

BRISBANE BAYLANDS

City Council Public Hearing

**Energy, Recreation, Biological Resources, Cultural
Resources, Geology & Seismicity, Hydrology**

March 16, 2017

ENERGY RESOURCES

SOURCES OF ENERGY CONSUMPTION

- Construction
 - Electricity for construction tools and offices
 - Diesel fuel
 - Gasoline
- Operations
 - Heating and cooling within buildings
 - Lighting of buildings, streets, and parking and landscape areas
 - Gasoline and diesel fuel use
- Amount of consumption reduced by onsite renewable energy generation

MEASURES TO REDUCE ENERGY CONSUMPTION

- EIR mitigation measures :
 - Air Quality
 - Hazards and Hazardous Materials
 - Greenhouse Gas Emissions
 - Noise (limitations on construction hours)
 - Traffic and Circulation
- Buildings subject to City requirement to achieve LEED “Silver” standard must achieve “Gold” standard

ENERGY RESOURCES PLANNING CONSIDERATIONS

- Renewable energy facilities can be building or ground-mounted
- Renewable Energy Generation Alternative
 - Only scenario/alternative to generate more energy than consumed onsite
- NREL/U.S. EPA study determined onsite renewable energy generation (Renewable Energy Generation Alternative) to be feasible
 - Focused on amount of energy that could be produced & whether sale of that energy would justify costs of construction and operation
 - Did not address costs of land, site remediation or landfill closure or effects on cost of development for the balance of the Baylands

RECREATION

PARKS

- **Quimby Act**
 - Permits requirements for dedication of land for parks or fees in lieu of dedication
 - City Ordinance requires dedication of 3 acres per 1,000 population or payment of fees in lieu of dedication
- **General Plan Goal**
 - 18.5 acres of parks and open space per 1,000 population
- **Considerations for the appropriate amount of park land:**
 - Permitted uses within Baylands
 - Configuration of open space in 2009 open space plan for the Baylands

2009 PUBLIC SPACE PLAN FOR THE BAYLANDS



WINDSURFING RESOURCES

- Candlestick Point State Recreation Area: premier windsurfing area
- New buildings increase effective surface roughness and decrease wind speed
- Impacts of the DSP & CPP scenarios determined to be less than significant
 - Undetectable to most windsurfers (particularly beginners and intermediates)
 - Would not impair ability to launch, sail within a desirable area, and return to launch area

WINDSURFING RESOURCES: ISSUES RAISED IN DEIR COMMENTS

- Significant criteria should have been formally adopted
 - No applicable threshold available in CEQA Appendix G
 - Lead Agency not required to formally adopt thresholds
 - Threshold clearly stated in the EIR
- Draft EIR uses same threshold used by San Francisco for Executive Point project
 - Based on substantially degrading windsurfing resource or substantially impairing access to the resource from launch sites
 - Already used to analyze impacts on Candlestick Point SRA

WINDSURFING RESOURCES: ISSUES RAISED IN DEIR COMMENTS

- Candlestick Preservation Association and others stated:
 - Significant impacts would result
 - Alternative methodology should have been used
 - Wind tunnel testing should not have been used
 - Project description in the EIR was incomplete

WINDSURFING RESOURCES: ISSUES RAISED IN DEIR COMMENTS

- Final EIR Master Responses 30 - 34
 - Alternative analysis methodology suggested by CPA and others less appropriate and useful than methodology used in Draft EIR
 - Use of wind tunnel well documented as an effective analysis tool
 - Models built for wind tunnel testing accurately reflect proposed grading and maximum building area and heights of scenarios
- Study by Bennett, White, van Damm
 - Wind tunnel testing is scientifically valid; confirmed by scientific literature search
 - Methodology used for the Baylands is scientifically valid; conclusions of EIR are scientifically valid

