



IRONHOUSE SANITARY DISTRICT

Analysis and Recommendations for Utilization of Jersey Island

Prepared by

Municipal Resource Group, LLC

675 Hartz Avenue, Suite 300
Danville, CA 94526
925.314.3889

December 14, 2017



TABLE OF CONTENTS

	<u>Page</u>
I. Summary of Findings.....	1
II. Jersey Island Today	3
A. Current Operations	3
B. Fiscal Condition.....	3
C. Physical Condition.....	3
III. Regulatory Environment.....	6
A. Urban Limit Line.....	6
B. 100-year Floodplain	6
C. Delta Primary Zone	7
D. Delta Plan	7
E. Regulatory Agencies.....	8
IV. Property Ownership Risks	16
A. Property Condition	16
B. Fiscal Condition.....	16
V. Strategies to Enhance Fiscal Performance	17
A. Land Acquisition by Public Agencies.....	17
B. Transfer of Water Rights / Use of District Recycled Water	20
C. Park Uses.....	21
D. Carbon Credits	22
E. Dredge Spoils Disposition.....	23
F. Wind Energy Generation.....	24
G. Mitigation Banks.....	25
H. Other Uses.....	26
VI. Recommended Next Steps	27

Attachments

1. Vicinity Map
2. Elevation Map
3. California Natural Diversity Database (CNDDB) map
4. Contra Costa County Urban Limit Line
5. Delta Primary Zone
6. California State Lands Commission jurisdictional impact letter
7. Carbon Farming in the Delta (DWR, Bryan Brock, October 2012)
8. Infrastructure Map

I. Summary of Findings

The Ironhouse Sanitary District (“District”) engaged Municipal Resource Group, LLC (MRG) to review Jersey Island’s current revenue generating activities and provide the District with an analysis of Jersey Island’s suitability for alternative revenue generating uses. The District also requested MRG explore alternative ownership or stewardship options congruent with the District’s goals. Our report provides recommendations for potential additional uses, options for alternative ownership and/or stewardship, and an estimate of the timeframe for a full analysis of the recommendations.

Findings Overview – Jersey Island was originally purchased for effluent disposal through land application for the District’s original aerated pond treatment plant. The District’s regulating agency designated a location on the San Joaquin River at the north eastern end of Jersey Island that met its requirements. The Island could provide suitable locations for installation of the District’s facilities to serve the outfall requirement. In purchasing the Island, the District continued the cattle operation that existed on the Island to serve as a revenue generating opportunity. The District established the hay production on the Island to support nitrogen uptake of the District’s recycled water.

Based on our evaluations of the Island, we believe that the District would significantly benefit from exploring a number of partnership options and alternatives that would potentially:

- Generate additional revenue;
- Reduce ongoing expenses;
- Spread the costs for maintenance of the Island;
- Bring partners to jointly participate in the Island’s ownership and operations; and
- Spread the potentially significant economic risk the Island represents.

As contained in our report, the Island has a number of significant physical and locational constraints that limit the types of activities and initiatives it can sustain. The alternatives we have identified all initially appear to conform to the zoning, land use, regulatory agency and environmental constraints we identified during the project. These alternatives are discussed in more detail in the report, and include:

- Establishment of one or more mitigation banks for protected species with an experienced partner who brings expertise, financing and resources to the proposed use;
- Exploration of use of a portion of the Island for the placement of dredged material by a public entity such as the Port of Stockton, which could manage the site, generate revenue for the District and assist in the maintenance of the Island;
- Formation of a partnership with an alternative energy producer — Marin Clean Energy (MCE), which will be the alternative energy provider for Contra Costa County in 2018. The activity would initially include a feasibility analysis of the suitability of the Island for placement of windmills on the site. MCE would conduct the study. If feasible, MCE would develop a proposal for use of the site and manage the construction, operation and maintenance of the facilities — and provide a revenue stream to the District;
- Exploration of the potential of a portion of the Island for use as a carbon credit revenue generating activity. State law and the State’s Cap and Trade Program create a market for carbon capture for entities needing to offset their CO₂-generating activities. Rice farming, tule farming,

and other types of carbon storage activities are being evaluated as Carbon Credit activities and could replace some of the current agricultural activities;

- Exploration of the potential for use of a portion of the Island by the East Bay Regional Park District for recreational activities by the public. Expanded access to the Delta as a natural resource would benefit both public agencies.
- Consideration of alternative management of the District's cattle and agricultural activities. The District currently conducts the agriculturally related activities and maintenance of on-Island facilities using District employees. A portion of the employees' activities are related to the agricultural operations, which could be relegated to either a contractor or to a mitigation bank partner. It is common for mitigation bank management to include cattle operations and other agricultural activities. We believe the total per-employee cost could be significantly reduced by this modification.

The timing for completion of these recommended activities is estimated to take between 12 and 24 months, depending on the activity. The alternatives all require full feasibility evaluation by the partnering entity, development of an operating/licensing/lease or purchase option between the District and the partner, and approval by any regulatory authority with jurisdiction. We believe that these alternatives represent the most practical, achievable and environmentally responsible outcomes available to the District to assist in revenue generation, risk management and benefit to the District's constituents.

The final section of this report includes Recommended Next Steps. MRG recommends that the Board provide feedback and identify additional questions at its December meeting and that a follow-up meeting be scheduled early in 2018 for the Board to provide direction to staff to implement specific next steps.

II. Jersey Island Today

Jersey Island is an approximately 3,520-acre island owned by the District. **Attachment 1** is a Vicinity Map. Reclamation District 830 is a separate governmental district, responsible for the maintenance and repair of the Jersey Island levees.

Jersey Island is considered a critical island in the San Joaquin River Delta. It is one of the eight islands listed in the Delta Flood Protection Act as critical to preserving water quality in the Delta. Preserving the integrity and current configuration of Jersey Island levees is important to the Delta ecosystem.

A. Current Operations

Jersey Island currently serves the following primary purposes for the District:

1. Disposal site for recycled water from the District's wastewater treatment plant;
2. Location of pipe infrastructure that transports recycled water from the District's wastewater treatment plant to an outflow in the San Joaquin River;
3. Hay production; and
4. Cattle production.

B. Fiscal Condition

Revenues and expenditures related to Jersey Island are accounted for in a separate account by the District. A District staff assessment of Jersey Island's fiscal condition in Fiscal Year 2014-15 concluded that, on average, Jersey Island's annual costs exceed revenues by approximately \$500,000.

The principal expenditure is for the labor costs associated with levee maintenance and cattle operations. Labor costs associated with levee maintenance are reimbursed by Reclamation District 830 (RD 830).

The primary revenue sources are proceeds from cattle and hay sales and RD 830 reimbursements. The revenue received from cattle and hay sales is subject to changes in the prices of the commodities and varies from year to year.

C. Physical Condition

Key physical, title, and regulatory characteristics of Jersey Island impact the range of alternate uses that can be considered regarding the Island. Regulatory restrictions are addressed in the next section of this report. Primary physical and title features impacting future development include:

1. Most of Jersey Island is below sea level

Attachment 2 is a 2011 map describing the elevations of Jersey Island. The majority of the Island is 4 to 18 feet below sea level. Climate change and associated sea level rise will

significantly exacerbate this condition and place additional cost pressure on levee maintenance.

2. Jersey Island levees do not provide an urban level of protection

Similar to many levees in the Delta, Jersey Island's levees, are agricultural levees, not urban levees, pursuant to Federal Emergency Management Agency (FEMA) standards. Construction of new structures on Jersey Island will require foundations above the 100-year flood plain or will incorporate a design that addresses flooding of the Island in the future. Development on the Island is subject to the Contra Costa County Flood Plain Management Ordinance.

3. Soil condition/Subsidence

The soil condition on Jersey Island is primarily comprised of peat and sandy soils. The northern portion of the Island is comprised of peat over sandy soil. The southern end of Jersey Island is primarily comprised of sandy soil and is the higher ground. The ground surface on the island is below sea level with the northern portion of the island lower than the southern portion. Peat oxidizes and disintegrates over time. Historically, approximately 1 to 3 inches of peat oxidizes and disappears each year in the Delta.

The southern end of Jersey Island is primarily comprised of sandy soil and is the higher ground.

4. Sensitive species habitat

Sensitive species habitat is present on Jersey Island. **Attachment 3** provides information from the California Natural Diversity Database (CNDDB) regarding the presence of sensitive species on Jersey Island. The purpose of this California Department of Fish and Wildlife database is to provide location and natural history information to the public regarding special status plants, animals, and natural communities. This database is not an exhaustive and comprehensive inventory of all rare species and natural communities present on the Island.

The RD 830 Five Year Plan completed by MBK Engineers, and ongoing mitigation work associated with levee maintenance and repair, contain more specific information regarding sensitive species habitat on Jersey Island. Any new development on Jersey Island will be required to address its impact on sensitive species.

5. Easements

Pacific Gas and Electric Company (PG&E) and the Western Area Power Administration (WAPA) own independent easements for transmission lines on Jersey Island. Use of property within these easements for alternative uses will be subject to the terms of the easements and will require coordination with PG&E and WAPA. There are also a series of underground utility easements on the island held by ABA Energy Company, Calpine, PG & E, Venoco, and Conoco Phillips. All of the easements are shown in **Attachment 8**.

6. Property title issues

A title report was not a part of this project. Clarification of clear title and identification of any covenants that may restrict future alternative uses is important. The solicitation of a current title report is discussed in the Recommended Next Steps section of this report.

III. Regulatory Environment

Jersey Island is located in the unincorporated area of Contra Costa County and within the Primary Zone of the Delta. As a special district, the District has the right to use the Island for its wastewater treatment plant operations in compliance with the local, state and federal regulations related to these public facilities. However, when the District wants to establish land uses on the Island outside of the scope of its special district function, other state and local agencies have jurisdictional authority. Jersey Island is heavily-regulated due to the following features:

A. Urban Limit Line

Contra Costa County's Urban Limit Line was approved in 1990. The Urban Limit Line was designed to limit urban growth in the County to no more than 35% of land in the County. The areas outside of the Urban Limit Line (the remaining 65% of the County) are to be preserved for open space, wetlands, parks and agriculture. Jersey Island is outside of the Urban Limit Line. Alternate uses on the Island need to fit within the realm of open space, wetlands, parks, agriculture and non-urban uses. Urban uses are not allowed. Further, the County discourages the extension of urban services (e.g. potable water and sewer facilities) outside of the Urban Limit Line because of the potential growth-inducing impacts. The County would likely oppose any use that necessitates the extension of urban services to Jersey Island. This is a significant limitation on the types of alternate uses that could be accommodated on the Island. A map of the Urban Limit Line is attached to this report as **Attachment 4**.

B. 100-year Floodplain

Jersey Island is within a Special Flood Hazard Area on FEMA and County maps. Although its levees have been substantially reinforced over the years and meet the elevation requirements for an agricultural levee in the Delta, they are not FEMA-certified to provide an urban level of protection from a 100-year flood. Therefore, new construction is subject to the County's Floodplain Management Ordinance. This ordinance is designed to reduce loss of life and property damage in flood prone areas. There are specific floodplain requirements for new construction. In many cases, buildings need to be raised above the base flood elevation (above the mean sea level) plus one foot of freeboard. In other cases, buildings may be flood-proofed so that the areas below the base flood elevation are watertight, with walls substantially impermeable to the passage of water. Structural components need to be capable of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy. In all cases, new construction needs to be anchored to prevent it from floating or collapsing due to water pressure or velocity. Plumbing, mechanical, and electrical equipment need to be water resistant or elevated. This increases the cost of construction, and is a significant limitation on the types of alternate uses that could be accommodated on the Island.

