Berkeley Marina Area Specific Plan

Berkeley Pier/Ferry Facility Planning Study

COUNCIL WORKSESSION

February 16, 2021
Overview

- Waterfront background and issues
- Update on status of Pier/Ferry and BMASP projects
- Discuss possible solutions and changes
- Get City Council feedback
History of Berkeley Marina

1850's
- Two Private Wharves

1909
- Municipal Shipping Wharf

1913
- Dike and Landfill Operations Commence

1927
- Berkeley Pier Built

1936
- Berkeley Harbor Built, Bay Bridge Opens

1957
- Dikes and Landfill Operations Expanded

1961-1983
- Municipal Landfill

1990's
- César Chávez Park Construction (formerly North Waterfront Park)

2003
- Berkeley Marina Master Plan

2015
- Berkeley Pier Closed

2020
- Berkeley Marina Area Specific Plan

Future

HARBOR
LANDFILL
WHARF | PIER

COMMERCIAL MARITIME TRANSPORTATION
FERRY SERVICE
BERKELEY YACHT HARBOR
LANDFILL & DUMP AREA
FISHING & VIEWING PIER
RECREATION
NEW FERRY SERVICE
Berkeley Marina History
Berkeley Waterfront Regulatory Agencies + Land Use Restrictions

Land Use Restrictions
- State Lands Commission – Tideland Grant Trust (1913)
- BCDC - 100’ Shoreband Jurisdiction
- City of Berkeley Measure L – Open Space Ordinance (1986)

Regulatory Agencies
- Army Corp of Engineers
- BCDC
- California Department of Fish and Wildlife
- State Regional Water Quality Control Board
- State Lands Commission
Economics of Berkeley Marina Area

Operating Revenues*

Berth Rental Fees (55%)
Hotel Lease (21%)
Other Leases (14%)
Other Boating Fees (5%)
Youth Programming (2%)
Other (2%)
Water-Based Recreation (1%)

Operating Expenses

Marina Operations
Waterfront Maintenance
Capital Projects
Lease Management
Recreation Programs
Internal Service Charges
Debt Service
Security
Special Events

*Based on FY19 revenue
Marina Fund Challenges

Reserves depleted in FY2022

Annual Change in Reserve Balance

End of Year Reserve Balance

### Marina Fund Challenges

<table>
<thead>
<tr>
<th>Year</th>
<th>End of Year Reserve Balance (Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>$(0.80)</td>
</tr>
<tr>
<td>2012</td>
<td>$(0.65)</td>
</tr>
<tr>
<td>2013</td>
<td>$1.45M</td>
</tr>
<tr>
<td>2014</td>
<td>$1.30M</td>
</tr>
<tr>
<td>2015</td>
<td>$1.45M</td>
</tr>
<tr>
<td>2016</td>
<td>$2.35M</td>
</tr>
<tr>
<td>2017</td>
<td>$3.50M</td>
</tr>
<tr>
<td>2018</td>
<td>$3.06M</td>
</tr>
<tr>
<td>2019</td>
<td>$4.00M</td>
</tr>
<tr>
<td>2020</td>
<td>$3.15M</td>
</tr>
<tr>
<td>2021</td>
<td>$1.95</td>
</tr>
<tr>
<td>2022</td>
<td>$(3.98)</td>
</tr>
<tr>
<td>2023</td>
<td>$(4.79)</td>
</tr>
<tr>
<td>2024</td>
<td>$(3.08)</td>
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<tr>
<td>2025</td>
<td>$1.14M</td>
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<tr>
<td>2026</td>
<td>$900K</td>
</tr>
<tr>
<td>2027</td>
<td>$809K</td>
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<tr>
<td>2028</td>
<td>$40K</td>
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<tr>
<td>2029</td>
<td>$105K</td>
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<td>2030</td>
<td>$359K</td>
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<tr>
<td>2031</td>
<td>$446K</td>
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<tr>
<td>2032</td>
<td>$931K</td>
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<tr>
<td>2033</td>
<td>$1.16M</td>
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<tr>
<td>2034</td>
<td>$2.71</td>
</tr>
<tr>
<td>2035</td>
<td>$1.45</td>
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<tr>
<td>2036</td>
<td>$1.55</td>
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<tr>
<td>2037</td>
<td>$1.41</td>
</tr>
<tr>
<td>2038</td>
<td>$2.27</td>
</tr>
</tbody>
</table>

