

# Harbor Safety Committee

of the San Francisco Bay Region

*Mandated by the California Oil Spill  
Prevention and Response Act of 1990*

## Harbor Safety Committee of the San Francisco Bay Region

Thursday, March 8, 2018

Port of Oakland, Exhibit Room

530 Water Street, Oakland, CA

Capt. Lynn Korwatch (M), Marine Exchange of the San Francisco Bay Region (Marine Exchange), Chair of the Harbor Safety Committee (HSC); called the meeting to order at 10:02.

Marcus Freeling (A), Marine Exchange, confirmed the presence of a quorum of the HSC.

Committee members (M) and alternates (A) in attendance with a vote: **John Berge** (M), Pacific Merchant Shipping Association; **Ted Blanckenburg** (A), AMNAV Maritime Services; **Capt. Robert Carr** (M), San Francisco Bar Pilots; **Sejal Choksi-Chugh** (M), San Francisco Baykeeper; **Brian Garcia** (A), NOAA; **Aaron Golbus** (M), Port of San Francisco; **Ben Huber** (M), Westar Marine Services; **Capt. Thomas Kirsch** (M), Blue and Gold Fleet; **Andrew Marshall** (M), Port of Benicia; **Jim Mazza** (A), US Army Corps of Engineers; **Jim McGrath** (M), Bay Conservation and Development Commission; **Chris Peterson** (M), Port of Oakland; **Jeff Robbins** (M), General Steamship Corporation; **Julian Rose** (M), Andeavor; **CDR Jennifer Stockwell** (A), United States Coast Guard; **Jeff Vine** (A), Port of Stockton

The meetings are always open to the public.

### Approval of the Minutes-

A motion to accept the minutes of the February 8, 2018 meeting was made and seconded. The minutes were approved without dissent.

### Comments by Chair- Capt. Lynn Korwatch

Welcomed the committee members and audience.

### Coast Guard Report- CDR Jennifer Stockwell

- Advised of a February 18<sup>th</sup> small passenger vessel grounding in the vicinity of Berkeley Marina. All 43 people onboard were rescued and transported to shore with two minor injuries reported. Action is being taken against the mariner resulting in a one month license suspension.
- Advised of recent VTS and Bar Pilot joint training at the USCG Petaluma vessel simulator.

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- Advised that the Mavericks Surf Contest has been canceled this year.
- LCDR Rebecca Deakin read from the February- 2018 Prevention/Response Report (attached).
- CDR Stockwell advised of a pending case involving an illegal charter reported in Suisun City that was being used as a party boat. The vessel was overcrowded and a significant safety hazard. Please report these types of cases to the USCG. Illegal charters are a statewide issue.
- John Berge asked for details of the February 20<sup>th</sup> ballast water case. CDR Stockwell advised that the vessel didn't meet regulations and didn't have an approved plan in place. A valid mid-ocean exchange was conducted.

### **Army Corps of Engineers Report- Jim Mazza**

- Read from the US Army Corps of Engineers, San Francisco District Report (attached). FY 2018 dredging of the Main Ship Channel will be contracted hopper, not the Essayons. The Dillard is back conducting debris removal and condition surveys are planned.
- Jim McGrath asked about the increased amount of debris in Oakland Harbor. Jim Mazza advised that the wet year last year may be responsible.

### **Clearing House Report- Marcus Freeling (report attached)**

### **OSPR Report- Mike Coyne**

- Advised of new HSC appointments: Jim Anderson has been reappointed as member representing commercial fishing. Scott Grindy has been appointed as member representing pleasure boat operators. New member Capt. Ryan McKenney, Chevron Shipping, has been appointed representing tank ship operators. Open HSC positions are available and announced by email.
- Tom Cullen, OSPR Administrator, advised that OSPR's statewide regulations are in the final stage. Legislation is also being considered to address commercial abandoned and derelict vessels using State Lands surface lease revenue. Progress is being made after SB 1197 passage with the regulation of oil spill management teams. Capt. Korwatch has been named as a member of the Technical Advisory Committee.

### **NOAA Report- Brian Garcia**

- Advised that the US Coast Pilot has been updated with new navigation rules. NOAA and the USCG developed the navigation rules which will be an appendix in Coast Pilot publications. A

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USCG News Release was issued and is available at:

<https://content.govdelivery.com/accounts/USDHSCG/bulletins/1dffc4c>

- Advised that the NWS La Nina advisory continues. The forecast calls for more rainy weather. Early indications point to a possible El Nino next year.

## **State Lands Commission Report- Richard Hernandez (report attached)**

- Advised of ballast water regulations. State Lands processes ballast water reporting forms and issues fines for violations. Outreach is being made. John Berge asked about the penalties for noncompliance. Richard Hernandez advised that fines are up to \$20,000 per tank per day and the maximum penalty issued to date is \$260,000.