It should be noted that the existing levee system generally meets the minimum elevation requirements of FEMA's Short Term Hazard Mitigation Plan (HMP) for an agricultural levee in the Delta. This is the minimum standard for agricultural areas to be eligible for federal assistance in the event of a disaster.

C. Delta Primary Zone

Jersey Island is in the Primary Zone of the Delta. Projects in the Primary Zone must be consistent with the Delta Protection Commission's Land Use and Resource Management Plan. The Management Plan includes a series of goals and policies to protect and enhance agriculture, natural resources, water, levees, utilities and infrastructure. Projects the County approves in the Primary Zone must be consistent with the Land Use and Resource Management Plan. The Delta Protection Commission reviews the County's actions and acts as an appeal body if a project in the Primary Zone is challenged. If the appeal is upheld, the proposed project must be brought into conformity with the Management Plan before it can proceed.

The staff at the Delta Protection Commission has advised that any alternate uses on the Island should not unreasonably reduce or constrain agricultural opportunities on the Island. The Delta Protection Commission will review the impacts of new construction on the integrity of levees, wildlife, recreation, agriculture and Delta communities to ensure that impacts are avoided, minimized and mitigated. A map showing the Delta Primary Zone is attached to this report as **Attachment 5**.

D. Delta Plan

The State of California has adopted a Delta Plan that consists of an over-arching set of goals, policies, and recommendations that apply within the legal boundary of the Delta. The Delta Plan is administered by the Delta Stewardship Council. The Delta Plan has two co-equal goals:

1. Providing a more reliable water supply for California; and
2. Protecting, restoring, and enhancing the Delta Ecosystem.

In the Delta Plan, Jersey Island is designated as a Public/Quasi Public land use. It is identified as subtidal land, with an agricultural use, primarily irrigated pasture. The Delta Stewardship Council has jurisdiction when a state or local agency, such as the District, proposes a project that is a "covered action" in the Delta Plan. There is a regulatory process that must be followed for any covered action, and a certification of consistency that must be filed with the Delta Stewardship Council. The certificate of consistency must include sufficient, scientifically-backed documentation to show the covered action is consistent with the Delta Plan by being fully transparent, disclosing potential environmental impacts, and identifying how best available science will be used in decision-making and adaptive management. The Delta Stewardship Council has the appellate authority to determine the consistency of the covered action with the Delta Plan if it is challenged.

E. Regulatory Agencies

The following are regulatory agencies with some level of jurisdictional authority or interest in Jersey Island:

1. Contra Costa County (CCC)

a. Regulatory Authority on Jersey Island

When the District is conducting activities outside of its purpose as a special district, Contra Costa County has land use regulations and approval authority on the Island. The County's General Plan is the over-arching document regulating land use. The General Plan includes the foundation for enforcement of other regulatory programs, including:

- Urban Limit Line
- 65/35 Land Preservation Standard
- Zoning
- Floodplain Construction
- Delta Protection Commission Land Use and Resource Management Plan
- Delta Plan
- Building plan check, permits, and inspections

The County may be required to make findings that the sale of land on Jersey Island to a non-public agency is in conformance with the General Plan as part of a land disposal action.

b. Impact on Alternate Uses

Urban Limit Line – Jersey Island is outside of the Urban Limit Line, so urban uses are not allowed. Uses must fall within the realm of open space, wetlands, parks, agriculture, and non-urban uses.

Zoning – Jersey Island is in the A-3 Heavy Agriculture Zone. This zone allows for a variety of agricultural uses, including general farming, wholesale horticulture, floriculture, nurseries, greenhouses, mushroom rooms, dairying, livestock production, fur farms, poultry raising, animal breeding, aviaries, apiaries, forestry, granaries, dehydration plants, and hullers. Certain uses would be allowed with a land use permit, such as wind energy conversion systems, publicly owned parks, publicly owned buildings, and outdoor commercial recreational facilities. Waste disposal sites, including dredge spoils disposition, would be allowed with a special permit.

Floodplain Construction – Jersey Island is within a Special Flood Hazard Area on FEMA and County maps. New construction is subject to the Floodplain Management Ordinance, which imposes stringent construction requirements to build in the floodplain. Buildings need to be raised above the base flood elevation (above the mean sea level) plus one foot of freeboard.

Delta Protection Commission Land Use and Resource Management Plan – The County must make findings that a project is consistent with the Land Use and Resource

Management Plan and forward its actions to the Delta Protection Commission for its review.

Delta Plan – The County will require a project proponent to comply with the Delta Plan goals and policies and the Delta Stewardship Council’s protocols for “covered actions.”

Building permits – Construction drawings will need to be prepared and submitted to the County for building plan check, permits, and inspections.

c. Other District-Owned Property

The Districts owns nearly 400 acres on the mainland adjacent to Jersey Island, which are not protected by levees. The mainland adjacent to District headquarters is within the Urban Limit Line, the City of Oakley, the secondary zone of the Delta, and designated in the Delta Plan as “priority habitat area” and “urban interface.”

Oakley’s General Plan designation for the mainland is Public/Semi-Public, and the Zoning is Delta Recreation. The mainland is also within the Special Flood Hazard Area and is subject to floodplain construction requirements. The purpose of the City’s Delta Recreation zoning is to preserve and protect land areas of special or unusual ecological or geographic interest and to promote a variety of passive recreational uses.

Although limited agricultural and commercial uses are provided for in the Delta Recreation Zone, they are allowed only as non-intrusive, secondary uses to the primary recreational uses associated with the natural Delta environment. Given these parameters, the mainland may be conducive for wind energy systems, solar arrays, or outdoor recreation. Development would have to comply with the Delta Stewardship Council’s regulations regarding “covered actions.”

d. Point of Contact with Agency

Will Nelson, Principal Planner
Contra Costa Department of Conservation and Development
(925) 674 7791
william.nelson@dcd.cccounty.us

e. References

Contra Costa General Plan Urban Limit Line
<http://cccounty.us/DocumentCenter/View/30951>

Contra Costa General Plan Land Use Section
<http://www.contracosta.ca.gov/DocumentCenter/View/30913>

Contra Costa Zoning Ordinance A-3 Zoning Designation
https://library.municode.com/ca/contracosta_county/codes/ordinance_code?nodeId=TIT8ZO_DIV84LAUSD_CH84-40HEAGDI

Flood Plain Management Ordinance
<http://www.contracosta.ca.gov/documentcenter/view/691>

2. Delta Protection Commission (DPC)

a. Regulatory Authority on Jersey Island

The Delta Protection Commission has jurisdiction on land uses in the Primary Zone of the Delta. Projects proposed within the Primary Zone must be consistent with the Delta Protection Commission's Land Use and Resource Management Plan, and are subject to review by the Commission. A primary function of the Delta Protection Commission is to maintain and implement a resource Management Plan for the Primary Zone of the Delta. The Land Use and Resource Management Plan guides projects impacting land use, agriculture, natural resources, water, levees, utilities and infrastructure. General plans and projects in the five Delta counties must be consistent with the Management Plan, and are subject to review by the Commission. The Commission acts as an appeal body if a project in the Primary Zone is challenged as inconsistent with the Management Plan. If the appeal is upheld, the proposed project must be brought into conformity with the Management Plan before it can proceed.

b. Impact on Alternate Uses

The Delta Protection Commission seeks to preserve agricultural opportunities in the Delta and on Jersey Island as a result of its jurisdictional authority. Uses that unreasonably restrict or eliminate agricultural uses may cause the Commission to question compliance with its Land Use and Resource Management Plan.

c. Other District-Owned Property

The mainland adjacent to District is within the secondary zone of the Delta. The Delta Protection Commission does not have direct land use authority in the secondary zone, unless the land uses cause negative impacts to land in the Primary Zone.

d. Point of Contact with Agency

Erik Vink
Executive Director
Delta Protection Commission
(916) 376-8941
erik.vink@delta.ca.gov

e. References

Land Use and Resource Management Plan
http://delta.ca.gov/land_use/land_use_plan/

3. Delta Stewardship Council (DSC)

a. Regulatory Authority on Jersey Island

The Delta Stewardship Council has jurisdiction within the legal boundary of the Delta and enforces the goals, policies, and recommendations in the Delta Plan. The Delta Plan has two co-equal goals:

1. Providing a more reliable water supply for California; and
2. Protecting, restoring, and enhancing the Delta Ecosystem.

In the Delta Plan, Jersey Island is designated with a Public/Quasi Public land use. It is identified as subtidal land, used for agriculture, primarily irrigated pasture.

b. Impact on Alternate Uses

The Delta Stewardship Council has jurisdiction when a state or local agency, such as the District, proposes a project that is a “covered action” in the Delta Plan. A covered action is defined as a plan, program, or project as defined pursuant to Section 21065 of the Public Resources Code that meets all of the following conditions:

1. Will occur, in whole or in part, within the boundaries of the Delta or Suisun Marsh;
2. Will be carried out, approved, or funded by the state or a local public agency;
3. Is covered by one or more provisions of the Delta Plan; and
4. Will have a significant impact on the achievement of one or both of the coequal goals or the implementation of government-sponsored flood control programs to reduce risks to people, property, and State interests in the Delta.

Unless otherwise exempt, there is a regulatory process that must be followed for any covered action, and a certificate of consistency that must be filed with the Delta Stewardship Council. The initial steps of the process include an option for an early consultation with the Delta Stewardship Council staff to review the consistency of the proposed action and to offer non-binding advice to the local agency. The certificate of consistency, which must be filed by the local agency, must include sufficient documentation to show the covered action is consistent with the Delta Plan by being fully transparent, disclosing potential environmental impacts, and identifying how best available science will be used in decision-making and adaptive management.

c. Other District-Owned Property

The mainland adjacent to District headquarters is in the secondary zone of the Delta. It is designated in the Delta Plan as “priority habitat area” and “urban interface.” The mainland may be conducive for wind energy systems, solar arrays, or outdoor recreation. Any project would have to comply with the Delta Stewardship Council’s regulations regarding “covered actions.”

d. Point of Contact with Agency

Cassandra Enos-Nobriga
Deputy Executive Officer, Planning
Delta Stewardship Council
(916) 445-0258
cassandra.enos@deltacouncil.ca.gov

e. References:

Delta Plan
<http://deltacouncil.ca.gov/delta-plan-0>

4. Reclamation District 830 (RD 830)

a. Regulatory Authority on Jersey Island

Reclamation District 830 is responsible for maintenance and levee restoration on Jersey Island. It performs levee maintenance, drainage, siphoning, pumping, and irrigation. RD 830 is self-permitting for improvements on Jersey Island if work is related to the sanitary sewer district mission. RD 830 is the legal entity that secures funding from the State for levee improvements, including millions of dollars in subvention funds from the Department of Water Resources (DWR).

b. Impact on Alternate Uses

Alternate uses need to be compatible with the responsibilities of RD 830 for maintenance and levee restoration. RD 830 prepares a five-year plan for planning, coordination, prioritization and financial management purposes. RD 830 may be an important entity or conduit to secure funding from the State or third parties for mitigation banking, carbon credits, and revenue sources from alternate uses.

c. Other District-Owned Property

N/A.

d. References:

RD 830 Jersey Island Final Five Year Plan, dated June 2012, prepared by MBK Engineers.

