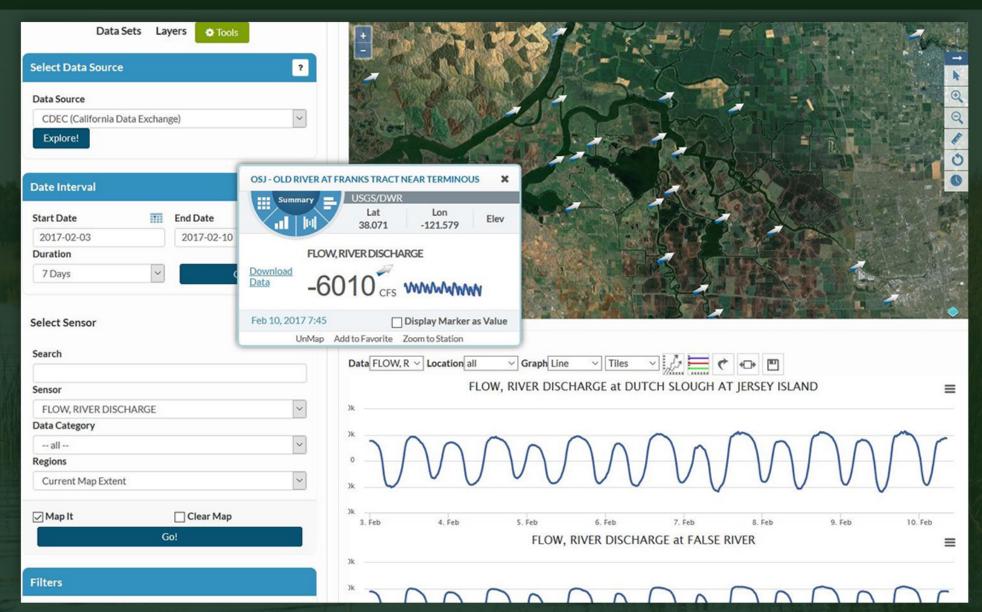






Levees, Aqueducts, and Islands Data







Real Time Levee Monitoring Data

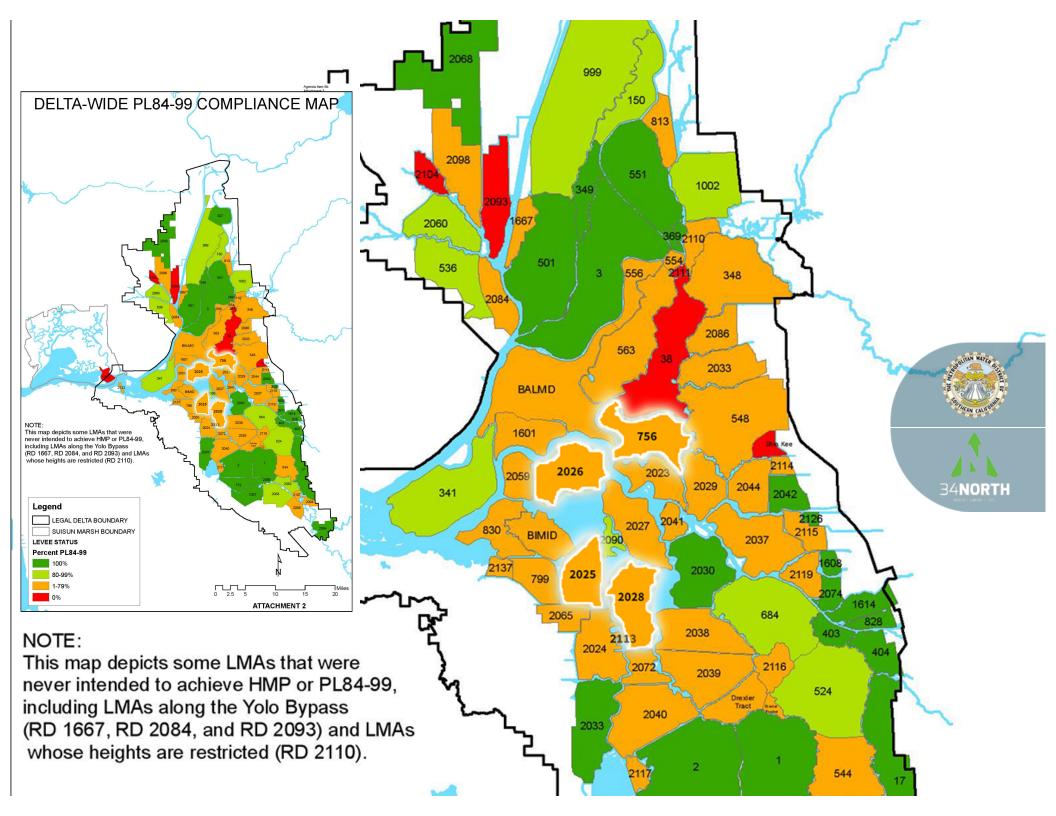


- Levee Safety Program provides eligibility for federal rehab assistance to levees if maintained to standards
- ✓ Under program: "eligible damage" restored to pre-event condition:
 - > At no cost to federal system owners
 - > At 20% of cost to non-federal system owners
- Regularly inspected by USACE
- ✓ Surveyed parameters include:
 - Stability (Piezometers, Inclinometers)
 - Subsidence (LiDAR, Profile and Cross-section Surveys, 3D scanning)
 - Cracking (Daily visual inspections, 3D scanning, Photogrammetry)
 - Vegetation growth (Daily visual inspections, LiDAR)
 - Erosion (Daily visual inspections)
 - Settlement and depressions (Daily visual inspections, LiDAR, Profile and Cross-section Surveys, 3D scanning)
 - Animal control (Daily visual inspections)
 - Rip-rap condition (Daily visual inspections)
 - Elevation changes (LiDAR, Profile and Cross-section Surveys, 3D scanning, inclinometer)