## **Regulatory Overview of Pipeline Lease Provisions- Nicholas Lavoie, State Lands**

- Nicholas Lavoie, State Lands Commission Public Land Manager, outlined the lease terms for pipelines within State Lands jurisdiction including many San Francisco Bay-Delta waterways. Federal and State regulations apply but are mostly for pipeline integrity testing. Many pipelines go through multiple jurisdictions with varying standards. The older method of pipeline installation involves trenching whereas the current method uses deeper horizontal directional drilling. Older pipelines can be subject to erosion and exposure. There are no current regulations addressing pipeline condition maintenance. Pipeline leases are now issued for 20-25 years but older leases are for longer and records can be incomplete. New lease terms are added when a lease is issued or renewed. Lease terms requiring certified engineer drawings, geotechnical reports, inspections and regular surveys are now included for pipeline leases. If pipelines become exposed, remediation is required. HSC participation is welcome.
- Capt. Korwatch asked about regulations for submerged cables. Nicholas Lavoie advised that cables are less common and pose less environmental hazard than pipelines. Regulations are being considered but jurisdiction is complex. Ellen Johnck asked about pipeline burial depth and channel dredging. Nicholas Lavoie advised that many older pipelines were only required to be buried 3-4 feet below the mud line but the new standard is 5 feet. Remediation plans have been required to re-cover pipelines to the 5 foot burial depth when found to be exposed. Engineered mattresses have also been used to protect exposed pipelines. Ellen Johnck advised that a request for pipeline relocation was authorized for San Bruno Shoal Channel if dredging is impacted.

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## **Presentation on the Effects of Sea Level Rise in CA- Martine Schmidt-Poolman, UC Berkeley**

- Marine Schmidt-Poolman and Jang Yu, UC Berkeley, gave a presentation on the predicted effects of sea level rise on California's transportation fuel sector focusing on the Port of Oakland (slides attached). Sea level rise and coastal flooding are predicted to increase due to climate change. The model used was developed by the UCB CEC-TFS Modeling Team and incorporates data for sea level rise, storm surge, tides and LIDAR topographic information to predict future coastal flooding. Three projections of varying severity were presented. It is projected that flooding could become an issue for the Port of Oakland by 2060. The projections get further apart the farther in the future they go. Coastal flooding could be significant by 2100. Southern California infrastructure is more vulnerable to flooding than the Bay Area's. Comments and participation are welcome.
- Jim McGrath asked if this model is related to the sea level rise work of Dr. Mark Stacey. It was advised that this is an updated model that incorporates additional variables. Dr. Stacey is a reviewer of the project. Brian Garcia advised that storms are expected to increase in intensity and there is a focus on storm surge research.

## **Work Group Reports-**

**Tug Work Group-** Ted Blanckenburg advised that there was nothing to report

**Navigation Work Group-** Capt. Carr advised that there was nothing to report.

**Ferry Operations Work Group-** Capt. Thomas Kirsch advised that there was nothing to report.

**Dredge Issues Work Group-** Julian Rose advised that there was nothing to report.

**PORTS Work Group-** Chris Peterson advised that there was nothing to report.

**Prevention through People Work Group-** Nothing to report.

## **PORTS Report- Marcus Freeling**

- Advised that the UP Railroad Bridge wind station is still offline due to bridge electrical issues.
- Advised that solar panels are scheduled to be replaced at the Tiburon shore station for the Southampton Shoal LB6 buoy mounted current sensor.

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- Advised that several PORTS buoy mounted current sensors have been damaged while deployed in recent years. Please report damaged equipment if found.

**Public Comment- None**

**Old Business- None**

**New Business- None**

**Next Meeting-**

1000-1200, April 12, 2018

California Maritime Academy, Richmond Maritime Safety & Security Center  
756 West Gertrude Street, Richmond, CA

**Adjournment-**

A motion to adjourn was made and seconded. The motion passed without dissent and the meeting adjourned at 11:25.

Respectfully submitted:



Capt. Lynn Korwatch

## SIGNIFICANT PORT SAFETY AND SECURITY CASES (FEB 2018)

### MARINE CASUALTIES

Vessel Grounding, (10FEB18): A US flag small passenger vessel ran aground in the vicinity of Berkeley Marina. Coast Guard and Berkeley Fire assisted on scene to escort passengers off the vessel and transport them shore-side. 02 injuries reported. A CG-835 No Sail was issued requiring proper repairs prior to operation. Vessel was towed to dry dock for follow-up investigation and to make repairs. Case pends.