5. CA Department of Water Resources

a. Regulatory Authority on Jersey Island

DWR provides funds from the Delta Levees Maintenance Subventions Program and Special Projects Program to RD 830 for levee improvements on Jersey Island.

b. Impact on Alternate Uses

DWR may have a key role as a State agency partner for alternate uses involving habitat restoration, carbon credits, or mitigation banks. DWR has an interest in the integrity of Jersey Island for protection of the State's water supply, levee maintenance, habitat, recreation, and agriculture; however, it is not necessarily looking to purchase the Island. DWR's Real Estate Branch contacted its internal organizations to determine if there was any potential medium- or long-term interest in acquiring Jersey Island. None of the internal agencies expressed an interest in acquiring the Island.

c. Other District-Owned Property

There may be potential for the District to partner with DWR on other District-owned properties.

d. Point of Contact at Agency

Habitat restoration:

Patty Finfrock
DWR Staff Program Manager
(916) 651-0851
Patricia.Finfrock@water.ca.gov

Carbon sequestration/land subsidence reversal:

Bryan Brock, P.E.
DWR West Delta Program
(916) 651-0836
bpbrock@water.ca.gov

Land acquisition:

Linus A. Paulus, SR/WA
Chief, Acquisition and Appraisal Section
(916) 653-3947, office
(916) 952-5576, cell
Linus.Paulus@water.ca.gov

e. Resources

DWR Delta Website
http://www.water.ca.gov/delta_environment_home.cfm

6. CA State Lands Commission (SLC)

The State Lands Commission manages four million acres of tide and submerged lands and the beds of navigable rivers, streams, lakes, bays, estuaries, inlets, and straits in California. These lands, often referred to as “sovereign” or “public trust lands,” stretch from the Klamath River and Goose Lake on the north to the Tijuana Estuary and Colorado River on the south, and from the Pacific Coast three miles offshore on the west to world-famous Lake Tahoe on the east, and includes California’s two longest rivers, the Sacramento and the San Joaquin.

a. Jurisdictional Authority on Jersey Island

The SLC is the adjacent land owner. MRG secured a letter from the SLC regarding its jurisdictional authority on Jersey Island. This letter is attached as **Attachment 6**.

b. Impact on Alternate Uses

Any alternate uses that include activity below the mean high tide line surrounding Jersey Island would require SLC approval. It is unlikely that alternate uses landside of the levees would be impacted by SLC jurisdiction. Given SLC’s ability to make broader claims near waterways, it will be prudent to continue to keep SLC informed as alternate uses are considered.

c. Other District-Owned Property

No impact.

d. Point of Contact with Agency

Grace Kato
Assistant Chief, Land Management Division
California State Lands Commission
(916) 574-1227
Grace.Kato@slc.ca.gov

e. Resources

None.

7. CA Department of Fish and Wildlife (DFW)

a. Regulatory Authority on Jersey Island

The California Department of Fish and Wildlife has jurisdiction to the hinge of the levee on Jersey Island. The Federal Department of Fish and Wildlife (DFW) monitors impacts to species and habitats. The District has a Routine Maintenance Agreement (RMA) that covers many aspects of the District's maintenance responsibilities, and allows for various types of trimming, pruning, and clearing, dependent upon multiple factors, including time of year. The RMA also allows for small erosion repair work at sites that will not place rock or fill in the water. The RMA was developed through arbitration as described in the State of California's Department of Fish and Game Code, and complies with CEQA's Categorical Exemption requirements and the No Net Loss of Habitat requirements of the Delta Levees Program.

b. Impact on Alternate Uses

The DFW will be notified and engaged as part of the environmental review for new uses that may have an impact on species and habitats. Impacts will need to be identified and mitigated as part of the CEQA process.

c. Other District-Owned Property

N/A.

d. References

None.

8. Central Valley Flood Protection Board (CVFPB)

a. Regulatory Authority on Jersey Island

The Central Valley Flood Protection Board has the power to determine that a reclamation district is not satisfactorily maintaining its levees and flood control structures, causing the California DWR to declare an area as a maintenance area.

b. Impact on Alternate Uses

The CVFPB is expected to have limited involvement on Jersey Island. It is typically not involved in non-project (private) levees, such as Jersey Island.

- c. Other District-Owned Property
N/A.
 - d. References
None.
- 9. US Army Corps of Engineers (USACE)
 - a. Regulatory Authority on Jersey Island
The US Army Corps of Engineers has jurisdiction below the mean high water mark.
 - b. Impact on Alternate Uses
The USACE will require a 404 Permit if construction work is below the mean high water mark. The USACE will be involved as a permitting agency for dredge spoils.
 - c. Other District-owned Property
N/A.
 - d. References
None.

IV. Property Ownership Risks

Property owners in California assume a variety of risks. It is important for property owners to acknowledge those risks and to the extent financially feasible implement mitigation strategies. The key risk factors for the District as the owner of Jersey Island include the following:

A. Property Condition

1. Levee failure – While RD 830 is responsible for the maintenance and repair of the levees, the District may be required to bear a portion the costs of damage to the Island in the event of a levee failure. Although the State has funded the significant majority of the costs of levee maintenance and enhancement in the past, there is no guarantee that the funds will be available in the future.
2. Subsidence – Parts of Jersey Island are subsiding. This subsidence may result in additional costs related to levee maintenance and infrastructure maintenance on the Island.
3. Earthquake risk – A major earthquake could induce further subsidence and potentially liquefaction. Levee damage in an earthquake could impact Jersey Island significantly.
4. Outfall Pipeline and Outfall Structure – Maintenance and repair of the District’s outfall pipeline and outfall structure represent a significant cost liability should they fail or be severely damaged.
5. Bridge – Jersey Island is connected to the mainland via a bridge. The bridge is owned by Contra Costa County. Bridge failure would increase the District’s current operations costs if the County did not fund repairs, etc.

B. Fiscal Condition

1. Rising labor costs – The District’s personnel costs involved in the operation of the Island are a principal factor contributing to the Island operating at a deficit. Pension and post-retirement costs are significant and growing components of the District’s personnel costs. California agencies participating in the CalPERS pension program will be required to address the significant increases in pension costs in the coming decade. This growth will further negatively impact the financial performance of Jersey Island. The District currently funds several employee post-retirement benefits (OPEB). Funding of OPEB responsibilities will place additional pressure on District labor costs.
2. Reliance on RD 830 – The costs related to levee maintenance are partially reimbursed by the State of California through subventions. Historically, this has been a reliable source of funds. The source of funds varies from year to year and there is no statutory commitment by the State of California to continue this revenue source at a certain level. If the revenue source is eliminated, or significantly reduced, the District would face additional cost pressure for its share of levee maintenance.

V. Strategies to Enhance Fiscal Performance

As discussed in the previous sections, the physical and regulatory constraints of Jersey Island limit the opportunities for alternate uses that would enhance the fiscal performance of Jersey Island. This section provides MRG’s preliminary assessment of a menu of alternate uses that could be pursued. The ways in which the Island would be put to alternate uses vary, as do the means by which the District could deploy the uses (e.g. lease agreements, partnership agreements or fee title disposition of the property). The uses could range from disposition of all or part of the Island. Jersey Island is a complicated asset. If the District decides to pursue alternate uses, developing clear strategies for soliciting alternate user proposals will be important.

MRG believes that two of the key issues that will impact decisions on alternate uses are:

- Is continued ownership of Jersey Island in the medium- to long-term in the best interests of the District?
- If the District finds a suitable buyer, how will the District guarantee its access to its outfall/disposal facilities?

Based on the physical characteristics of the Island, the risk of significant future cost events, and the certainty of future increased District labor costs, MRG believes that a strategy to ultimately dispose of the Island or, at a minimum, reduce operating costs and bring in revenue generating and risk spreading partners is prudent. This issue is discussed further in the Recommended Next Steps section of this report.

The final component of this section includes a discussion of alternate uses that were investigated on Jersey Island that could be considered by the District as development opportunities for other District-owned properties.

A. Land Acquisition by Public Agencies

Two public agencies with significant land holdings and interest in the Sacramento Delta are the DWR and the Los Angeles Metropolitan Water District. Both agencies were contacted regarding their potential interest in acquiring Jersey Island. At this time, both clearly indicated that they have no plans to acquire the Island. Both agencies were helpful in their responses and as outlined below, provided information and referrals to other potential purchasers and/or agencies with interests in Jersey Island.

The Metropolitan Water District of Southern California (MWD)

MWD is a regional wholesaler that delivers water to 26 member public agencies which provide water to 19 million people in six southern California counties. MWD owns and operates an extensive system, including the Colorado River Aqueduct, 16 hydroelectric facilities, nine reservoirs, 819 miles of large-scale pipelines, and five water treatment plants. MWD imports water from the State Water Project in Northern California and the Colorado River to supplement its local supplies.

The District has been actively involved for a number of years in developing a program to ensure delivery of suitable water to its users in Southern California. The project, called the “California

Water Fix,” would develop a twin tunnel and reservoir system designed to ensure delivery of water to the canal system that transports it to Southern California, and to increase storage capacity in the event of a drought. As part of the District’s planning process, in 2016 it purchased five islands in the Sacramento Delta. The District indicated that the islands were strategically located and would provide potential mitigation for the tunnel construction, resources associated with the construction, and enhancement opportunities for important Delta species.

MRG spoke with several District representatives, including Lilly Shraibati, the Manager—Real Property Group, and her associates Sherman Hom and Angela Wright, as well as Laura Simonek of the Sacramento Office, who all deal with Delta issues for the District. As a result of those conversations, MRG learned the following:

Although the District has acquired islands in the Delta, and is conducting conversations with the DWR on another possible purchase, the DWR takes the lead on identifying islands and properties of potential interest to both parties. MWD does not act independently of DWR on Delta-related issues.

In summary, discussions with District Staff included the following:

- MWD works with the State in looking at properties in the Delta with “good restoration potential” that includes properties that meet State CEQA and federal Endangered Species Act (ESA) requirements. These resources will assist the agency in offsetting the environmental impact of the proposed twin tunnels, and improve environmental conditions in the Delta.
- Jersey Island is not currently on MWD’s list—the Island’s significant subsidence disqualifies it from being a “prime restoration property” or being identified as having high value as a mitigation property for MWD’s purposes.
- The District’s desired prime characteristics are properties with elevations that are close to surrounding water levels and tidally influenced.
- MWD suggested that the Army Corps may have interest in the Island as a dredge spoils site.
- The District staff also indicated that rice farming or tule growth may be of promise in bringing the Island to desirable property status.
- They also suggested PPAC/Eco Restore/Delta Stewardship Council as information sources.

The California Department of Water Resources

The California DWR was created in 1956 by the State Legislature to plan, design, construct and oversee the building of the nation’s largest state-built water development and conveyance system.