WINDSURFING ANALYSIS BY BENNETT, WHITE, AND VAN DAMM

- Methodologies and standard of care used in EIR have been widely used in the San Francisco Bay Area
- Wind tunnel testing is scientifically valid, well tested, and widely accepted in the scientific community
- Review of scientific literature validates the use of wind tunnel testing for the Baylands
- Wind tunnel testing of Baylands impacts at UC Davis represent appropriate objective analysis
- Principle conclusion of EIR (less than significant impact) is supported by scientific data and analysis
- Analysis area used in EIR was based on NOP response from S.F. Boardsailing Association

WINDSURFING ANALYSIS BY BENNETT, WHITE, AND VAN DAMM

- Potential use of computer modeling
 - To accurately analyze effects of Baylands development requires modeling at two different scales:
 - Large-scale atmospheric modeling
 - Micro-scale modeling of topography, buildings, grading
 - Each modeling scale has different requirements and is ill-suited to use for the other scale
 - Multi-scale modeling required, but is not commercially available
 - Once a model could be built, it could only be validated by comparing its results to those of a wind tunnel

BIOLOGICAL RESOURCES

EXISTING HABITAT AREAS

Habitat Types

- Freshwater wetlands
- Tidally influenced areas (lagoon)
- Terrestrial habitats

Influences

- Baylands largely consists of artificial fill
- Past development



IMPACTS TO BIOLOGICAL RESOURCES WILL RESULT FROM:

- Site remediation, Title 27 landfill closure, and grading for new development
- Proposed trails on Icehouse Hill
- Tall buildings, renewable energy facilities (bird strikes)

KEY MITIGATION MEASURES

- Protection of Icehouse Hill habitats
 - MM 4.C-1a through 4.C-1c
- Avoidance of impacts to special status bird species
 - MM 4.C-1d, 4.C-1g, 4.C-4f, 4.C-4g (tree removal)
 - MM 4.C-4d, 4.C-4e 4.C-1f, (bird strikes)
- Protection of riparian and sensitive habitats
 - MM 4.C-1e, 4.C-2a through 4.C-2c

INTEGRATING HABITAT PROTECTION AND LAND USE PLANNING

- Projectwide Open Space Plan (MM 4.C-4a)
 - Mosaic of native coastal scrub, grassland, willow scrub habitat types
 - East-west and north-south linkages between upland habitats and the Bay
- Marsh Wildlife and Habitat Protection Plan (MM 4.C-4b)
 - Protection from night lighting of developed areas
 - Buffering and separation of preserved and developed areas
 - Education programs

20-YEAR WETLAND ANALYSIS



"Dry" Wetland Conditions
1/13/2012



"Average" Wetland Conditions
2/18/2007



"Wet" Wetland Conditions
3/8/2010

Three Month Precipitation Total
(Total includes month that aerial was dated and two preceding months)

Wetland Map	Date of Google Earth Aerial	3 Month Precipitation Total	Months of Precipitation
"Dry"	1/13/2012	3.84 inches	November 2011 to January 2012
"Average"	2/18/2007	8.16 inches	December 2006 to February 2007
"Wet"	3-8/2010	11.45 inches	January 2009 to March 2010



Monthly Rain Fall Totals

Month	Monthly Rainfall 2006-2007	Monthly Rainfall 2009-2010	Monthly Rainfall 2011-2012
October	0.33"	2.96"	1.18"
November	1.64"	0.20"	1.55"
December	3.37"	3.07"	0.13"
January	0.65"	5.97"	2.16"
February	4.14" <i>"Average" Wetland Map*</i>	2.70"	0.66"
March	0.27"	2.78" <i>"Wet" Wetland Map*</i>	4.76"
April	1.14"	2.75"	2.79"