USACE PL 84-99 Compliance



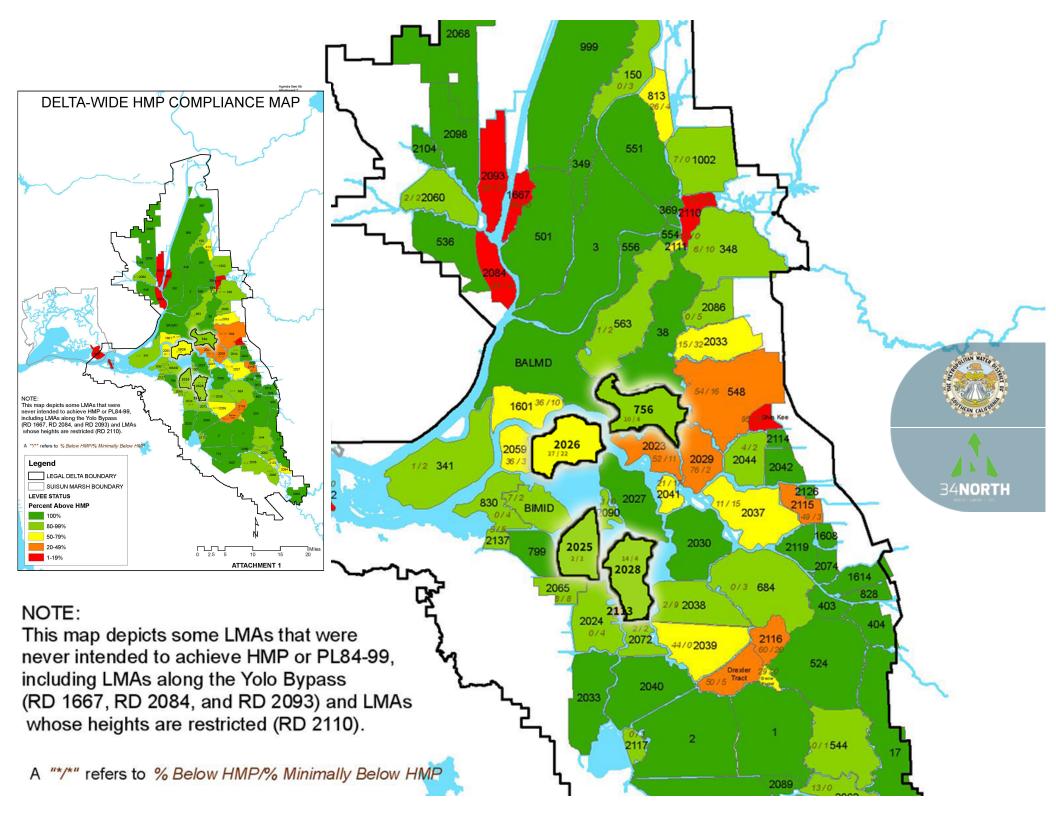


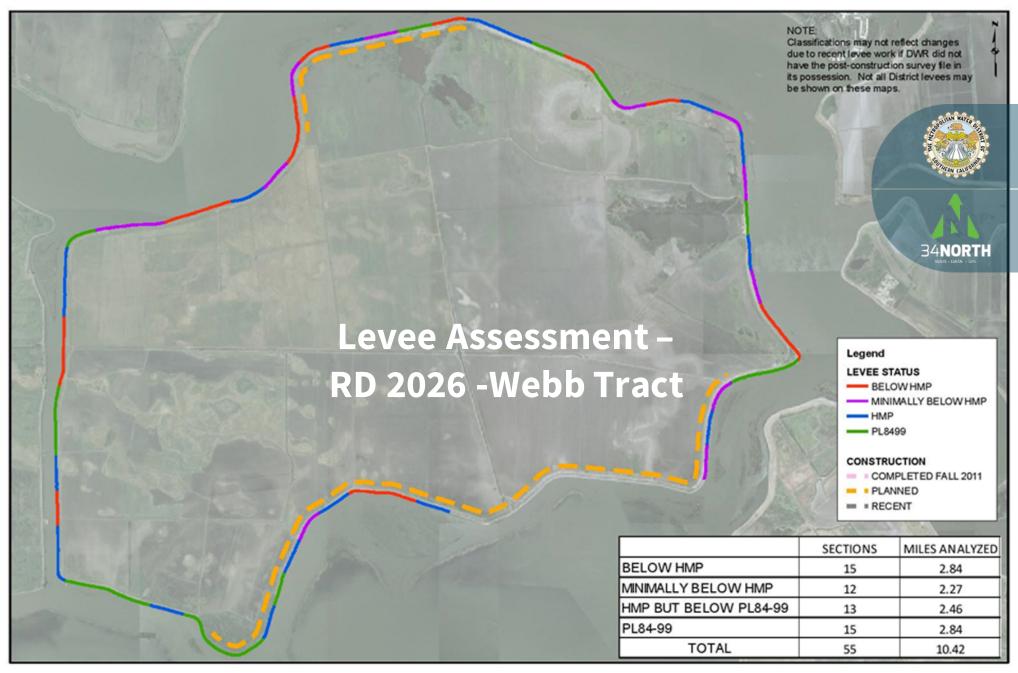
FEMA HMP

- ✓ Hazard Mitigation Plans reduce loss of life and property during disasters
- ✓ Levee conditions are part of HMP's
- Must comply with HMP to qualify for certain funding from FEMA
- ✓ Numerous sections of levees in Delta not in compliance
- ✓ DWR maps of HMP compliance