DWR is intimately involved in California’s water supply by managing the State Water Project (SWP), which provides water supply for an estimated 25 million Californians and about 750,000 acres of farmland. The SWP, spanning more than 600 miles from Northern California to

Southern California, includes 34 storage facilities, 20 pumping plants, five hydroelectric power plants, four pumping generating plants, and approximately 700 miles of canals, tunnels, and pipelines.

DWR is also responsible for maintaining and enhancing the Delta Ecosystem. The Delta Ecosystem Enhancement Section is an interdisciplinary team of scientists and engineers who develop, enhance, and maintain ecologically effective habitats that benefit the overall ecological health of the region and its native species by:

- Coordinating environmental compliance requirements for the Delta Levees Program, including Habitat Mitigation;
- Implementing the Delta Levees Program's ecosystem enhancement mandate, serving as the Program's environmental arm and having a primary role in providing environmental oversight for Reclamation District projects funded by the Program;
- Working with other local, state, and federal entities to improve habitat conditions in the Delta and Suisun Marsh; and
- Planning and coordinating habitat monitoring and land management of Program Habitat Enhancement sites.

MRG contacted a number of personnel at the DWR who have varied responsibilities associated with the Delta and land acquisition. MRG's primary point of contact to ascertain DWR's interest in Jersey Island is Linus Paulus, Chief, Acquisition and Appraisal Section. Mr. Paulus initiated the process to determine DWR's program-level interest. DWR's Real Estate Branch reached out to its internal organizations to determine if there was any potential medium- or long-term interest in acquiring Jersey Island. They were no responses over the 30-day period.

The results of the discussions on Carbon Credits are contained in that section of the report, as are the results of the conversations regarding Mitigation Banks.

1. Compliance with Zoning Regulations

Disposition of the property to a public agency would likely require an environmental review as part of the disposition action.

2. Interest Among Potential Users

None identified.

3. Financial benefit

Subject to negotiation.

4. Risk mitigation

Disposition would reduce the District's exposure to risk factors associated with the ownership of Jersey Island

B. Transfer of Water Rights / Use of District Recycled Water

The Jersey Island property and Reclamation District 830 hold several types of water rights that entitle the use of water directly from the surrounding Delta. These rights have been used and maintained by the District since it acquired the Island. The total available water exceeds the current operational needs of the agricultural and cattle uses on the Island, and there has been discussion of the possible transfer of a portion of those rights to another party.

Our discussions with District staff have confirmed that although the water rights exist and may be available, the quality of the water varies considerably with the time of year, the yearly annual rainfall, and the available volumes of water moving through the Delta throughout the year. The salt water intrusion, which varies in intensity due to the factors above, significantly reduces the reliability of the water to potential users.

In addition, MRG has also confirmed that reallocation of water rights or “wheeling” of water from one area to another is a difficult and not frequent practice. Regulatory agencies and water purveyors generally constrain the ability of the water to be moved or reallocated to the southern canal system for irrigation purposes.

MRG has been in conversations with the Contra Costa Water District (CCWD) staff regarding the CCWD’s potential interest in the District’s water rights. The District enumerated the issues with the quality and indicated that it has very early water rights that permit it to acquire water from the lower salinity areas of the Delta, and that the District is not currently in need of an additional supply.

CCWD has indicated a strong interest in meeting with Ironhouse District staff to discuss areas of mutual interest, including the potential for reuse of the District’s recycled water for a CCWD project. The recent drought led the District to develop a partnership with 11 other water using agencies to jointly explore the expansion of the Los Vaqueros Reservoir. During the drought, the District was able to capture excess water from the Delta, transmit it to Los Vaqueros and use it as a supplemental water source. The District and the 11 agencies have completed a review of the potential expansion for the Reservoir, which would allow it to significantly increase storage. The increased storage will serve as a source of water for the participants when their supplies are interrupted or their allocations are significantly reduced by drought.

Of significance to the District is the potential of the addition of a “high lift” pump from the CCWD canal that would allow pumping of water to the expanded reservoir. The canal has access to the Rock Slough area of the Delta, which is not subject to the constraints many of the participating agencies face in their access to Delta sources.

The proximity of the District treatment facility and existing outfall structure could simplify the District’s use of its recycled water to augment the Los Vaqueros storage site when that use is allowed in the future. This use could potentially be economically advantageous to the District.

The District staff met with the CCWD Staff on December 4th to discuss the potential for CCWD’s use of the District’s recycled water, the potential for management of the District’s water rights, and other potential joint venture activities. The District staff and CCWD staff will continue to explore these areas of mutual interest.

1. Compliance with Zoning Regulations

Transfer of water would not be subject to a zoning review. Any new infrastructure necessary to accommodate the transfer would be subject to review.

2. Interest Among Potential Users

CCWD.

3. Financial benefit

Subject to negotiation.

4. Risk mitigation

None.

C. Park Uses

MRG contacted the East Bay Regional Park District (“Park District”) to discuss its potential interest in Jersey Island, and held several meetings with District Land Acquisition and Planning staff. Park District staff also attended one of the meetings.

The meetings were productive, and the Park District staff provided background information regarding discussions held a number of years ago with District staff regarding potential Park-related activities on Jersey Island. In addition, the Park District staff will be meeting with the Park District Board to review the District’s long-term real estate planning interests. At this time, it is premature to assume the outcome of those discussions or speculate on the Park District’s interests in installing facilities or improvements on the Island. Park District staff indicated they anticipate meeting with the Park District Board at its December meeting and will contact Ironhouse Sanitary District staff to discuss the results.

1. Compliance with Zoning Regulations

Development of a portion of Jersey Island for a public park use would likely comply with the zoning regulations for the site.

2. Interest Among Potential Users

None confirmed at this time.

3. Financial benefit

Subject to negotiation.

4. Risk mitigation

Limited.

D. Carbon Credits

As farmers in the Delta churn up the peat soils to dry them for planting, the carbon in them reacts with oxygen in the air to form the greenhouse gas carbon dioxide (CO₂), which is soon gone with the wind, along with the soil. Peat soils oxidize and disappear. Because the soil keeps disappearing, farmers dig deeper, and the islands keep sinking. Farming peat soils emits a substantial amount of carbon dioxide. These invisible greenhouse gasses that emerge from the Delta under the “business as usual” baseline create an opportunity on the carbon market.

California’s Greenhouse Gas Reduction Law (AB 32) requires industries that are heavy polluters to reduce or offset their emissions. One of the options to reduce emissions is to participate in the State’s cap and trade program. The cap and trade program allows industries to purchase “carbon credits.” For example, if a manufacturer has reduced its emissions to the extent practical, but still exceeds the threshold, it may purchase carbon credits as a way to mitigate its impacts in the air basin. The carbon credits fund programs that reduce emissions in the air basin that otherwise may not have been feasible. In many communities, this is the funding that has made it possible for schools and municipalities to convert school busses and mass transit to cleaner fuels. This reduces emissions in a defined air basin and provides a public benefit: cleaner air where people live and work. There is an effort to include carbon sequestration, or carbon farming, into the cap and trade program. If this happens, there would be a market for tule and rice farming in the Delta.

There are a number of agencies involved in pilot programs of carbon farming in the Delta. A carbon methodology was recently approved for carbon farming, which is one of the mandatory steps in the long process to be included in the cap and trade program. In the pilot programs on Twitchell Island and Sherman Island, the scientific teams are finding that each acre converted to wetlands keeps about five tons of carbon dioxide out of the air per year compared to those acres kept for agriculture.

The other benefit of carbon farming is that it reverses land subsidence in the Delta. Instead of losing two to three inches of soil each year, the wetland plants build up the soil with each growing season. Restoring the marsh habitat allows the peat to re-establish itself. The pilot programs are indicating that tule farming adds two to three inches of soil each year. This is a slow process, but certainly in the right direction for reversing land subsidence. Overall, the benefits of carbon farming are:

- Halts the soil loss;
- Reverses the effects of subsidence;
- Reduces the cumulative stress on the levees;
- Decreases the risk of levee failure, flooding, and costs of recovery;
- Sequesters carbon;
- Generates carbon credits;
- Creates habitat;
- Reduces greenhouse gas emissions;
- Provides climate change adaptation; and

- Preserves open space.

A succinct and interesting overview of the carbon farming in the Delta prepared by DWR is included in **Attachment 7**.

1. Compliance with Zoning Regulations

The farming of wetland plants, such as tule or rice, is permitted by right in the agricultural zone and therefore, no explicit approvals are required from the County.

2. Interest Among Potential Users

The pilot programs are developing the science and methodology for successful farming operations. The next step would be to expand the pilot programs to other agencies and locations to further the science and benefits.

3. Financial benefit

a. One time v. ongoing revenue stream

Uncertain. Subject to price of carbon credits in future. At this time, carbon credits would only apply to those businesses that want to voluntarily reduce their carbon emissions. This would not provide a significant revenue source to cover the costs of the farming. However, if carbon farming is incorporated into the cap and trade program, the revenue may be in the initial range of \$150 per acre per year. If carbon farming is stacked with other revenue streams, such as mitigation banking or species habitat, this may be a meaningful revenue source.

4. Risk mitigation

Carbon farming would increase the soil elevation by two to three inches per year in the areas where the peat soils exist. Over a four to six-year period, carbon farming could increase soil elevation a foot or more. This would halt soil loss, reverse the effects of subsidence, reduce the stress on the levees, and decrease the risk of levee failure, flooding, and costs of recovery.

E. Dredge Spoils Disposition

Agencies performing dredging operations are required to dispose of the “spoils” in a manner consistent with local, State and federal regulations. Disposition locations may require that the spoils are tested and comply with certain environmental standards prior to acceptance.

The Port of Stockton investigated Jersey Island as a site for dredge spoils within the past 10 years. The Port of Stockton and the District were unable to come to terms acceptable to both parties, and District did not proceed with this project.

Close coordination with the California Regional Water Board 5 (Central Valley) is important. MRG has discussed the opportunity for dredge spoils disposition on Jersey Island with a regulatory agency representative and consultant that has significant experience with dredge spoils disposition in the Delta.

MRG attended (with District representatives) the Bay Planning Coalition Dredging and Beneficial Reuse Workshop on November 13, 2017, and identified two mitigation projects that take beneficial materials. We have been in contact with several of the facilities' operators.

1. Compliance with Zoning Regulations

Contra Costa County permitting and Regional Water Board Region permitting would be required. A CEQA EIR would be necessary.

2. Interest Among Potential Users

Yes. There appears to be a long-term demand for dredge spoils disposition locations. Analysis of the site for this use would require identification of a private firm and/or public agency willing to finance the assessment, and if feasible, future permitting and development costs.

3. Financial Benefit

Uncertain. Potential financial benefits are subject to negotiation with a site developer and the value of dredge spoils disposition.

4. Risk Mitigation

Transfer of property could transfer responsibility for a portion of levee maintenance costs and property maintenance costs. Dredge spoils disposition on a portion of the Island could also mitigate subsistence.

F. Wind Energy Generation

Wind farms have been developed to the north of Jersey Island in Solano County. Key factors impacting feasibility include geotechnical condition of the Island, expiring federal tax credits, and the entitlement process.