### End of Year Reserve Balance

- 2011: $(0.80)
- 2012: $(0.65)
- 2013: $1.45M
- 2014: $1.30M
- 2015: $1.45M
- 2016: $2.35M
- 2017: $3.50M
- 2018: $3.06M
- 2019: $4.00M
- 2020: $3.15M
- 2021: $1.95
- 2022: $(3.98)
- 2023: $(4.79)
- 2024: $(3.08)
- 2025: $1.14M
- 2026: $900K
- 2027: $809K
- 2028: $40K
- 2029: $105K
- 2030: $359K
- 2031: $446K
- 2032: $931K
- 2033: $1.16M
- 2034: $2.71
- 2035: $1.45
- 2036: $1.55
- 2037: $1.41
- 2038: $2.27
Marina Fund Challenges

• Marina Fund was never set up to succeed.
  • Low berther fees for decades
  • Lack of capital replacement fund
  • Lack of infrastructure replacement

• Fund has now reached the tipping point.
  • Safety and security issues
  • Failing infrastructure
  • COVID-19

• Revenue unable to cover basic operating expenses.

• No additional funds for > $100M in infrastructure needs.
Waterfront Funding Gap

Future CIP Needs

Revenue (R)

Expenditure (E)

Funding Gap* (G)

On-Going O&M

BMASP Process

Identify community supported potential solutions for new revenue generation

Community Input Process

Viable Solutions

Funding Gap (G)

Future CIP Needs

*Funding Gap will include sufficient and stable stream of funding to support 5-year CIP Plan
Capital Projects Update

1. South Cove East Parking Lot & Restroom
2. Bay Trail Extension – Segment 3
3. South Cove ADA Accessible Gangway at Middle Dock
4. South Cove Floating Docks Replacement

5. Marina Streets Reconstruction [Bidding]
   - University Ave (W Frontage Rd to Marina Blvd)
   - Spinnaker Way
   - Marina Blvd
6. O&K Docks Electrical Upgrade [Bid by April]
7. Electronic Bicycle Lockers [Awarding Contract]
8. D&E Docks Replacement
9. South Cove West Parking Lot
10. Selective Timber Pile Replacement
11. Cesar Chavez Park Restroom

12. K-Dock Restroom Renovation
13. Municipal Pier Structural Assessment & Ferry Facility Feasibility Study
14. Marina-wide Sea Level Rise Vulnerability Study
15. Berkeley Marina Area Specific Plan

Complete
2021 Construction
Design
Planning

CalTrans University Ave/I-80 Interchange Improvement
<table>
<thead>
<tr>
<th>PROJECT</th>
<th>Marina Enterprise Fund</th>
<th>Grants</th>
<th>State Loans</th>
<th>Measure T1</th>
<th>Public Works</th>
<th>General Fund</th>
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<tbody>
<tr>
<td>1. South Cove East Parking Lot &amp; Restroom</td>
<td></td>
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<tr>
<td>2. Bay Trail Extension – Segment 3</td>
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<td>3. South Cove ADA Accessible Gangway at Middle Dock</td>
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<tr>
<td>4. South Cove Floating Docks Replacement (East &amp; West Docks)</td>
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<tr>
<td>5. Marina Streets Reconstruction (University Ave/Spinnaker Way/Marina Blvd)</td>
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<tr>
<td>6. O&amp;K Docks Electrical Upgrade</td>
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<td>7. Electronic Bicycle Lockers</td>
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<td>8. D&amp;E Docks Replacement</td>
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<tr>
<td>9. South Cove West Parking Lot (Design Only)</td>
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<tr>
<td>10. Selective Timber Pile Replacement</td>
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<tr>
<td>11. Cesar Chavez Park Restroom (On Spinnaker Way)</td>
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<tr>
<td>12. K-Dock Restroom Renovation</td>
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<td>13. Municipal Pier Structural Assessment &amp; Ferry Facility Feasibility Study</td>
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</tbody>
</table>
Recently Completed Capital Projects