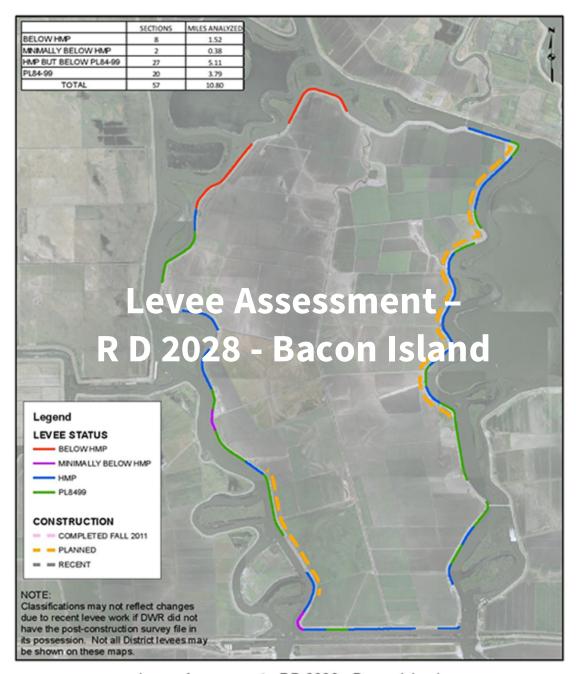






Levee Assessment - RD 2026 - Webb Tract

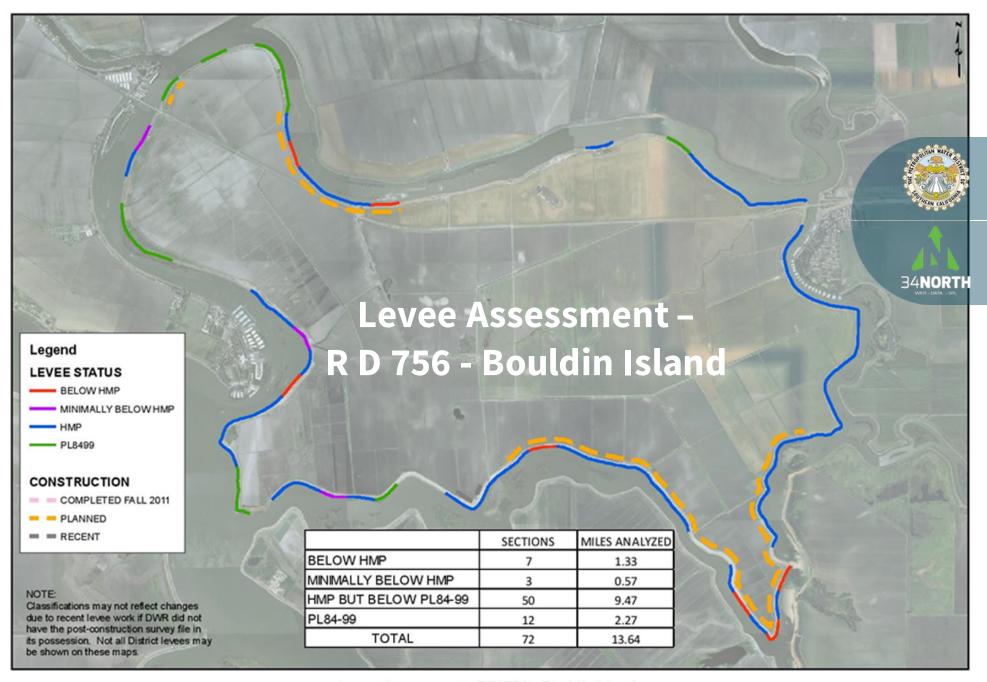
0 0.25 0.5 1 Miles





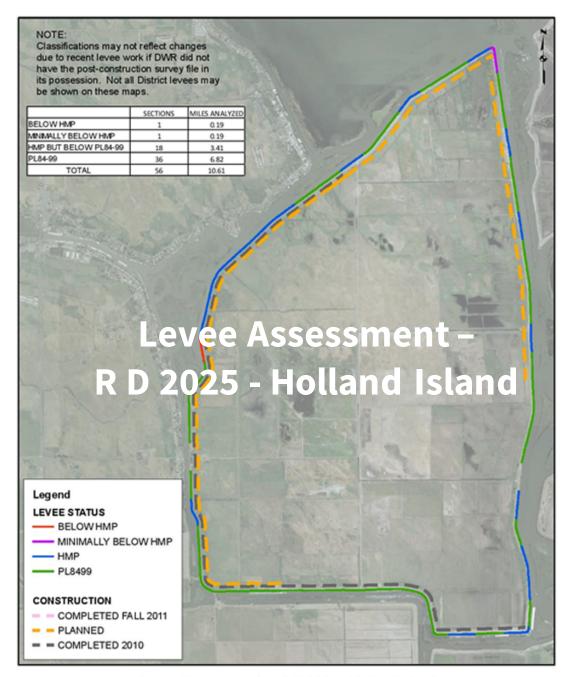
Levee Assessment - RD 2028 - Bacon Island

0 0.25 0.5 1 Miles

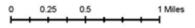


Levee Assessment - RD 756 - Bouldin Island

0 0.25 0.5 1 Miles



Levee Assessment - RD 2025 - Holland Tract





Water Supply Reliability and Emergency Planning

Issues include:

- ✓ Levee Management and Maintenance
- ✓ Emergency Freshwater
- ✓ Salinity Management
- Emergency Management Planning





Emergency Management Planning

- California has FEMA approved State Hazard MitigationPlan
 - Many local jurisdictions also have more specific FEMA approved HMPs

Hazard Mitigation Plans identify:

- ✓ Hazards and potential impacts on life and property
- Actions to reduce losses from hazards
- Coordinated process to respond and mitigate hazard impacts

Response relies on:

- ✓ Ability to communicate risk
- Identify immediate mitigation actions and relief efforts