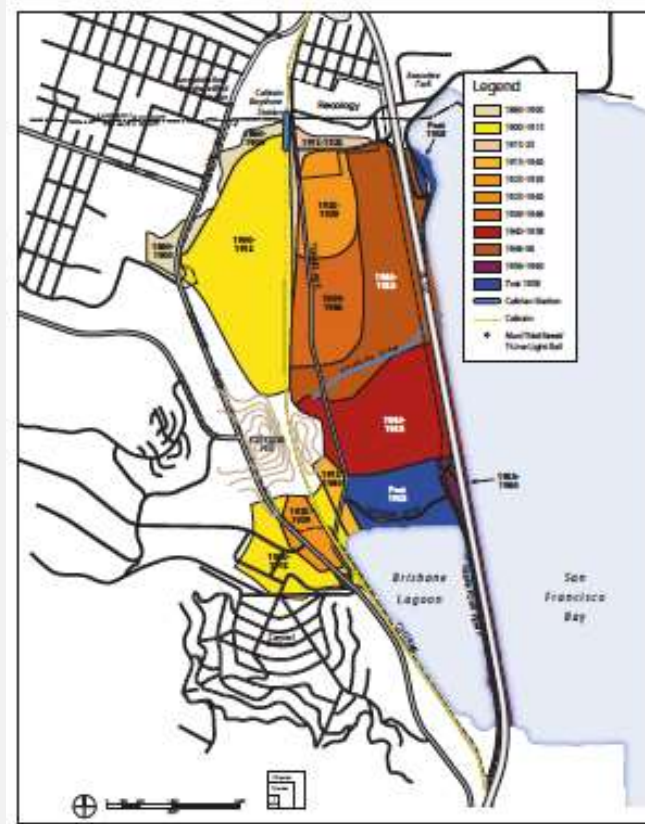
**Shading indicates month in which wetland aerial was dated from Google Earth satellite imagery.*

PLANNING CONSIDERATIONS

- Two primary natural habitat areas to be preserved in place
 - Icehouse Hill
 - Lagoon
- Opportunities
 - Enhance biological values of central drainage channel
 - Reconfigure discontinuous patches of habitats into integrated, sustainable mosaic of habitats
 - Cluster development to the north; maximize open space to the south

CULTURAL RESOURCES

CREATION OF THE BAYLANDS; FILLING OF VISITACION BAY



CREATION OF THE BAYLANDS; FILLING OF THE BAY



Brisbane Baylands . 206069

SOURCE: Collection of Ralph Domenici, sanfranciscohistory.org

Figure 4.D-3
Bayshore Railroad Yard at Visitacion Bay
View from Bayshore Point, February 24, 1911

ROUNDHOUSE



SOURCE: ESA, 2007

Brisbane Baylands . 206069

Figure 4.D-4
The Roundhouse

- Historic resource under CEQA
 - National Register of Historic Places
 - California Register of Historic Places
- Severely damaged; in deteriorating condition

LAZZARI CHARCOAL BUILDING



SOURCE: ESA, 2007

Brisbane Baylands . 206069

Figure 4.D-5

Lazzari Charcoal Building

(Former Southern Pacific Tank and Boiler Shop)

- Not a historic resource under CEQA
 - Not on federal or state registers
 - Lack of physical integrity
 - Lack of historic context
- Will still be restored and reused

MACHINERY & EQUIPMENT BUILDING



- Historic resource under CEQA
- Surrounded by, but not within the Baylands Project Site

SOURCE: ESA, 2007

Brisbane Baylands . 206069

Figure 4.D-6

Machinery & Equipment Building
(Former SPRR Ice Manufacturing Plant)

OTHER CONSIDERATIONS RELATED TO THE FORMER RAILYARD

- Other remaining features/remnants (railroad ties, spikes, tracks) not historically significant
 - Would not likely yield new significant information
- Would not qualify as a “historic district” or “cultural landscape”
 - Significantly altered over time
 - Many characteristic defining features have been removed

IMPACTS AND MITIGATION MEASURES

- Roundhouse building (MM 4.D-1a)
 - Stabilization plan
 - Rehabilitation and reuse plan
- Protect historic context of Roundhouse/Machinery & Equipment buildings (MM 4.D-2)

PLANNING CONSIDERATIONS

- Future development in proximity to Roundhouse and Machinery & Equipment buildings should respect their history integrity
- In the absence of an approval leading to rehabilitation/reuse of the Roundhouse building, consider means to arrest further deterioration