MRG has spoken with a representative of MCE about potential interest in Jersey Island. In April 2018, MCE will become the official electricity provider in Oakley, unincorporated Contra Costa County and other Contra Costa County jurisdictions. MCE expressed preliminary interest in assessing the feasibility of wind power on Jersey Island. MCE would assess preliminary feasibility, and if the project was deemed feasible, market the opportunity to wind farm developers.

1. Compliance with Zoning Regulations

Contra Costa County permitting would be required. Current zoning of Jersey Island allows wind generation systems. Compliance with CEQA would be a part of the County permit application process. An EIR would likely be required.

2. Interest Among Potential Users

Potential interest to conduct feasibility study.

3. Financial Benefit

Uncertain. Subject to feasibility analysis. If wind power generation is feasible, could create ongoing revenue stream to the District.

4. Risk Mitigation

Limited. Real estate transfer structure would not likely include fee title transfer of property and shift of expense responsibility.

G. Mitigation Banks

According to the National Mitigation Banking Association (NMBA), mitigation banking is defined as “the restoration, creation, enhancement, or preservation of a wetland, stream, or other habitat area undertaken expressly for the purpose of compensating for unavoidable resource losses in advance of development actions, when such compensation cannot be achieved at the development site or would not be as environmentally beneficial.” There are mitigation bank developers that are active in the Delta region.

Mitigation bank development firms conduct a preliminary review of the property, and if there is perceived potential, conduct a feasibility study over a 6- to 12-month period to assess whether all or part of Jersey Island would be suitable for one or more mitigation banks. If feasibility is established, a real estate transaction (e.g. title sale of property or perpetual use agreement) could be negotiated between the District and the developer. As part of the development of mitigation banks, endowments are created and funded by the developer to ensure the perpetual maintenance of the bank.

Mitigation banks are developed and endowed to be maintained in perpetuity. Any agreement with a mitigation bank developer would need to include the sharing of costs (e.g. contribution to levee maintenance costs if any, mitigation relative to future levee failure, and other issues related to long-term investments).

1. Compliance with Zoning Regulations

Compliant. Limited Contra Costa County permitting would be required.

2. Interest Among Potential Users

Yes. Mitigation bank development firms have expressed potential interest in securing an exclusive right to conduct a feasibility study of the mitigation bank potential of Jersey Island.

3. Financial Benefit

A Purchase and Sale Agreement is the most likely transaction structure. One-time payment or ongoing payments could be negotiated as part of a Purchase and Sale Agreement.

4. Risk Mitigation

Transfer of property could transfer responsibility for a portion of levee maintenance costs and property maintenance costs. If wetland mitigation is involved, there may also be benefits of reversing soil subsidence and reduced stress on the levees.

H. Other Uses

The following other uses were assessed briefly. These uses are being studied by others, are not recommended for further consideration at this time, or may be more suitable for other District-owned property:

1. Bio-solids

Another consultant is assessing the feasibility of bio solids on Jersey Island.

2. Solar

There is currently not a zoning process that allows for the development of solar farms on agriculturally zoned property. Additionally, the costs and risks associated with building a solar farm in a levee supported flood plain are significant. The market does not appear to be feasible at this time. Consideration of additional solar facilities on other District-owned property could be pursued.

3. PG&E and WAPA facilities

MRG engaged with the two principal easement holders on Jersey Island regarding their respective interest in Jersey Island. Neither expressed interest in land-related uses associated with their respective easements and facilities on the Island. A map describing the easements is included as **Attachment 8**.

4. One time uses (e.g. Concerts, rodeos)

MRG discussed two uses (concerts and rodeos) that were mentioned during the September 19, 2017 District Board meeting with Contra Costa County Planning staff. Both uses could be allowed through the County's one-time event permit processes (temporary use permit). The uses would not be allowed on a permanent basis due to their urban nature. MRG did not assess the feasibility of these uses.

5. Agricultural uses

California is experiencing significant interest in institutional marijuana growing under pending regulations from the State. In light of the conflict between State and federal law regarding the legality of marijuana, MRG does not recommend that this use be pursued on Jersey Island. MRG did not investigate the expansion of agricultural uses on Jersey Island beyond the discussion in the carbon credit section of the report.

VI. Recommended Next Steps

The purpose of this section is to describe recommended actions to enhance the financial performance of Jersey Island. The section is divided into two parts. The first part includes general recommended property owner actions irrespective of whether the District ultimately decides to pursue one or more of the specific alternate uses. These actions will ensure that District staff maintains a basic understanding of the regulatory environment that impacts this complex asset and ensures that current operations are as cost efficient as possible.

The second part of this section includes specific actions – potential next steps if the District is interested in pursuing alternate uses. The introduction of alternate uses on Jersey Island will in all cases other than fee title disposition, involve the following phases:

- Feasibility Analysis;
- Negotiation of Financial Terms;
- Permitting Process; and
- Transfer of property (through license, lease or sale).

General Actions

The following general next steps are recommended:

A. Maintain ongoing communications with Contra Costa County Planning Division

Contra Costa County will be updating its General Plan in the next few years. Maintaining ongoing communications with the County will ensure the District is engaged in any potential changes to the General Plan Designation, Zoning Ordinance or other County regulations related to Jersey Island.

B. Maintain ongoing communication with other regulatory agencies, including: the Delta Protection Commission, Delta Stewardship Council, California Department of Water Resources, and California State Lands Commission.

Communicating with these agencies on a quarterly basis to understand the State of California's interest in Jersey Island, and any new or proposed regulations that may impact Jersey Island and adjacent properties.

C. Maintain ongoing communication with the East Bay Regional Park District and Contra Costa Water District

Communicating with these agencies on a quarterly basis will help identify interest in Jersey Island and other potential areas of mutual interest.

D. Commission a current preliminary title report

Understanding any title conditions on the property that could limit or impact development will allow for more expeditious negotiations of agreements with potential partners on Jersey Island.

E. Develop a risk analysis/emergency action plan for a seismic event

Understanding the District's cost exposure in the event of a catastrophic event on Jersey Island could help the District as it plans for the future management/disposition of the asset.

F. Evaluate the current cattle operation

Review the cost effectiveness of the current cattle operation (e.g. staffing costs, revenue generation) compared to other similarly sized cattle operations. This analysis would be similar to other assessments of the District's operations. The analysis would assess the long-term viability of the operation and specific recommendations that could enhance financial performance.

Specific Actions

The following specific actions are recommended to fully explore revenue-generating opportunities. A number of actions described in the following section may occur in parallel with each other. This will depend on the interest of the various entities (e.g. location on Jersey Island, willingness to enter into parallel feasibility periods with alternate uses, compatibility of the uses). It will be important to coordinate these activities as the feasibility analyses proceed.

Very preliminary timelines are provided for each action. These timelines are preliminary and subject to confirmed interest and negotiations with the selected partner organizations.

A. Interview and select a mitigation bank developer. Negotiate an Exclusive Right to Negotiate Agreement (ERNA) that would provide time for the developer to assess the feasibility of mitigation banks on Jersey Island.

Mitigation banks provide an opportunity to reduce costs risk on Jersey Island through the disposition of all or part of the Island. The mitigation bank developers are also potential partners in the emerging carbon credit market.

Preliminary Timeline:

April 2018 – Interview and select mitigation bank developer;

June 2018 – Board considers exclusive right to assess mitigation bank opportunities agreement with mitigation bank developer;

July 2018-June 2019 – Mitigation bank developer assesses feasibility;

July 2019-November 2019 – If feasible negotiate land sale / lease agreement;

December 2019 – Execute land sale / lease agreement; and

2020+ – Commence development of mitigation bank.

B. Track the opportunity for carbon credit sequestration

The Delta Conservancy (under the Delta Stewardship Council), DWR, and Hydrofocus recently won approval from the American Carbon Registry for a new carbon banking methodology. This means wetland restoration in the Delta can now generate money by selling greenhouse gas credits to industries that generate pollution. This is an emerging field that may be relevant to a mosaic of solutions to restore the soil, reduce stress on the levees, reduce liabilities, and add to revenue sources.

Preliminary Timeline:

February-June 2018 – Maintain monthly contact with Delta Conservancy and DWR regarding progress of developing carbon banking market; and

July 2018 (or at point in time when State of CA has monetized the carbon banking opportunity) – Evaluate whether the revenue and other benefits (reversal of subsidence) is of benefit to the District.

- C. Investigate whether developers of dredge spoils disposition locations would fund a feasibility analysis of Jersey Island.

There are a number of dredge materials-generating agencies in the vicinity of Jersey Island who may potentially be interested in using the Island for depositing material. The Port of Stockton has expressed interest in use of a portion of the Island in the past and will meet with the District to discuss future opportunities. We have also contacted the operator of the Montezuma Slough restoration project regarding their potential interest in the Island. There are likely a number of other opportunities that will need to be explored and evaluated should the District decide to consider this use for the site.

Preliminary Timeline:

February-June 2018 – Evaluate opportunity with dredge spoils disposal site developers;

July-November 2018 – If interest, solicit proposals and select dredge spoils disposal site developer;

December 2018 – Board considers exclusive right to assess dredge spoils disposal site opportunity with developer;

January 2019-June 2020 – Developer assesses feasibility;

July 2019-December 2020 – If feasible, District and developer negotiate land sale / lease agreement, developer submits permits as needed (local, State and federal permits, environmental impact review); and

2021+ – If permit process is successful, commence development of dredge spoils management activities.

- D. Negotiate an Exclusive Right to Negotiate Agreement (ERNA) with MCE to assess the feasibility of wind power generation on Jersey Island.

MCE has expressed preliminary interest in assessing the feasibility of wind power on Jersey Island. Negotiation of an ENRA would allow MCE to assess preliminary feasibility, and if the project was deemed feasible, market the opportunity to wind farm developers. It is anticipated that the feasibility assessment would take 24 to 36 months, depending on the availability of wind data on and around Jersey Island.

Preliminary Timeline:

February-May 2018 – Negotiate an Exclusive Right to Assess Wind Energy Opportunities with MCE;

June 2018 – Board considers exclusive right to assess wind energy opportunities agreement with MCE;

July 2018-June 2021 – MCE assesses feasibility of wind farm generation;

2021+ – If feasible, MCE submits permit applications, MCE solicits proposals for development of wind farm, District negotiates use agreement with MCE; and

If entitlement process is successful, development of wind farm commences.

- E. Identify the feasibility and scope of biosolids on Jersey Island as part of the mosaic of alternate uses.