Emergency Response Dashboard using OpenNRM tools





California
Department
of Water
Resources

US Army Corps of Engineers PL84-99

FEMA
Hazard
Mitigation
Planning

California
Office of
Emergency
Services

Emergency Management Stakeholders

Metropolitan Water District

Reclamation District Farmers and Residents of the Islands





Plan Element	Dataset	Source	OpenNRM Application
Hazard Identification and Location	GIS files, reports, imagery	Local jurisdictions, Office of Emergency Services, FEMA, USGS	Web Map, Geo-located Reports and Imagery, Document Library, Explore Data, Project Pages, Reporting and Compliance Dashboards
Previous Occurrences and Impacts	GIS files, reports, imagery	Office of Emergency Services, Local Jurisdictions	Web Map, Geo-located Reports and Imagery, Document Library, Project Pages, Reporting and Compliance Dashboards
Risk Assessment Relative to Assets	GIS files, reports, imagery	Local jurisdictions, Office of Emergency Services, FEMA, USGS	Web Map, Geo-located Reports and Imagery, Document Library, Reporting and Compliance Dashboards
NFIP Insured Structures	GIS files, reports, imagery	FEMA	Web Map, Geo-located Reports and Imagery, Reporting and Compliance Dashboards
Existing Authorities /Boundaries	GIS files, reports, imagery	State or Local Agencies	Web Map, Reporting and Compliance Dashboards
Preventative Measures	Reports, documents, imagery, GIS	State, Local Agencies, Reclamation Districts or Levee Maintaining Agency, FEMA	Web Map, Geo-located Reports and Imagery, Document Library, Reporting and Compliance Dashboards
Emergency First Response Locations	Emergency First Response Locations	Local Jurisdictions, Fire and Law Enforcement Agencies, State Database	Web Map, Geo-located Reports and Imagery, Document Library, Reporting and Compliance Dashboards



Environmental Management Use Cases



Plan Element	Dataset	Source	OpenNRM Application
Relief Locations	GIS files and searchable database of assets	Office of Emergency Services, Local Jurisdictions	Web Map, Geo-located Reports and Imagery, Document Library, Reporting and Compliance Dashboards, Fillable Forms
Roadway Conditions	GIS files, real-time mapping and searchable list	CalTrans	Web Map, Reporting and Compliance Dashboards
Weather Conditions and Notifications	GIS fies, real-time mapping and searchable list	NOAA	Web Map and Reporting and Compliance Dashboards
Hospitals and Medical Facilities	GIS files and searchable database of assets	Local Jurisdictions, State database	Web Map, Geo-located Reports and Imagery, Document Library, Reporting and Compliance Dashboards
Community Services Locations	GIS files and searchable database of assets	Local Jurisdictions, State database	Web Map, Geo-located Reports and Imagery, Document Library, Reporting and Compliance Dashboards



Emergency Management Use Cases

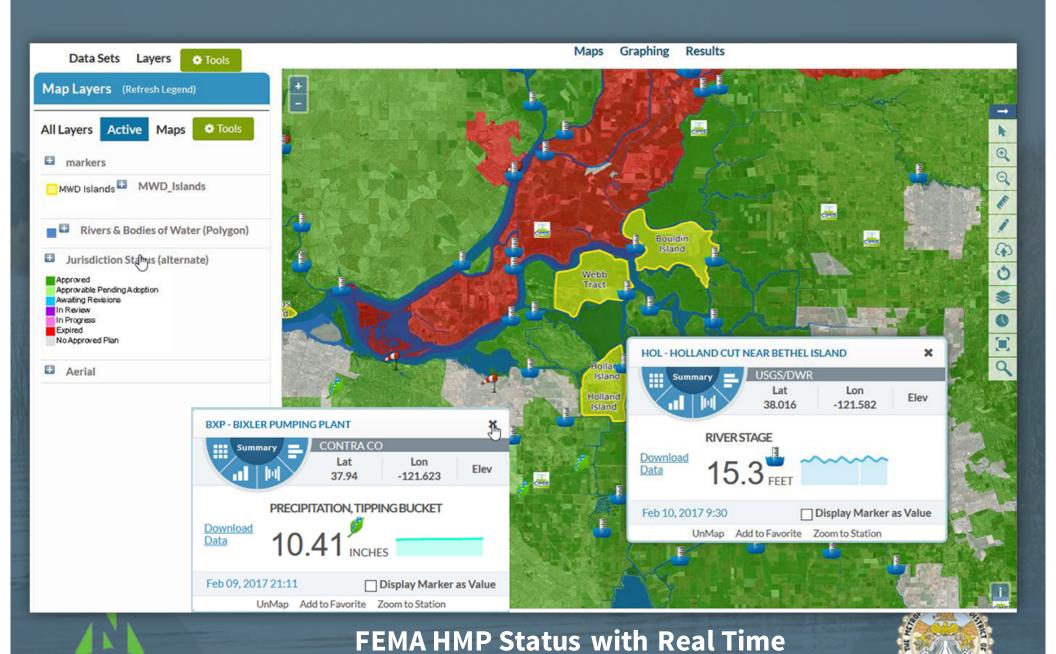


Plan Element	Dataset	Source	OpenNRM Application
Supply Locations	GIS files and searchable database of assets	Office of Emergency Services, Local Jurisdictions	Web Map, Geo-located Reports and Imagery, Document Library, Reporting and Compliance Dashboards, Fillable Forms
Real-time Alerts and Developments	GIS files, real-time mapping and searchable list, notifications, threshold data dashboards	CalTrans	Web Map, Reporting and Compliance Dashboards
Photos for Incident Tracking and Reporting	Imagery upload, georeferencing of images and fillable reporting form	NOAA	Web Map and Reporting and Compliance Dashboards
Citizen Reports	Imagery upload, georeferencing of images and fillable reporting form	Local Jurisdictions, State database	Web Map, Geo-located Reports and Imagery, Document Library, Reporting and Compliance Dashboards
Citizen Resources/ Skills	Profile database, georeferencing of profile and fillable skills reporting form	Local Jurisdictions, State database	Web Map, Geo-located Reports and Imagery, Document Library, Reporting and Compliance Dashboards



Emergency Management Use Cases





Hydrology Conditions on BayDeltaLive

Island Diversions and SB 88

Water diversions made from adjacent rivers and sloughs onto islands. After use, water often discharged back into adjacent waterways