- Bay Trail Extension – Phase 3 - South Cove
- ADA Gangway
- Remodeled berther restrooms
- Cesar Chavez Park East Shoreline Stabilization

Currently Bidding
Decaying Infrastructure

- Misc finger dock
- D & E docks
- Aged Sheetpile Wall - South Cove
- Decaying Timber Piles
- Low lying Area - Marina Blvd
- Low lying Area - University Ave
Vital improvements needed within the next 20 years to upgrade decaying infrastructure.

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**UTILITY IMPROVEMENTS ($4.5 M)**
- Sewer Collection System
- Emergency Fire Service
- Stormwater Quality Improvements

**PAVEMENT REHABILITATION ($3.4 M)**
- University Ave (Marina Blvd to Seawall Dr)
- Seawall Dr

**PARKING LOTS ($10.5 M)**
- F & G Dock Lot, O Dock and Yacht Club Lot, J & K Dock Lot
- N Dock and Skates Lot, Launch Ramp Lot, L & M Dock Lot, Lordships’ Lot
- Construction of South Cove West Lot

**SIDEWALKS/PATHWAYS ($4.6 M)**
- Cesar Chavez Park Perimeter Trail
- Marina Boulevard Trail
- Completion of Bay Trail Master Plan
- General Sidewalk/Pathway Upgrades

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**LANDSIDE INFRASTRUCTURE NEEDS:** est. $23M
Waterside Infrastructure Needs: est. $64.5M to $108M

**Shoreline & Over-Water**
- SLR/Shoreline Stabilization
  - Cost: $5.8M to $7M
- South Sailing Basin Seawall Replacement
  - $4.8M

**Dredging, Pier, and Breakwaters**
- Dredging (South Cove Sailing Basin & Marina Entrance)
  - $4M to $6M
- Berkeley Pier Design/Construction
  - $15 to $55M (TBD)

**Docks**
- Dock Replacement
  - $35M

**Infrastructure Maintenance**
- TBD

**Future Infrastructure Costs**
- $87.5M – $131M
BMASP + Pier/Ferry Planning Study

• Introductions of Consultant Teams
• Project Timelines
• BMASP Overview
• Pier/Ferry Planning Study Overview
BMASP Project Team

HARGREAVES JONES
Prime / Landscape Architecture & Planning
San Francisco, CA

BLUHON GROUP*
Community Engagement
Berkeley, CA

MOFFATT & NICHOL
Marine and Shoreline Engineering
Oakland, CA

BKF ENGINEERING
Civil Engineering
Walnut Creek, CA

RINCON CONSULTANTS
CEQA & EIR Specialists
Oakland, CA

NELSON\NYGAARD*
CONSULTANTING ASSOCIATES
Transportation Planning
San Francisco, CA

KEYSER MARSTON
Financial Analysis & Strategic Economic Planning
Berkeley, CA

*Also on the Pier/Ferry Study Project Team
BMASP Project Team

waterfront park expertise
over 30 waterfront projects
over 23 water bodies
master planning through implementation

Hargreaves Jones

CRISSY FIELD
San Francisco, CA

SOUTH LAKE UNION PARK
Seattle, WA

SOUTH POINTE PARK
Miami Beach, FL

QUEEN ELIZABETH OLYMPIC PARK
London, UK
90+ years in operation
135+ countries served
200+ offices worldwide
$2.3B revenue 2020
5 global markets
10K people
50+ service lines

Providing engineering, environmental, advisory, architecture, digital and construction services

Pier/Ferry Study Project Team
San Francisco Bay Area
Water Emergency Transportation Authority

Kevin Connolly
Manager, Planning & Development

Michael Gougherty
Senior Planner

Taylor Rutsch
Planner
WETA Route Map

MORE INFO: SANFRANCISCOBAYFERRY.COM

ROUTES AND SCHEDULES

Weekday and Weekend Service:
- Vallejo — San Francisco
- Alameda & Oakland — San Francisco