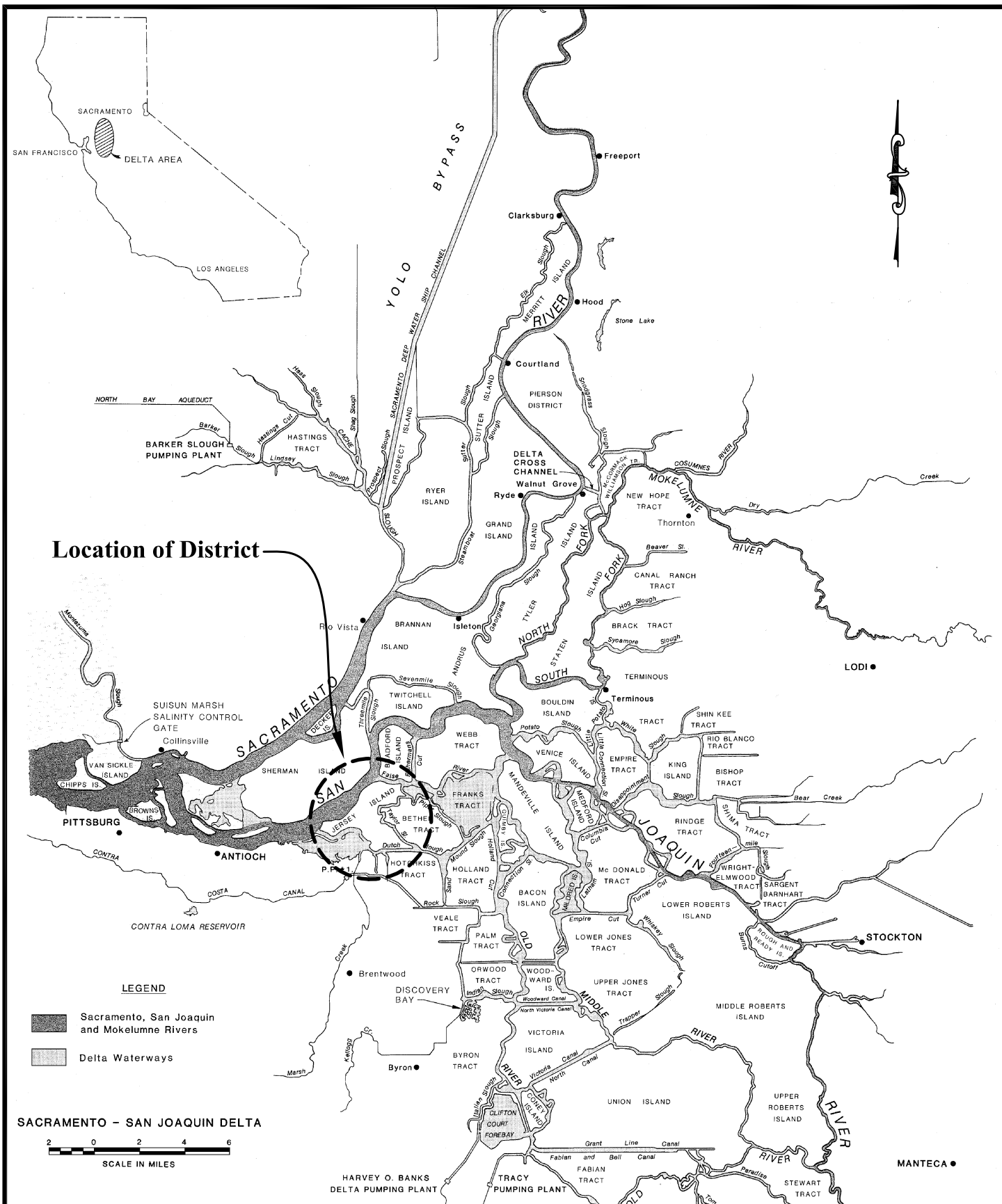
A separate analysis is being performed by another consultant regarding the feasibility of expanding biosolids operations on Jersey Island. The conclusions from that study should be considered by the Board as another opportunity for revenue generating uses on the Island.

- F. Identify a community outreach process to inform and involve rate payers and stakeholders in alternate uses on the island.

Engaging rate payers in the ultimate strategy for Jersey Island will be important. As plans emerge, including progress in written District communications, conducting regular workshops / updates at Board meetings, and providing information regarding next steps in the entitlement process for new uses are examples of the types of communication that can help ensure successful and well-understood new revenue generating uses on Jersey Island.

Attachments

1. Vicinity Map
2. Elevation Map
3. California Natural Diversity Database (CNDDDB) map
4. Contra Costa County Urban Limit Line
5. Delta Primary Zone
6. California State Lands Commission jurisdictional impact letter
7. Carbon Farming in the Delta (DWR, Bryan Brock, October 2012)
8. Infrastructure Map



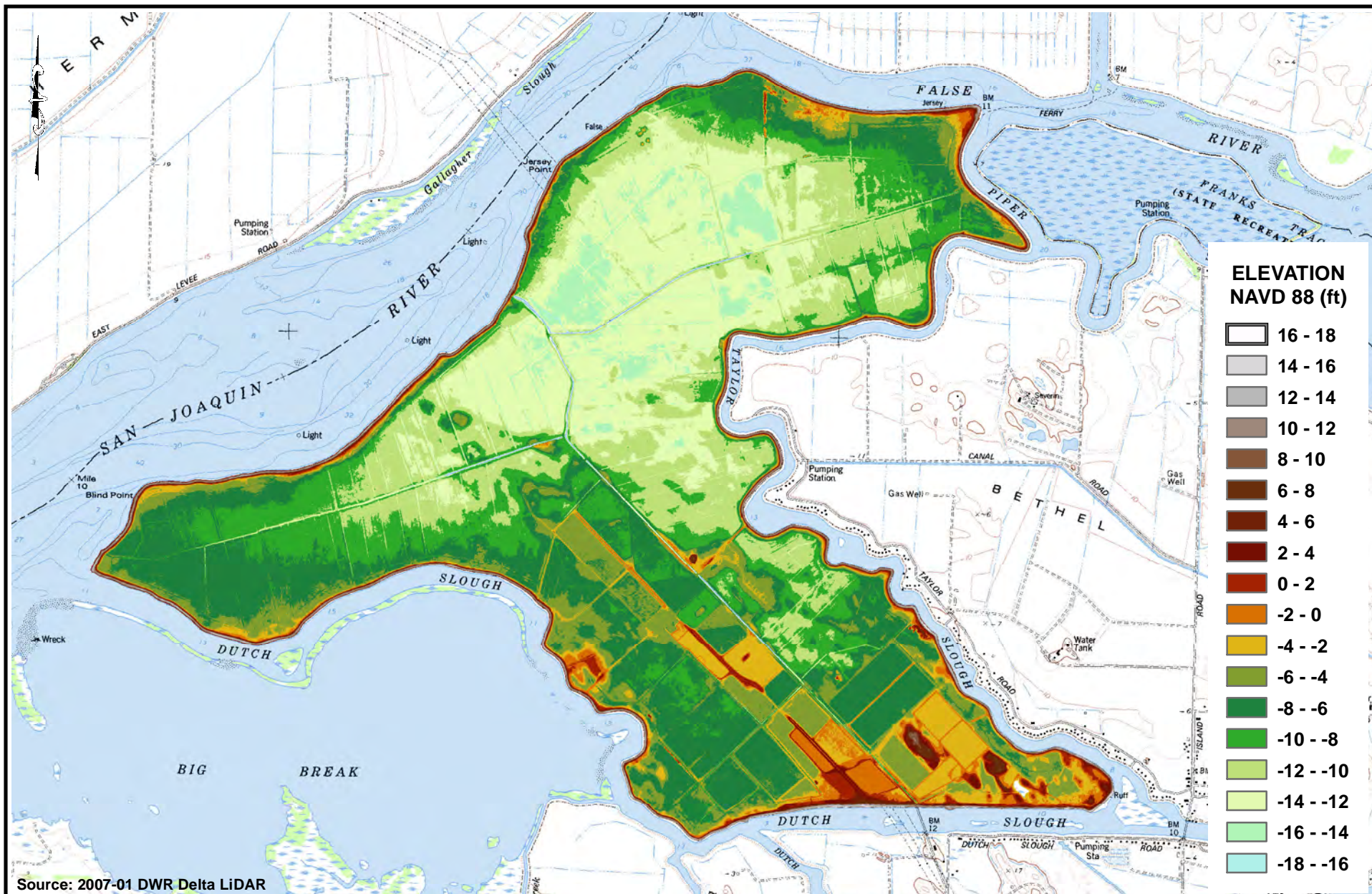
MBK
ENGINEERS

1771 Tribute Road, Suite A
Sacramento, California 95815
Phone: (916) 456-4400 • Fax: (916) 456-0253

**RECLAMATION DISTRICT NO. 830
JERSEY ISLAND**

VICINITY MAP

SCALE:	AS SHOWN
JOB NUMBER:	4155-11
DRAWN BY:	JB
DATE:	02/18/2011
SHEET:	1 OF 6



MBK
ENGINEERS

1771 Tribute Road, Suite A
Sacramento, CA 95815
Phone: 916-456-4400 - Fax: 916-456-0253

RECLAMATION DISTRICT NO. 830
JERSEY ISLAND

DISTRICT ELEVATION EXHIBIT

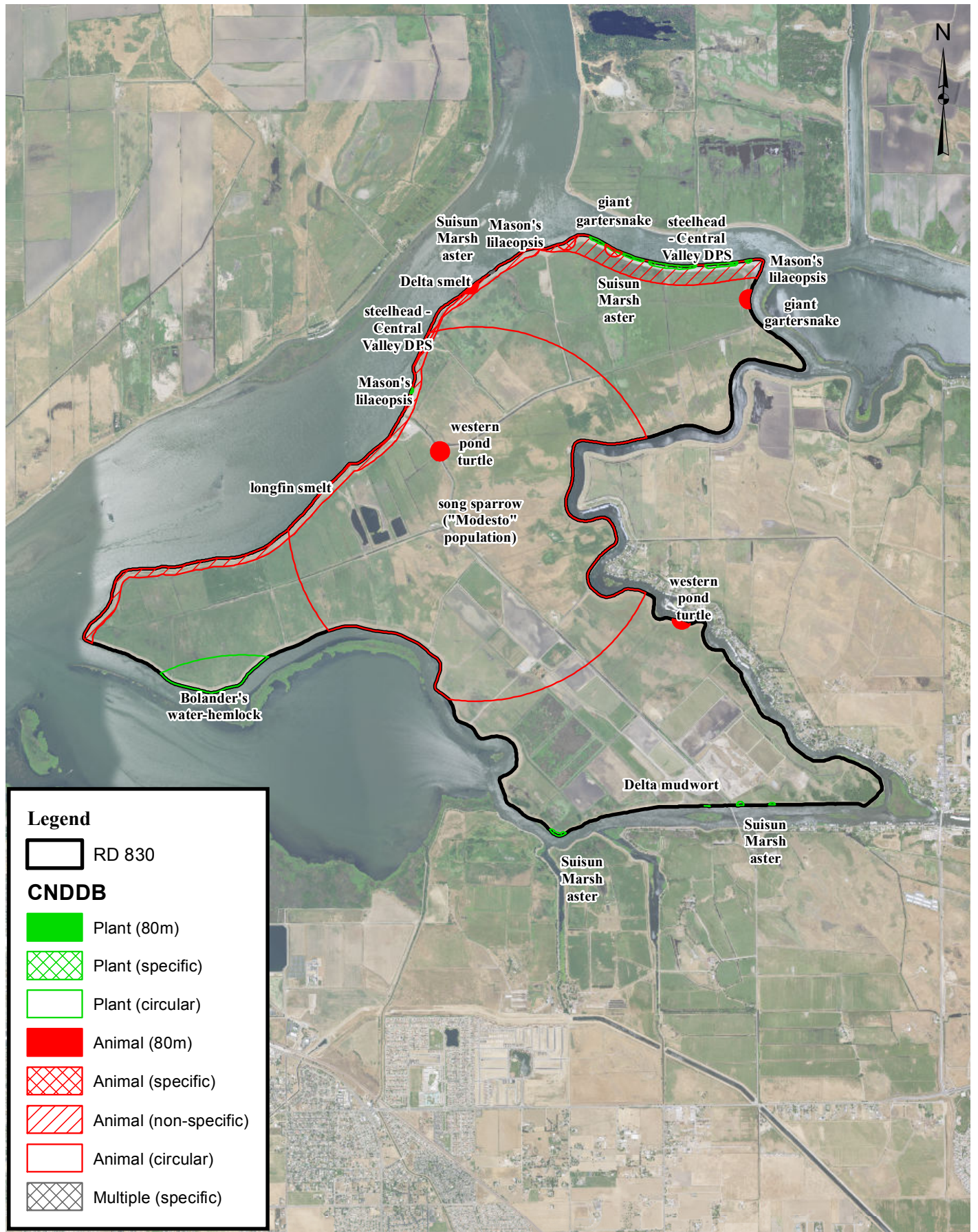
SCALE: 1" = 3000'