California Water code requires monitoring and reporting of diversions

Monitoring and reporting diversions asissts in ensuring proper allocation of State's water resources

SB88 – Emergency Regulation for Measuring and Reporting the Diversion of Water

- Signed by Governor Brown on June 24, 2015
- ✓ Waterboard implemented law on January 19, 2016
- ✓ Reporting requirements begin January 1, 2017
- Requires person/organization diverting 10 acre-feet or more per year to meet specific measurement, accuracy, and reporting requirements





Metropolitan Water District State Water Resources Control Board

Reclamation District

California
Department
of Water
Resources

Diversion
Compliance
and Reporting
Stakeholders

Farmers
And Residents
of the Islands







Plan Element	Dataset	Source	OpenNRM Application		
Water Right Info	GIS, Documents, Reports	USBR, DWR, Farmer	Web Map, Compliance and Reporting Dashboard, Fillable Forms, Catalog, Projects		
	Excel, Reports	Farmer, Water Right Holder, Diversion works operator	Compliance and Reporting Dashboard, Data Analytics, Reports		
Monthly Reporting	Excel, Reports	Farmer, Water Right Holder, Diversion works operator	Compliance and Reporting Dashboard, Data Analytics, Reports		
	Excel, Reports	Farmer, Water Right Holder, Diversion works operator	Compliance and Reporting Dashboard, Data Analytics, Reports		
Diversion Details	Reports, Images	Farmer, Water Right Holder, Diversion works operator	Catalog, Projects, Fillable Form, Compliance and Reporting Dashboard		
Measurement Methods	Reports,Images	Farmer, Water Right Holder, Diversion works operator	Catalog, Projects, Fillable Form, Compliance and Reporting Dashboard, Web Map		
Beneficial Uses	Excel, Reports	Farmer, Water Right Holder, Diversion works operator	Compliance and Reporting Dashboard, Data Analytics, Reports		
Beneficial Uses	Reports, Images	Farmer, Water Right Holder, Diversion works operator	Catalog, Projects, Fillable Form, Compliance and Reporting Dashboard, Web Map		



Diversion Monitoring Use Cases

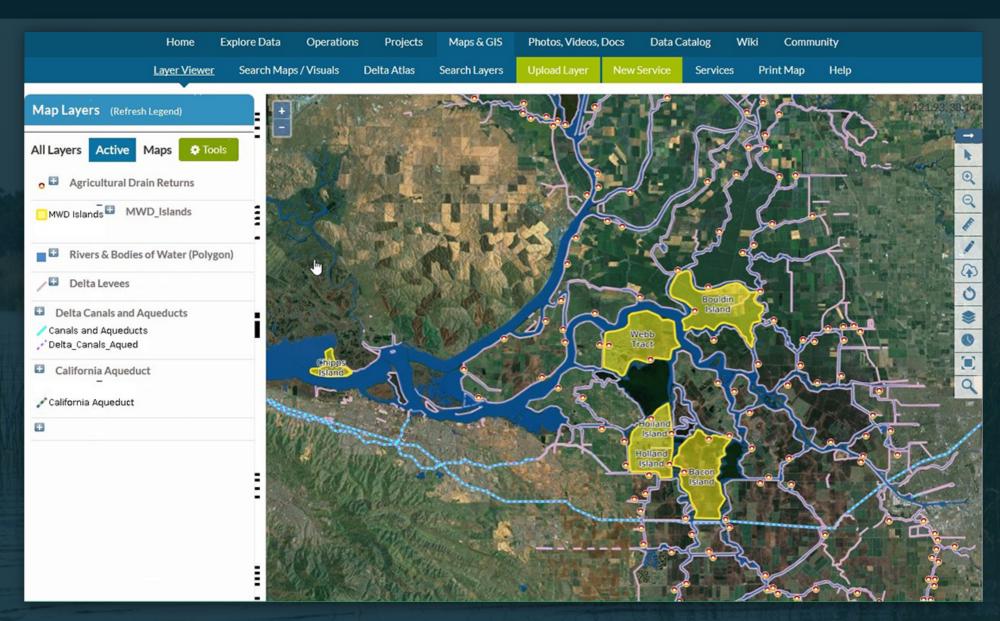


Type of Diversion (af=acre-feet)	Installation Deadline	Required Accuracy	Required Monitoring Frequency	Qualifications For Installation and Certification
Direct Diversion ≥ 1,000 af/year Storage ≥ 1,000 af	January 1, 2017	10%	Hourly	Engineer/Contractor/ Professional
Direct Diversion ≥ 100 af/year Storage ≥ 200 af	January 1,2017	10%	Daily	Engineer/Contractor/ Professional
Direct Diversion ≥ 10 af/year Storage ≥ 50 af	January 1,2018	15%	Weekly	Individual experienced with measurement and monitoring
Storage≥10 af	January 1,2018	15%	Monthly	Individual experienced with measurement and monitoring











Levees, Ag Discharges, and Water Infrastructure Data



California Water Fix Monitoring and Collaboration

- ✓ California Water Fix requires substantial monitoring and reporting to minimize environmental impacts
- ✓ Data collected for island management can be integrated into reporting and mitigation for the Water Fix project
- Monitoring and reporting mandated in the EIR for Water Fix integrated into platform
- Types of data collected will have crossover with existing research efforts and island management strategies
- ✓ Monitoring topics for California Water Fix include:
 - > Flows management
 - Turbidity
 - Salinity
 - > PH
 - Fish rescue and salvage
 - Biological monitoring of listed and endangered species
 - Storm water quality monitoring
 - Compliance with all existing environmental standards and regulations





Municipal Management - Water Supply

34 North data management services can be used to guide water supply asset operations.

Data Dashboards of water supply conditions:

- Real-time hydrology conditions
- Water diversion rates monitoring
- Agricultural discharge monitoring
- Pumping rates for water projects
- Reservoir levels

Reporting Dashboards for SB88:

 Custom reporting platform for compliance with diversion reporting.