Weekday Commute Service:
- South San Francisco — Alameda & Oakland
- Harbor Bay — San Francisco
- Richmond — San Francisco

Special Service:
- Select off-peak and weekend trips to Pier 41 San Francisco from Vallejo, Alameda & Oakland
- Select connections to Mare Island from Vallejo — San Francisco route
- Seasonal service to the Giants at Oracle Park from Vallejo, Alameda & Oakland
- Seasonal service to the Mariners at Chase Center from Alameda & Oakland

THE BEST WAY TO CROSS THE BAY.
WETA Strategic Plan

2016

12 Vessels
7 Terminals
4 Routes
Peak Capacity 1,802
7,583 Daily Riders
5 Peak Hour Landings at SF Ferry Bldg
$33M Operating Budget

2035

44 Vessels
16 Terminals
12 Routes
740% increase in Peak Capacity
5x the Daily Riders
25 Peak Hour Landings
$144M Operating Budget
Pier/Ferry Study & BMASP Timelines

1/21 Workshop #1
2/16 City Council Work Session BMASP/Pier-Ferry
3/4 WETA Board
June Workshop #2
Sept Workshop #3
City/WETA approvals; approve MOU amendment

Meeting #1
January 28, 2021
Project Introduction Challenges & Conceptual Opportunities

Meeting #2
Aug/Sept 2021
Specific Plan Design and Financial Mode Options

Meeting #3
Feb/Mar 2022
Specific Plan Refinement Workshop

Meeting #4
TBD 2022
EIR Public Scoping Meeting
BMASP Goals & Process
BMASP Goals

Develop a specific plan to set the Waterfront on a sustainable path.

<table>
<thead>
<tr>
<th>achieve financial sustainability</th>
<th>support community needs</th>
</tr>
</thead>
<tbody>
<tr>
<td>• keep Marina Fund operational</td>
<td>• Marina: slips, business, clubs, etc.</td>
</tr>
<tr>
<td>• develop a viable financial model</td>
<td>• Recreation and environmental stewardship</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>address infrastructure needs</th>
<th>adapt to climate change</th>
</tr>
</thead>
<tbody>
<tr>
<td>• prioritize capital projects</td>
<td>• Assess SLR vulnerability</td>
</tr>
<tr>
<td>• Identify funding sources</td>
<td>• Identify mitigation and adaptation measures</td>
</tr>
</tbody>
</table>
BMASP Process

Community & User Input

Site Challenges

Current Projects

Current & Past Studies

Sea-Level Rise

Ferry Feasibility Study

Specific Plan & CEQA Requirements

CEQA Guideline 15168

Governing Policies

Specific Plan

Programmatic EIR
BMASP - What we are working on - Baseline Evaluations

**Existing Amenities and Operations Assessment**

Includes:
- Market Demand Trend Analysis
- Informs future capital project planning process

**Existing Infrastructure Assessment – Waterside and Landside Facilities**

Includes:
- Cost Estimates for each capital projects
- Prioritize capital projects per importance to the Marina operation and Community Input

End Product = 5-year Capital Improvement Plans [Expenditure]

**Marina Enterprise Fund Financial Assessment**

Includes:
- Existing Marina Enterprise Fund Financial Analysis
- Revenue Generating Opportunities and Constraints Analysis
- Identify feasible solutions with Community Input to Alleviate Funding Gap

End Product = Implementation Strategy Memo [New Revenue Source(s)]
Marina Case Studies (5)

Pillar Point Harbor

Alamitos Bay Marina

Dana Point Harbor

Former San Leandro Marina
San Francisco Marina

San Francisco | State Tidelands

Public Owner/Operator
City & County of San Francisco

667 marina slips

39 acres | water
19 acres | land

<table>
<thead>
<tr>
<th>Onsite</th>
<th>Offsite</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 West Harbor</td>
<td>A Fort Mason</td>
</tr>
<tr>
<td>2 East Harbor</td>
<td>B Crissy Field</td>
</tr>
<tr>
<td>3 Marina Green</td>
<td>C Palace of Fine Arts</td>
</tr>
<tr>
<td>4 Yacht Clubs</td>
<td>D Chestnut St</td>
</tr>
</tbody>
</table>
San Francisco Marina Recent Capital Investment