JOB NUMBER: 4155-11

DRAWN BY: MB

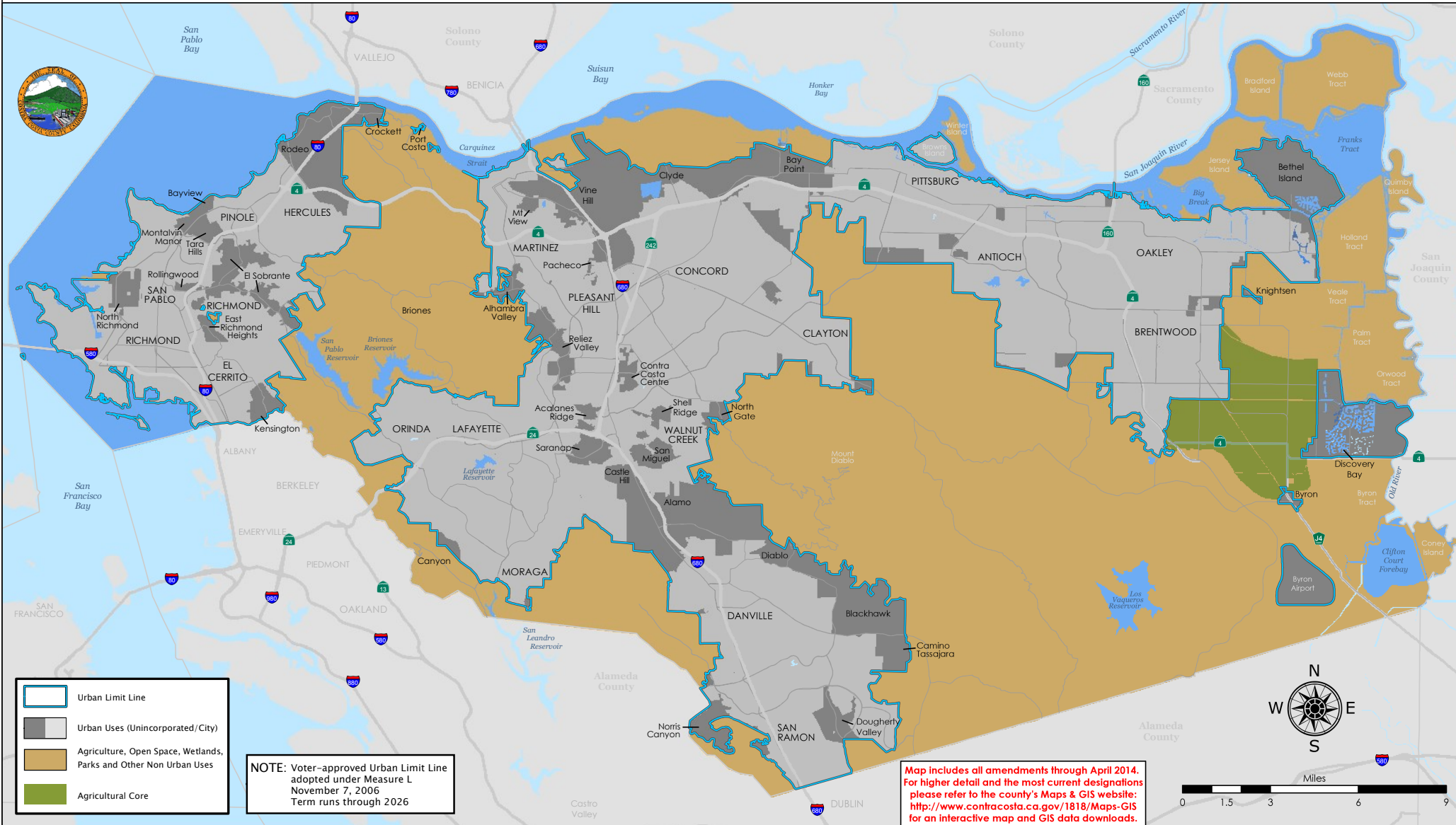
DATE: 03/14/2011

SHEET: 3 OF 6



CONTRA COSTA COUNTY

Urban Limit Line

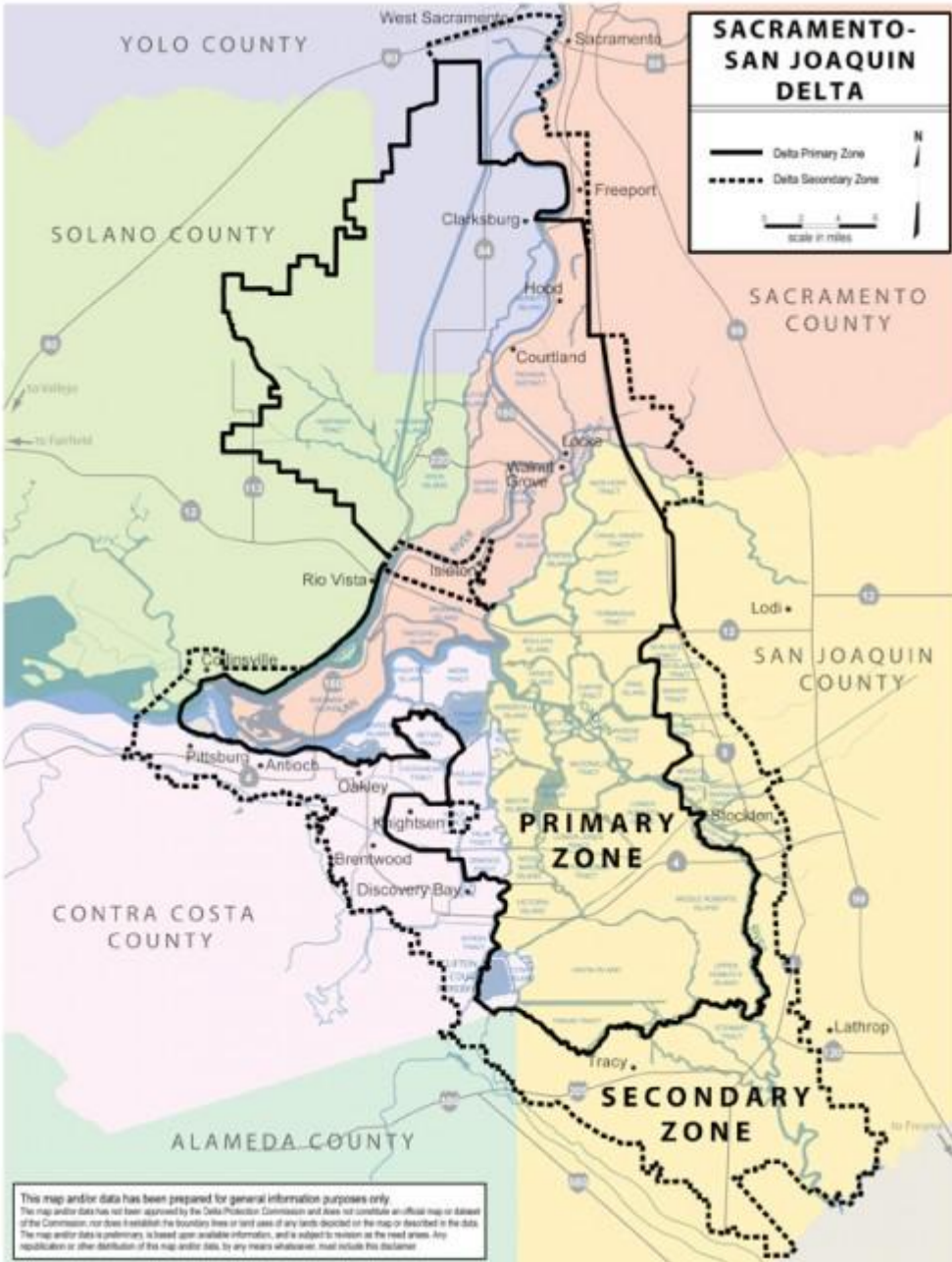


Prepared by the Department of Conservation and Development

ANTIOCH Incorporated Areas
Alamo Unincorporated Areas

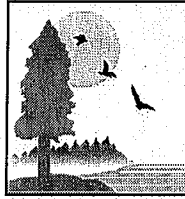
This map was created by the Contra Costa County Department of Conservation and Development with data from the Contra Costa County GIS Program. The voter approved urban limit line is valid for unincorporated Contra Costa County and those cities that adopted it. Some cities have adopted their own voter approved urban growth boundaries. Please contact the individual cities for their urban growth boundary. This map contains copyrighted information and may not be altered. It may be reproduced in its current state if the source is cited. Users of this map agree to read and accept the County of Contra Costa disclaimer of liability for geographic information.

Map Created on May 8th, 2014
 Contra Costa County Department of Conservation & Development
 30 Main Road, Martinez, CA 94553
 37°39'41.791N 122°07'03.766W



CALIFORNIA STATE LANDS COMMISSION

100 Howe Avenue, Suite 100-South
Sacramento, CA 95825-8202



Established in 1938

JENNIFER LUCCHESI, Executive Officer
(916) 574-1800 Fax (916) 574-1810
California Relay Service TDD Phone 1-800-735-2929
from Voice Phone 1-800-735-2922

Contact Phone: (916)574-1940
Contact Fax: (916)574-1835

November 1, 2017

File Ref: SD2017-10-02.1

Craig Whittom
Municipal Resource Group
675 Hartz Avenue, Suite 300
Danville, CA 94526

Via email: cwhittom@municipalresourcegroup.com

SUBJECT: State Lands Jurisdictional Determination within Jersey Island, Contra Costa County

Dear Mr. Whittom:

This letter is in response to your request for a determination by the California State Lands Commission (Commission) whether it asserts a sovereign title interest within Jersey Island, north of Oakley and west of Bethel Island, Contra Costa, (specifically Assessor Parcel Numbers: 027-050-001, 027-030-001, 027-040-001, and 027-050-002).