Levee Safety and Asset Protection

Visual data integration for levee monitoring using data management tools.

Dashboards of spatial data and mapping applications:

- Drone and ground imagery
- 3-D scan visual monitoring
- Satellite and LiDAR data monitoring
- Imagery catalog for levee inspections
- Land use monitoring

Reporint Dashboards for Levee Monitoring:

- Project pages for levee repair and maintenance projects
- Flood models integrating FEMA data

Environmental Management and Conservation

Real-time hydrology and water quality data streams.

Dashboards for water quality and fish population monitoring:

- Spatial locations of fish and wildlife habitats
- Restoration project tracking and mapping
- Critical area identification
- magery catalog for levee inspections
- Land use monitoring
- Recreation opportunities
- Project pages to track and manage restoration efforts

California WaterFix and the Delta's Co-Equal Goals

- Two of the islands are on the proposed path of the Delta Tunnels → levee maintenance and monitoring
- Protecting water supplies through accounting, monitoring, modeling of quality and quantity
- Improve flows for fish through forecasting and monitoring of pumping, salinity, turbidity, diversions
- Tracking of ecosystem restoration and conservation; opportunity identification through spatial analyses



Water Fix



Islands purchased by MWD are in critical areas:

- ✓ on Pacific Flyway
- ✓ In Delta smelt and Chinook salmon habitat
- ✓ Western islands act as salinity buffer
- > Chipps island intended for tidal wetland restoration
 - > Food and habitat for Delta Smelt

Restoring native tule vegetation could help rebuild peat soils

- ✓ Increase island elevations
- ✓ Reduce carbon emissions from soil decay

An OpenNRM island portal could be a resource and repository for natural resource management information.



Environmental Management



Delta Science Council California
Department
of
Conservation

US Fish and Wildlife Service

National Marine Fisheries Service

Environmental Management / Restoration Stakeholders

Metropolitan Water District

California
Department
of Fish
and Wildlife

Farmers and Residents of the Islands

California
Department
of Water
Resources

Reclamation District





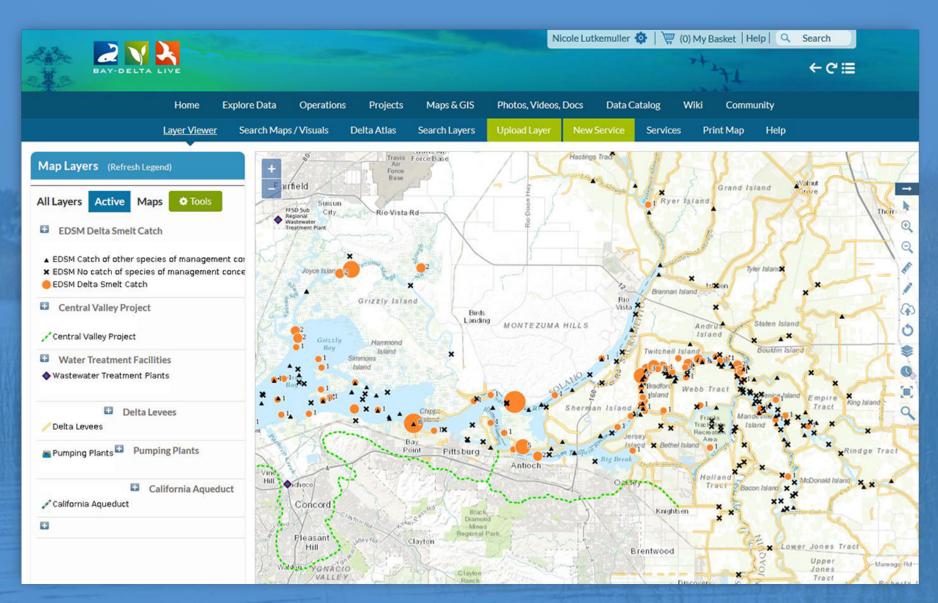


Plan Element	Dataset	Source	OpenNRM Application			
Restoration tracking	GIS files, reports, data	Various agencies and organizations	Web Map, Data Stories, Projects, Compliance and Reporting Dashboards			
Fish	Excel, PDF, GIS files, Web Services, data	USFWS, CDFW, DWR	Web Map, Data Stories, Compliance and Reporting Dashboards			
Water Quality, salinity, turbidity	Excel, Web Services, data	SWRCB, DWR, USFWS, CDFW	Explore Data, Models, Data Analytics, Tables, Compliance and Reporting Dashboards			
Land/habitat conservation	GIS files, reports, data	Various agencies and organizations	Web Map, Data Stories, Projects, Compliance and Reporting Dashboards			