Marina rebuild supported by higher fees, shift to larger slips

- $27M renovation of West Harbor completed in 2013
  - Replaces & reconfigures docks and slips
- Phase 1 financed by DBW loans repaid through increased fee revenue
- Phase 2 will replace & reconfigure East Harbor docks and slips
  - Partially funded by PG&E settlement

<table>
<thead>
<tr>
<th></th>
<th>West</th>
<th>East</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slips</td>
<td>325</td>
<td>342</td>
</tr>
<tr>
<td>Renovation Year</td>
<td>2013</td>
<td>Not Completed</td>
</tr>
<tr>
<td>Avg. Slip Length</td>
<td>43’</td>
<td>28’</td>
</tr>
<tr>
<td>Slip Occupancy</td>
<td>98%</td>
<td>75%</td>
</tr>
<tr>
<td>30’ Berth Rate</td>
<td>$14.47/ft.</td>
<td>$10.44/ft.</td>
</tr>
<tr>
<td>Annual Fees Per Slip</td>
<td>$8,000</td>
<td>$2,400</td>
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Marina rebuild supported by higher fees, shift to larger slips
Pillar Point Harbor

Half Moon Bay | State Tidelands

Public Owner/ Operator
San Mateo County Harbor District

369 marina slips

45 acres | water (marina)
+/-20 acres | land

<table>
<thead>
<tr>
<th>Onsite</th>
<th>Offsite</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Rec Marina</td>
<td>A Harbor Village</td>
</tr>
<tr>
<td>2 Comm. Marina</td>
<td>B HMB Brewing</td>
</tr>
<tr>
<td>3 Pier/ Fisheries</td>
<td>C Chowder House</td>
</tr>
<tr>
<td>4 Shops &amp; Restaurants</td>
<td></td>
</tr>
<tr>
<td>5 Boat Launch</td>
<td></td>
</tr>
</tbody>
</table>
Pillar Point’s Special District Funding Model

Special district property tax provides flexibility to encourage diversity of uses

Special district owner/operator receives $0.03/$1 of county prop taxes

• Property taxes represent 2/3 of district revenues, help fund capital needs

Dedicated funding provides flexibility to encourage uses that generate modest direct revenues, but provides spinoff benefits, such as commercial fishing

• Commercial fishing vessels occupy half of berths; 98% occupancy
• 3 whole fishery leases on pier (4 hoists)
• Fresh fish sales permitted off boats
• Draws visitors to restaurants & charter boats
Alamitos Bay Marina

Long Beach | State Tidelands

Public Owner/Operator
City of Long Beach

1,646 marina slips

200 acres | water
10 acres | land

<table>
<thead>
<tr>
<th>Onsite</th>
<th>Offsite</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Yacht Clubs</td>
<td>A New Coastal Mall</td>
</tr>
<tr>
<td>2 Commercial Areas</td>
<td>B Existing Shopping Center</td>
</tr>
<tr>
<td>3 Marinas</td>
<td></td>
</tr>
<tr>
<td>4 Marina Boatyard</td>
<td></td>
</tr>
<tr>
<td>Water Taxi</td>
<td></td>
</tr>
</tbody>
</table>
Dana Point Harbor

Dana Point | State Tidelands

Public Owner/Private Operator
Orange County

2,254 marina slips

170 acres | water
107 acres | land

<table>
<thead>
<tr>
<th>Onsite</th>
<th>Offsite</th>
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</thead>
<tbody>
<tr>
<td>1 Marinas</td>
<td>A Hotels</td>
</tr>
<tr>
<td>2 Hotel/Commercial</td>
<td>B State Beach</td>
</tr>
<tr>
<td>3 Yacht Club</td>
<td></td>
</tr>
<tr>
<td>4 Shipyard</td>
<td></td>
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<tr>
<td>5 Ocean Institute</td>
<td></td>
</tr>
</tbody>
</table>
Former San Leandro Marina