At Jersey Island, the landward boundary of the State's sovereign land ownership is the ambulatory ordinary high water mark (OHWM). Generally, the OHWM is measured by the mean high tide line (MHTL), except where there was fill or artificial accretions or the boundary was fixed by agreement or court decision. MHTL surveys do not create a permanent boundary, but rather serve as evidence as to the MHTL location at that single point in time. In the absence of a boundary line agreement with this agency, or an adjudicated boundary line, the boundary between sovereign land and privately-held uplands remains ambulatory.

Commission staff expects the MHTL to continue to fluctuate, at this time Commission staff does not have sufficient information to conclude the extent to which the boundary may move landward at this site. Additional research might reveal where the boundary is likely to move, but Commission staff believes that the time, effort, and cost to develop such information is not warranted at this time.

Staff understands that the Municipal Resource Group is working with the Ironhouse Sanitary District to assess opportunities for additional land uses on Jersey Island. Staff requests additional information from Municipal Resource Group once a determination is made regarding use and the proposed location of the use.

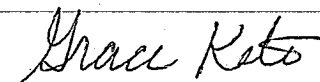
As general background, the State of California acquired sovereign ownership of all tidelands and submerged lands and beds of navigable lakes and waterways upon its admission to the United States in 1850. The State holds these lands for the benefit of all people of the State for statewide Public Trust purposes, which include, but are not limited to, waterborne commerce, navigation, fisheries, water-related recreation, habitat preservation, and open space. The Commission has jurisdiction and management authority over all ungranted tidelands, submerged lands, and the beds of navigable lakes and waterways. The Commission also has certain residual and review authority for tidelands and submerged lands legislatively granted in trust to local jurisdictions (PRC §6301 and §6306). All tidelands and submerged lands, granted or ungranted, as well as navigable lakes and waterways, are subject to the protections of the Common Law Public Trust.

On tidal waterways, the State's sovereign fee ownership extends landward to the mean high tide line, except for areas of fill or artificial accretion or where the boundary has been fixed by agreement or a court decision. Such boundaries may not be readily apparent from present day site inspections.

This determination is without prejudice to any future assertion of state ownership or public rights, should circumstances change, or should additional information come to the Commission's attention. In addition, this letter is not intended, nor shall it be construed as, a waiver or limitation of any right, title, or interest of the State in any lands under the jurisdiction of the California State Lands Commission, either now or in the future.

If you have any questions regarding any of the above information, please don't hesitate to contact me at 916-574-1227 or via email at Grace.Kato@slc.ca.gov. Thank you.

Sincerely,



Grace Kato, Asst Division Chief
Land Management Division



A SUSTAINABLE FUTURE FOR FARMING IN THE DELTA



The Sacramento-San Joaquin Delta is the largest inland estuary system in the United States. This unique resource provides a passageway for migrating fish, a stopover for waterfowl on the Pacific Flyway, and other important ecosystem functions. The complex system of Delta levees protects local land uses and infrastructure critical to California's economy. The Department of Water Resources is committed to the development of successful, sustainable farming practices that promote the longevity and health of the Delta.

An aerial photograph showing a winding river in a rural landscape. A paved road follows the curve of the river. In the foreground, a large pile of harvested corn cobs is visible in a field. The background shows rolling green hills and a small town in the distance.

A photograph showing a coastal area. In the foreground, there is a large, leafless tree on the left side of a paved road. The road curves towards the right. To the left of the road is a rocky or pebbly area. In the background, there is a body of water under a cloudy sky.

Unfortunately, the deep organic peat soils are highly susceptible to subsidence using some of the current agricultural practices. Subsidence eventually results in the sinking of island interiors,

Research conducted by DWR, USGS, and the University of California has shown that growing crops that are flooded during most of the year (especially during the summer and early fall months) reverses subsidence. Tule wetlands and rice not only stop the peat soils from subsiding but also reverses subsidence by increasing root structure (accretion) which eventually yields soil production.

In 2008, DWR constructed a 300-acre research project on Twitchell Island to research the effect of growing rice. The initial research data from the first rice crops in 2009 and 2010 show rice production stopped subsidence, achieved small amounts of accretion, sequestered carbon, and

These large-scale projects are leading the way for new and innovative agricultural practices and providing information that can be used by the private sector to enter the carbon market.



The Delta's Primary and Secondary Zones

- Alone sea level
- Sea level to 10 feet below sea level
- 10 to 15 feet below sea level
- 15 feet or more below sea level
- Suiton zone
- Primary zone
- Secondary zone
- Federal highways
- State highways

The map shows the Delta region with various geographical features and infrastructure. Key locations include Fort Collins, Rio Vista, Loveland, Greeley, Weld, and Denver. The map also shows the Colorado River, the North Platte River, and the South Platte River. The Delta is divided into Primary and Secondary zones, with the Primary zone being the central area and the Secondary zone being the surrounding areas. The map uses a color-coded system to indicate elevation relative to sea level, with green representing areas above sea level and yellow, orange, and red representing areas below sea level. The map also shows major roads, including Federal and State highways, and the location of various towns and cities.

1997	15 acres	Research Wetland	Twitchell
2008	300 acres	Rice Research Project	Twitchell
2010	305 acres	Mayberry Farms Permanent Wetland	Sherman
2011	300 acres	Rice Expansion Project	Twitchell
Planned	500 acres	Southwest Wetland "Whale's Mouth"	Sherman
Planned	1100 acres	Wetland East of SR 160	Sherman
Planned	1500 acres	Wetland North of Mayberry Farms (Potential Expansion)	Sherman
Planned	50 acres	Chevron Point Tidal Marsh	Twitchell
Planned	665 acres	Wetland Expansion	Twitchell
Planned	275 acres	Wetland North of Rice Project	Twitchell



For more information:

Bryan Brock, P.E.
West Delta Program
(916) 651-0836
bpbrock@water.ca.gov

CARBON FARMING

In 2006, legislation required the California Air Resources Board to develop solutions, including carbon sequestration and carbon credit trading, to scale back California's greenhouse gas emissions to 1990 levels by 2020.

The Delta's peat soils are rich in carbon. Carbon can be sequestered in the cessation of ongoing emission of carbon associated with subsidence, and the sequestration of new carbon in the form of decaying plant matter.

This potential to increase wetlands and sequester carbon offers a unique opportunity to increase elevation on subsided lands, restore a large portion of the Delta wetlands, and continue to farm the lands for the production of a marketable commodity.

Subsidence research, conducted by DWR and other researchers, could assist Delta landowners trying to capitalize on the emerging carbon market by switching from growing crops to growing carbon.

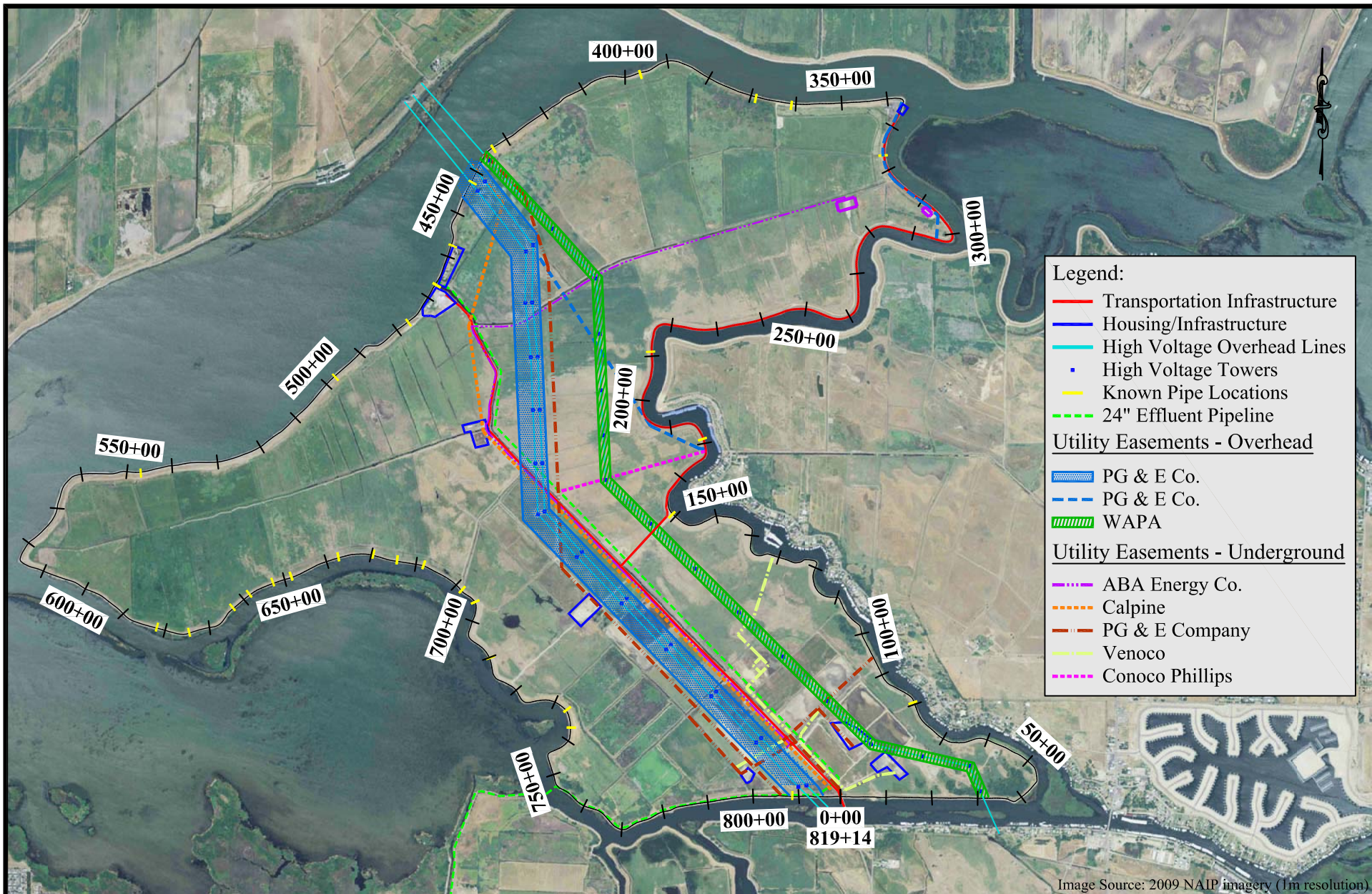
BENEFITS

- Reduces the cumulative stress on the levees
- Decreases the risk of levee failure, flooding, and costs of recovery
- Halts the soil loss
- Reverses the effects of subsidence
- Sequesters carbon
- Generates carbon credits
- Creates habitat
- Reduces greenhouse gas emissions to meet the 2020 goal
- Provides climate change room for adaptation
- Preserves open space

October 2012

State of California
California Natural Resources Agency
Department of Water Resources
Floodsafe Environmental Stewardship and Statewide Resources Office





MBK
ENGINEERS

1771 Tribute Road, Suite A
Sacramento, California 95815
Phone: (916) 456-4400 • Fax: (916) 456-0253

RECLAMATION DISTRICT NO. 830
JERSEY ISLAND

DISTRICT INFRASTRUCTURE MAP

SCALE:	1" = 3000'
JOB NUMBER:	4155-11
DRAWN BY:	JB
DATE:	02/18/2011
SHEET:	5 OF 6