Background

Apr. 2015 Public asks County to consider replacing dock at SBYC

Jun. 2016: Funding approved to perform study

Apr. 2017: Alviso Dock Feasibility Study Phase (I) presented at HLUET
Dredging is a core issue. HLUET requests additional study

Jun. 2018: Bathymetric Survey & Report (Phase II)

Nov. 2018 County Parks presents -4.0 MLLW Scenario at HLUET

-6.8ft. Mean Lower Low Water (MLLW) Scenario presented costing $21M
HLUET requests a lower cost analysis
## Comparison of Dock Construction Costs

<table>
<thead>
<tr>
<th></th>
<th>-4.0ft. MLLW</th>
<th>-6.8ft. MLLW</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DOCK COSTS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dock</td>
<td>$1,509,400</td>
<td>$1,509,400</td>
</tr>
<tr>
<td>Soft Costs</td>
<td>$854,320</td>
<td>$854,320</td>
</tr>
<tr>
<td><strong>LANDSIDE AMENITIES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Landside Amenities</td>
<td>$1,364,000</td>
<td>$1,364,000</td>
</tr>
<tr>
<td>Soft Costs</td>
<td>$772,024</td>
<td>$772,024</td>
</tr>
<tr>
<td>Subtotal of Dock &amp; Landside Amenities</td>
<td>$4,499,744</td>
<td>$4,499,744</td>
</tr>
<tr>
<td><strong>DREDGING</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dock Dredging</td>
<td>$1,300,000</td>
<td>$1,600,000</td>
</tr>
<tr>
<td>Soft Cost</td>
<td>$735,800</td>
<td>$905,600</td>
</tr>
<tr>
<td>Dredged Volume (Cubic Yards/CY)</td>
<td>13,000 CY</td>
<td>16,000 CY</td>
</tr>
<tr>
<td><strong>TOTAL DOCK &amp; AMENITIES COST</strong></td>
<td>$6,535,544</td>
<td>$7,005,344</td>
</tr>
</tbody>
</table>

*Soft Costs include design, contingency, environmental and permits, engineering, etc.*
## Comparison of Scenarios

<table>
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<tr>
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<th>-6.8ft. MLLW</th>
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<tr>
<td>TOTAL DOCK &amp; AMENITIES COST</td>
<td>$6,535,544</td>
<td>$7,005,344</td>
</tr>
<tr>
<td>SLOUGH CHANNEL DREDGING</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dredging</td>
<td>$3,661,800</td>
<td>$9,100,000</td>
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<tr>
<td>Soft Costs</td>
<td>$2,072,579</td>
<td>$5,150,600</td>
</tr>
<tr>
<td>Dredged Volume (Cubic Yards/CY)</td>
<td>36,618 CY</td>
<td>91,000 CY</td>
</tr>
<tr>
<td>ENVIRONMENTAL MITIGATION</td>
<td>$120,000</td>
<td>$120,000</td>
</tr>
<tr>
<td>TOTAL SCENARIO COST</td>
<td>$12,390,000</td>
<td>$21,380,000</td>
</tr>
</tbody>
</table>

(Rounded up to nearest $10,000 with soft costs included)

- Meets DBAW Guidelines for Channel Depth: Recommendation is 5ft. below Design Low Water (-1.8ft. MLLW)
  - X
  - ✓

- Meets DBAW Guidelines for access
  - 91% of days are impacted (for average month)
  - 100% accessibility at all tidal conditions
Comparison of -4 MLLW and -6.8 MLLW Scenarios

- **Mean Lower Low Water (MLLW)**
  The average height of low tide each day. Measured twice a day, in the morning and afternoon.

- **Draft**
  The draft determines the minimum depth of water a boat can safely sail.

- **Dredge Zone**
  Location of sediment needed to be removed above -4.0 and -6.8 Scenarios respectively.
Number of Days per Month where Access is Impacted by Tides within Alviso Slough

-4.0 MLLW SCENARIO

-6.8 MLLW SCENARIO

December: 10% (90% not affected)
November: 7% (93% not affected)
October: 10% (90% not affected)
September: 7% (93% not affected)
August: 23% (77% not affected)
July: 19% (81% not affected)
June: 10% (90% not affected)
May: 10% (100% not affected)
April: 10% (100% not affected)
March: 18% (82% not affected)
February: 18% (82% not affected)
January: 19% (81% not affected)

December: 100% (0% not affected)
November: 100% (0% not affected)
October: 100% (0% not affected)
September: 100% (0% not affected)
August: 100% (0% not affected)
July: 100% (0% not affected)
June: 100% (0% not affected)
May: 100% (0% not affected)
April: 100% (0% not affected)
March: 100% (0% not affected)
February: 100% (0% not affected)
January: 100% (0% not affected)
Number of Mornings and Afternoons per Month where Access is Impacted by Tides within Alviso Slough

-4.0 MLLW SCENARIO

-6.8 MLLW SCENARIO

ACCESS WILL NOT BE IMPACTED BY TIDES.
Summary

- If the proposed public dock were to be developed, dredging is recommended.
- Relative to the -6.8ft. MLLW scenario costs can be reduced by dredging to -4.0ft. MLLW, but access is significantly impacted.
- Both scenarios involve high initial capital expenditure and significant ongoing maintenance costs and staff time for permitting.
Questions