San Leandro

Formerly Public Owner/Operator
City of San Leandro

462 marina slips (to be dismantled)

23 acres | water (marina)
37 acres | land

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<thead>
<tr>
<th>Onsite</th>
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<tr>
<td>1 Marina</td>
<td>A City Golf Course</td>
</tr>
<tr>
<td>2 Pier/ Yacht Club</td>
<td>B Marina Park</td>
</tr>
<tr>
<td>3 Hotel/ Commercial</td>
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<tr>
<td>4 Boat Launch</td>
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</table>
## Case Study Reflections

### Explore potential solutions for new revenue generation

<table>
<thead>
<tr>
<th>Potential New Facilities</th>
<th>Potential Fees, Taxes, Bonds</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Additional Hotel</td>
<td>A Parking Fee</td>
</tr>
<tr>
<td>B Restore Berkeley Pier with Regional Ferry Service</td>
<td>B Vehicle Entrance Fee</td>
</tr>
<tr>
<td>C Restaurant</td>
<td>C Special Assessment Tax</td>
</tr>
<tr>
<td>D Boat Slip Reconfiguration</td>
<td>D Infrastructure Bond Measures</td>
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<tr>
<td>E New Businesses or Activities</td>
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<tr>
<td>F Special Events</td>
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<tr>
<td>G Event/Party Areas</td>
<td></td>
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<tr>
<td>H Fish Market/Commercial Fishing Amenities</td>
<td></td>
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<tr>
<td>I Recreation Businesses</td>
<td></td>
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</tbody>
</table>

- **Community Input Process**
- **Viable Solutions** (i.e. B+D+K = G)
- **Funding Gap** (G)
# Potential Economic Benefits of Ferry Service by Land Use

<table>
<thead>
<tr>
<th>Hotel</th>
<th>Retail</th>
<th>Food &amp; Beverage</th>
<th>Recreation</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Generate new or extended stays</td>
<td>• Capture “grab &amp; go” commuter spending</td>
<td>• Capture weekday commuter spending</td>
<td>• Draw visitors from across the Bay</td>
</tr>
<tr>
<td>• Enhance event revenue</td>
<td>• Support growing West Berkeley work force</td>
<td>• Capture recreational weekend/evening spending</td>
<td>• Gain exposure to outbound locals</td>
</tr>
<tr>
<td>• Attract new hotel</td>
<td>• Attract new retail</td>
<td>• Attract new uses</td>
<td>• Join a network of regional destinations</td>
</tr>
</tbody>
</table>
Berkeley Pier/Ferry Facility Planning Study
Multi-use Pier – Recreational Placemaking
Pier Structural Assessment — Project History

- **2015**: Pier Closes
- **2017**: Draft Structural Assessment Report
- **2018**: Sept 2018 Draft Small-Scale Ferry Terminal Feasibility Study
- **2019**: May City/WETA MOU
- **2020**: Oct Feasibility Study on WETA-scale Ferry Facility
- **2021**: Jan Community Engagement

- **Underwater Inspection**
- **Under Deck Condition**
Pier Alternatives – Repair or Replace

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Project Cost Range (3,000 LF Pier)</th>
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</thead>
<tbody>
<tr>
<td>Repair (no seismic)</td>
<td>$20M to $30M</td>
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<tr>
<td>Repair w/ Seismic Strengthening</td>
<td>$35M to $55M</td>
</tr>
<tr>
<td>New Pier w/ Seismic</td>
<td>$25M to $35M</td>
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</tbody>
</table>

Replacement Pier Length vs Total Project Cost

Project Cost Range

<table>
<thead>
<tr>
<th>Project Cost</th>
<th>Pier Length (lineal feet)</th>
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<tbody>
<tr>
<td>$2M</td>
<td>200</td>
</tr>
<tr>
<td>$6M</td>
<td>400</td>
</tr>
<tr>
<td>$10M</td>
<td>600</td>
</tr>
<tr>
<td>$14M</td>
<td>800</td>
</tr>
<tr>
<td>$18M</td>
<td>1000</td>
</tr>
<tr>
<td>$22M</td>
<td>1200</td>
</tr>
<tr>
<td>$26M</td>
<td>1400</td>
</tr>
<tr>
<td>$30M</td>
<td>1600</td>
</tr>
<tr>
<td>$34M</td>
<td>1800</td>
</tr>
<tr>
<td>$38M</td>
<td>2000</td>
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</tbody>
</table>

i.e. ~$17M for a 1,000 LF new pier
Note: MOU may be terminated at any phase upon mutual agreement.
Example C - Northside Berthing with Extension
Example D - Southside Berthing
Example E - Anchor with North Berthing
Parking & Mobility Considerations