GEOLOGY AND SEISMICITY

GEOLOGIC AND SEISMIC CONSIDERATIONS

- Non-engineering fill overlying Bay Muds
- Highly active seismic region
- Potential for differential settlement
- Expansive and corrosive soils
- Potential for liquefaction
- Need for detailed soils testing once specific building locations can be known
 - Existing information adequate for General Plan level decisions

HYDROLOGY AND WATER QUALITY

WATER QUALITY ISSUES

- Total suspended solids
- Localized oils and grease
- Leachate seeps
- Construction impacts
- Urban pollutants in post-development runoff

WATER QUALITY MANAGEMENT

- Compliance with standards of:
 - Statewide NPDES permit
 - Brisbane's Municipal Regional Stormwater Permit Provision C.3
- Implementation of site-specific:
 - Requirements of the RWQCB
 - Stormwater Pollution Prevention Plan (SWPPP)
 - Stormwater Management Plan
- Leachate collection system as part of Title 27 landfill closure

PROTECTION OF LAGOON WATER QUALITY

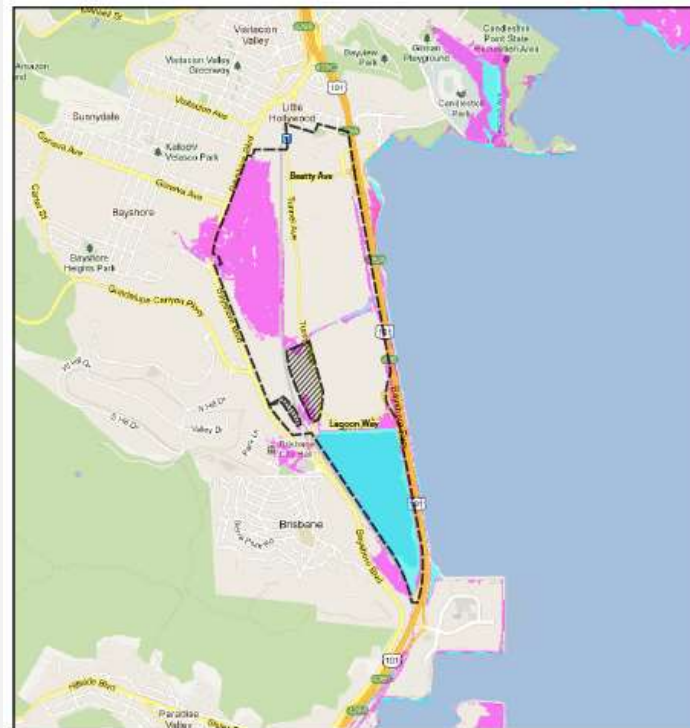
- EIR mitigation measures to restore riparian habitat and measures to prohibit encroachment of construction into the lagoon would prevent expansion of recreational uses
- Lagoon water quality protection measures
 - NPDES requirements
 - Statewide General Permit for Discharge of Storm Water
 - SWPPP requirements
 - City's Stormwater Permit
 - Stormwater Management Plan requirement
 - Integrated pest management

FLOODING



SOURCE: ESA, 2012; FEMA, 2012

SEA LEVEL RISE



FLOOD PROTECTION CRITERIA

- Convey peak flow from 25-year storm peak flow within underground piping system
- Convey 100-year storm peak flow within streets and underground piping system such that finished first floor elevations of buildings are 1 foot above 100-year storm flow elevation
 - With tidal flow
 - With 100 years of anticipated sea level rise

**PLANNING COMMISSION
RECOMMENDATION**

PLANNING COMMISSION RECOMMENDATIONS

- Reduce the total amount of new development to a maximum net increase of 1-2 million s.f. of building area
- Protect key habitat areas
 - Prohibit expansion of recreation in lagoon
 - Projectwide Open Space Plan
 - Marsh Wildlife and Habitat Protection Plan
- Restore the Roundhouse
 - Opportunities for compatible uses