Loss of steering, (10FEB2018): A U.S. flag small passenger vessel experienced a loss of steering due to a main generator failure. The vessel proceeded back to the pier under its own power using its emergency generator. A CG-835 No Sail was issued requiring proper operation of the generator on full load. The vessel made repairs and the generator was tested successfully to the satisfaction of the attending Marine inspector. Case Pends.

Reduction in propulsion, (12FEB2018): A U.S. flag container vessel experienced a reduction in propulsion while departing Anchorage 9 due to a loose bolt on the local control linkage. A CG-835 No Sail was issued. The vessel was escorted by tug to the Port of Oakland. Repairs and tests were witnessed and verified by class and Coast Guard. Case closed.

Equipment Failure, (16FEB2018): A U.S. flag small passenger vessel struck a dead head while underway. The vessel experienced engine vibrations and could not bring the vessel up to full speed. A CG-835 No Sail was issued. Upon return to the pier, divers discovered a tarp wrapped around the shaft. The tarp was removed and the vessel conducted sea trials with satisfactory results. Case closed.

Loss of propulsion, (19FEB18): A foreign flag bulk carrier experienced a loss of propulsion while anchoring at Anchorage 9. A COTP Order was issued requiring the vessel to remain at Anchorage 9 to effect repairs prior to departure. A Class Surveyor and Coast Guard attended the vessel and witnessed satisfactory operation of the vessel's main propulsion and associated systems. Loss of propulsion was not attributed to fuel switching. The COTP Order was lifted. Case closed.

### VESSEL SAFETY CONDITIONS

Operational Control, (02FEB2018): Coast Guard received evidence that an uncertificated vessel was carrying upwards of 60 passengers for hire while moored at the dock. A COTP Order was issued restricting the carriage of any passengers for hire until OUPV requirements are met. Case Pends.

Operational Control, (02FEB2018) A U.S. flag commercial fishing vessel was issued a COTP Order to provide evidence that the vessel could retain onboard all oily mixtures generated during their intended voyages or possess approved oily-water separating equipment, prior to departure. Coast Guard attended the vessel and verified appropriate and adequate bilge arrangements. The COTP Order was lifted. Case closed.

Operational Control, (19FEB18): A U.S. flag small passenger vessel experienced an accidental release of CO2 in the aft engine room compartment by a contractor conducting annual dockside maintenance and fire certification review. The contractor was testing a valve and accidentally discharged the gas. There were no injuries and the space was evacuated and ventilated. A CG-835 No Sail was issued. Technicians installed two new cylinder heads and recharged the CO2 cylinders to the satisfaction of the Coast Guard. Case closed.

Operational Control, (20FEB2018): A foreign flag bulk carrier was issued a COTP Order prohibiting the vessel from discharging any untreated ballast water within the San Francisco Captain of the Port zone. In lieu of using a ballast water management system, the vessel had been conducting open water exchanges as per their Ballast water management plan. Cal State Lands was contacted and the COTP order was lifted based upon vessel safety and commercial impacts. Case closed.

Operational Control, (22FEB18): A U.S. flag container ship discovered a lube oil leak resulting in the discharge of less than a teaspoon of bearing oil. Coast Guard responders attended the vessel and verified no visible sheening. A CG-835 No Sail was issued requiring the crew to make proper repairs prior to getting underway. Coast Guard approved modifications to the seal system restricting the outflow of oil. Follow up will be conducted at the vessel's next port of call. Case pends.

### GENERAL SAFETY CASES

Rule 9 Violation, (08FEB18): A foreign flag container ship took action to avoid collision with a recreational sailing vessel by reducing propulsion and altering course while transiting in the vicinity of the Golden Gate Bridge. The pilot submitted appropriate forms to the Coast Guard. Case pends.

### NAVIGATIONAL SAFETY

Letter of Deviation, (08FEB18): A foreign flag tank vessel was issued an inbound Letter of Deviation due to an inoperable AIS Pilot Plug. The vessel was authorized to shift within the port but was required to make repairs prior to departure. Coast Guard was notified of proper operation. Case closed.

### SIGNIFICANT INCIDENT MANAGEMENT DIVISION CASES

Letter of Warning, (04FEB18): A 100 'x 25' mystery sheen was discovered in Alameda Harbor, issued LOW to suspected responsible party. Case Closed.

Letter of Warning, (07FEB18): A 40' U.S. flag recreational vessel sunk in Half Moon Bay, discharging an unknown amount of motor oil. Clean up operations performed. Case Closed.