1. Develop baseline travel mode share for ferry
   - On a typical day, how many passengers would use each travel mode to get to/from ferry?

2. Compare mode share to existing infrastructure
   - How many ferry riders could the Waterfront support with existing parking, transit, multimodal facilities?

3. Consider supportive programs & enhancements
   - What programs & enhancements would support non-drive-alone travel & improve access to the Waterfront?

In Process
Parking & Mobility Considerations

Initial Findings:

- City/WETA goal is to accommodate ferry service with 250 spaces.
- Parking management strategies could accommodate many spaces in existing lots.
- Initial target of 60% ferry riders to arrive by bike, walking, transit, carpooling and other shared travel modes.
Upcoming Public Input Opportunities

• Online Questionnaire at project website
• Project email: bmasp@cityofberkeley.info
• Community Workshops #2
  • Pier/Ferry Planning Study – targeted for June 2021
  • BMASP - targeted for Sept 2021
#1 What revenue-generating solutions/funding mechanisms should be studied in greater depth and evaluated for feasibility at the Berkeley Waterfront?

### Potential New Facilities

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>A</td>
<td>Additional Hotel</td>
</tr>
<tr>
<td>B</td>
<td>Restore Berkeley Pier with Regional Ferry Service</td>
</tr>
<tr>
<td>C</td>
<td>Restaurant</td>
</tr>
<tr>
<td>D</td>
<td>Boat Slip Reconfiguration</td>
</tr>
<tr>
<td>E</td>
<td>New Businesses or Activities</td>
</tr>
<tr>
<td>F</td>
<td>Special Events</td>
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<tr>
<td>G</td>
<td>Event/Party Areas</td>
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<tr>
<td>H</td>
<td>Fish Market/Commercial Fishing Amenities</td>
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<tr>
<td>I</td>
<td>Recreation Businesses</td>
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<tr>
<td>J</td>
<td>Others?</td>
</tr>
</tbody>
</table>

### Potential Fees, Taxes, Bonds

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>A</td>
<td>Parking Fee</td>
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<tr>
<td>B</td>
<td>Vehicle Entrance Fee</td>
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<tr>
<td>C</td>
<td>Special Assessment Tax</td>
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<tr>
<td>D</td>
<td>Infrastructure Bond Measures</td>
</tr>
<tr>
<td>E</td>
<td>Others?</td>
</tr>
</tbody>
</table>

"Others?"
#2 What kind of uses/amenities and locations should be evaluated?
Council Worksession Discussion Topics

#3 What waterside and landside access concepts for a Berkeley Pier/Ferry terminal should be explored?
2050 Sea Level Rise (SLR) Impacts

- 2019 Draft Study
- Berkeley Marina less affected
- Shoreline: +10 FT NAVD88
- 2050 SLR (+1.1 FT)
  - 17% Likely to Occur
- Waves make a difference

1.1' SLR + 20-YR STORM

1.1' SLR + King Tide

2050 Tides

- 100-Year Extreme Tide
- Low-Risk Aversion SLR

2050

King Tide Dec 2018 +7.0 FT
## Supporting Policies & Studies

### City of Berkeley

**Policy:**
- *City General Plan Updates* (2001)

**Studies:**
- *Berkeley Municipal Pier Structural Assessment*
- *Small-scale Ferry Transportation Feasibility Study on Waterside Improvements*

### Water Emergency Transportation Authority

**Policy:**
- *Plan Bay Area 2050* (pending): Includes Berkeley ferry service as ‘Regionally Significant Project.’