Environmental Management Use Cases



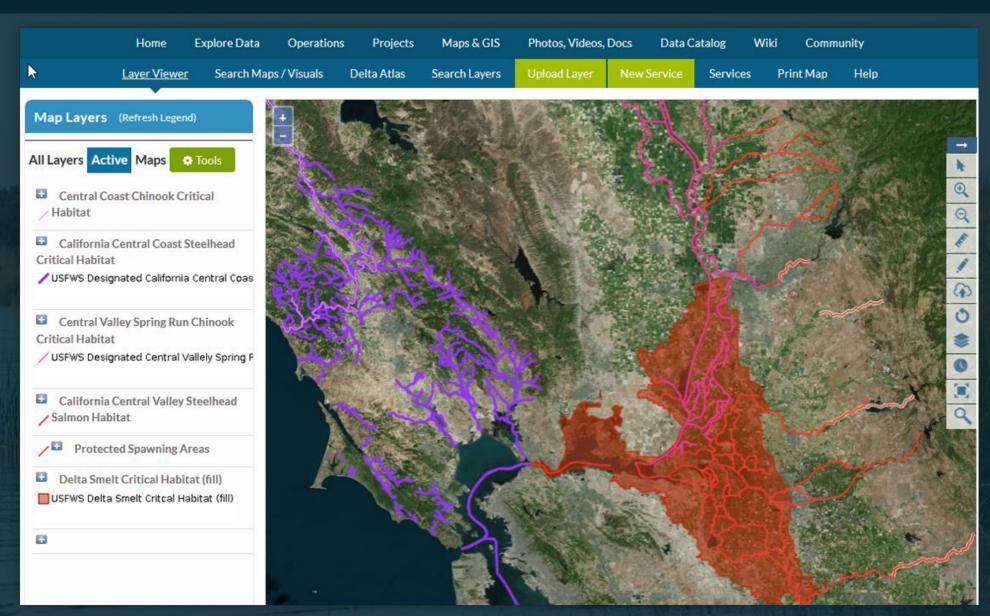






Species of Concern Monitoring



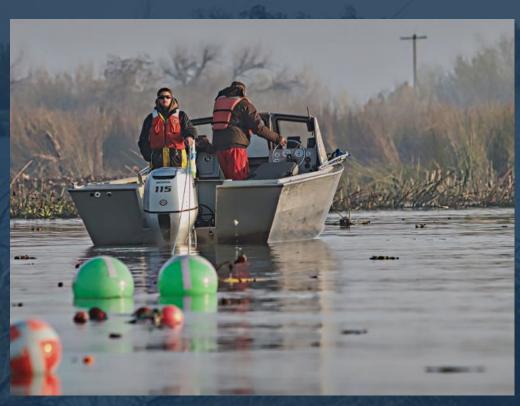




Critical Fish Habitats/Protected Spawning Areas



- ✓ Delta is a food limited and tidal wetland
- Research and monitoring conducted to identifying effective restoration practices and locations

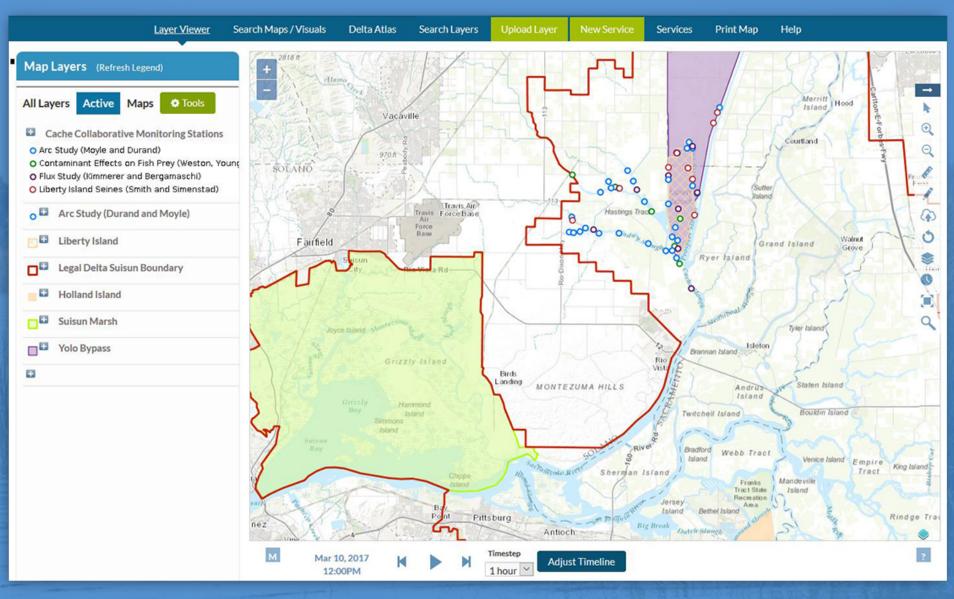


- ✓ Islands can be used for research or to supplement ongoing research
- ✓ Data can contribute to Delta studies
- ✓ The Arc Study (Peter Moyle and John Durand) and other Cache and Susuin studies can be used to inform management of islands
- ✓ Other ongoing monitoring and research can be expanded to other Delta islands











Cache Collaborative and Yolo Research Data



Island Specific Solution

- ✓ Build on Bay Delta Live infrastructure
- A new private data management platform would provide sub-domain access for each island
- ✓ Build on environmental management and monitoring data projects and products developed for BDL. e.g.
 - Fisheries Monitoring Program Dashboards
 - Operations
 - ✓ CDEC/NWIS/CEDEN Data Services
 - √ 300+ GIS layers
- Develop templates specific to island management reporting requirements and stakeholder collaboration
- ✓ Full service software and data support





OpenNRM/34 North Tools

- ✓ Spatial Tools: Library, WMS, WFS, and WMST
- ✓ Web Based Mapping Tools
- ✓ Database and Data Management Tools
- Data Visualization, Analytics, Animations, and3-D Mapping
- Explore Data Real-time Data Streams and Web Services
- Configurable Dashboards for index and threshold management
- Catalogs for images, videos, documents, reports, and research





Key Issues	Monitoring Component	GIS and Interactive Map Tools	Catalogs for Content Mgmt.	Data Mgmt., Analytics, Animations	Explore Data Real- Time Sensor Network	Compliance and Reporting Dashboard s	Projects and Data Stories	Fillable Forms
	Daily Visual Inspections	X	X			X	X	
ing	Profile and Cross- sections Surveys	X	X			X	X	
itor	Piezometers	X		X		X	X	
Mon	Inclinometers	X		X		X	X	
Levee Monitoring	Survey Monuments and GPS CORS	X	X	X		X	X	
Lev	Terrestrial 3D Scanning	X		X		X		
	Aerial LiDAR/ Photogramm-etry	X		X		X		
	Acres of Agricultural Land	X				X	X	
								UTAN WATER



OpenNRM Features Use Cases

Key Issues	Monitoring Component	GIS and Interactive Map Tools	Catalogs for Content Mgmt.	Data Mgmt., Analytics, Animations	Explore Data Real- Time Sensor Network	Compliance and Reporting Dashboard s	Projects and Data Stories	Fillable Forms
pu	Water Right Info	X	X			X		X
ice al	Monthly Reporting	X	X	X	X	X	X	X
pliar rting	Diversion Details	X	X			X	X	X
Com	Measurement Methods		X			X	X	X
Diversion Compliance and Reporting	Beneficial Uses		X			X	X	X
Dive	Transfers and Changes		X			X	X	X



OpenNRM Features Use Case



Key Issu		GIS and Interactive Map Tools	Catalogs for Content Mgmt.	Data Mgmt., Analytics, Animations	Explore Data Real-Time Sensor Network	Compliance and Reporting Dashboards	Projects and Data Stories	Fillable Forms
	Hazard Identification and Location	X	X	X	X	X	X	
PIT	Previous Occurrences and Impacts	X	X			X	X	
Z P	Risk Assessment Relative to Assets	X	X		X	X	X	
מתבת	Existing Authorities and Boundaries	X	X			X	X	
> >	Preventative Measures	X	X			X	X	
one.	Emergency First Response Locations	X	X			X	X	
Emergency Management	Relief Locations	X	X			X	X	
	Roadway Conditions	X	X			X	X	
	Weather Conditions and Notifications	X			X	X		







OpenNRM Features Use Case Table

Key Issues	Monitoring Component	GIS and Interactive Map Tools	Catalogs for Content Mgmt.	Data Mgmt., Analytics, Animations	Explore Data Real-Time Sensor Network	Compliance and Reporting Dashboards	Projects and Data Stories	Fillable Forms
ı	Hospitals and Medical Facilities	X	X		X	X	X	
emer	Community Services Locations	X	X			X	X	
Emergency Management	Supply Locations	X	X		X	X	X	
	Real-time Alerts and Developments	X				X	X	
	Photos for Incident Tracking and Reporting	X	X			X		X
	Citizen Reports	X	X			X	X	X
	Citizen Resources and Skills	X	X		X	X	X	X





34 North Services and Implementation

- Data Aggregation and Inventory
- ✓ Develop data management plan and data workflow, including data provenance
- ✓ UX for user interaction with data
- Content management schema and aggregation
- Database set up and architecture
- ✓ New instance of OpenNRM: set up management themed sub sections (catalogs, GIS, data libraries, wikis)
- Customize management admin for data contributors
- Custom GIS
- Databases and data interoperability
- Reporting Dashboards
- ✓ QA/QC, Debugging
- Project Management







What can you do here?

Login

Webb Tract Bacon Island

Holland Island

Chipps Island

Bouldin Island

DELTA ISLANDS DATA PORTAL

Data and visualization tools for managing Delta islands



DELTA ISLANDS SUMMARY DASHBOARDS

Key data summaries for environmental management, monitoring and associated levees for Webb, Bacon, Holland, Chipps and Bouldin Islands.





WEBB TRACT

Levee and island management, monitoring, and reporting data for regulatory compliance on Webb Tract in the north





BACON ISLAND

Bacon island specific data, information, and analysis for ecosystem management, sustainable land management, and





CHIPPS ISLAND

Ecosystem restoration and wildlife habitat management data and visualizations for Chipps island in the far west Delta.



HOLLAND ISLAND

Data aggregation and reporting dashboards for levees and ecosystem management on Holland island.





BOULDIN ISLAND

Reporting compliance, levee monitoring and general island management data aggregation for Bouldin island in the Delta.



Conditions Of Use

Privacy Policy

Accessiblity

Contact Us



MWD Island Home Mockups





What can you do here?

Login

Island Summary Webb Tract Bacon Island Holland Island

Chipps Island

Bouldin Island

DELTA ISLANDS DATA PORTAL

Data and visualization tools for managing Delta islands



DELTA ISLANDS SUMMARY DASHBOARDS

Key data summaries for environmental management, monitoring and associated levees for Webb, Bacon, Holland, Chipps and Bouldin Islands.

READ MORE -



WEBB TRACT

Levee and island management, monitoring, and reporting data for regulatory compliance on Webb Tract in the north east Delta.

READ MORE →



BACON ISLAND

Bacon island specific data, information, and analysis for ecosystem management, sustainable land

READ MORE → management, and water supply reliability.



CHIPPS ISLAND

Ecosystem restoration and wildlife habitat management data and visualizations for Chipps island in the far west Delta.

READ MORE →



HOLLAND ISLAND

Data aggregation and reporting dashboards for levees and ecosystem management on Holland island.

READ MORE



BOULDIN ISLAND

Reporting compliance, levee monitoring and general island management data aggregation for Bouldin island in the Delta.

READ MORE →

Conditions Of Use

Privacy Policy

Accessiblity

Contact Us







What can you do here?

Login

Island Summary

Webb Tract Bacon Island

Holland Island

Chipps Island

Bouldin Island

DELTA ISLANDS DATA PORTAL

Data and visualization tools for managing Delta islands



DELTA ISLANDS SUMMARY **DASHBOARDS**

Key data summaries for environmental management, monitoring and associated levees for Webb, Bacon, Holland, Chipps and Bouldin Islands.

LEARN MORE





WEBB TRACT

Levee and island management, monitoring, and reporting data for regulatory compliance on Webb Tract in the north east Delta.

LEARN MORE





BACON ISLAND

Bacon island specific data, information, and analysis for ecosystem management, sustainable land management, and water supply reliability.

LEARN MORE





CHIPPS ISLAND

Ecosystem restoration and wildlife habitat management data and visualizations for Chipps island in the far west

LEARN MORE



HOLLAND ISLAND

Data aggregation and reporting dashboards for levees and ecosystem management on Holland island.

LEARN MORE



BOULDIN ISLAND

Reporting compliance, levee monitoring and general island management data aggregation for Bouldin island in the Delta.

LEARN MORE

Conditions Of Use