**PREVENTION / RESPONSE - SAN FRANCISCO HARBOR SAFETY STATISTICS**

February 2018

PORT SAFETY CATEGORIES*	Feb-2018	Feb-2017	**3yr Avg
<b>Total Number of Port State Control Detentions:</b>	0	1	0.61
SOLAS (0), STCW (0), MARPOL (0), ISM (0), ISPS (0)			
<b>Total Number of COTP Orders:</b>	4	5	3.19
Navigation Safety (1), Port Safety & Security (3), ANOA (0)			
<b>Marine Casualties (reportable CG 2692) within SF Bay:</b>	10	12	9.33
Allision (0), Collision (0), Fire (1), Capsize (0), Grounding (1), Sinking (0)			
Steering (0), Propulsion (5), Personnel (1), Other (2), Power (0)			
<b>Total Number of (routine) Navigation Safety issues/Letters of Deviation:</b>	1	1	3.00
Radar (0), Gyro (0), Steering (0), Echo Sounder (0), AIS (1)			
ARPA (0), Speed Log (0), R.C. (0), Other (0)			
<b>Reported or Verified "Rule 9" or other Navigational Rule Violations:</b>	1	0	0.36
<b>Significant Waterway events/Navigation related Cases:</b>	0	1	0.33
<b>Total Port Safety (PS) Cases opened</b>	<b>16</b>	<b>20</b>	<b>16.83</b>
MARINE POLLUTION RESPONSE			
Pollution Discharge Sources (Vessels)	Feb-2018	Feb-2017	**3yr Avg
U.S. Commercial Vessels	1	1	0.69
Foreign Freight Vessels	0	0	0.06
Public Vessels	0	2	0.50
Commercial Fishing Vessels	0	0	0.28
Recreational Vessels	4	2	2.72
Pollution Discharge Sources (Facilities)			
Regulated Waterfront Facilities	0	0	0.14
Regulated Waterfront Facilities - Fuel Transfer	0	0	0.00
Other Land Sources	0	0	0.56
Mystery Spills - Unknown Sources	3	4	3.69
Number of Pollution Incidents within San Francisco Bay			
Spills < 10 gallons	2	4	3.69
Spills 10 - 100 gallons	0	1	1.03
Spills 100 - 1000 gallons	0	0	0.14
Spills > 1000 gallons	0	0	0.00
Spills - Unknown Size	6	4	3.86
<b>Total Pollution Incidents</b>	<b>8</b>	<b>9</b>	<b>8.72</b>
Oil Discharge/Hazardous Materials Release Volumes by Spill Size			
Estimated spill amount from U.S. Commercial Vessels	0.25	1.00	13.99
Estimated spill amount from Foreign Freight Vessels	0.00	0.00	8.36
Estimated spill amount from Public Vessels	0.00	12.00	2.01
Estimated spill amount from Commercial Fishing Vessels	0.00	0.00	1.17
Estimated spill amount from Recreational Vessels	5.00	2.00	40.74
Estimated spill amount from Regulated Waterfront Facilities	0.00	0.00	0.17
Estimated spill amount from Regulated Waterfront Facilities - Fuel Transfer	0.00	0.00	0.00
Estimated spill amount from Other Land Sources	0.00	0.00	1.98
Estimated spill amount from Unknown Sources (Mystery Sheens)	unk	unk	0.00
<b>Total Oil Discharge and/or Hazardous Materials Release (Gallons)</b>	<b>5.25</b>	<b>15.00</b>	<b>68.41</b>
Penalty Actions			
Civil Penalty Cases	0	0	0.00
Notice of Violations	0	1	0.47
Letters of Warning	2	2	2.56
<b>Total Penalty Actions</b>	<b>2</b>	<b>3</b>	<b>3.03</b>

\* NOTE: Values represent all cases within the HSC jurisdiction during the period. Significant cases are detailed in the narrative.

\*\* NOTE: Values represent an average month over a 36 month period for the specified category of information.

**Harbor Safety Committee  
Of the San Francisco Bay Region**

**Report of the  
U.S. Army Corps of Engineers, San Francisco District  
March 8, 2018**

**1. CORPS O&M DREDGING PROGRAM**

The following report covers the upcoming FY 2018 dredging program for San Francisco Bay. This program is subject to change based on a number of variables including final FY 2018 appropriations and Corps Work Plan. Please refer to the Local Notice to Mariner for details of dredge operations.

**FY 2018 DREDGING**

- a. **SF Main Ship Channel** – Estimated start mid-May 2018, estimated completion early June 2018, by **contracted** hopper.
- b. **Richmond Inner Harbor** –FY 18 dredging cycle estimated to commence early August 2018 with completion in November. Work will be contracted clamshell.
- c. **Richmond Outer Harbor (and Richmond Long Wharf)** –In alignment with last year’s proposal to alternate Hopper dredging, planned dredging for Richmond Outer will proceed with Essayons.
- d. **Oakland Harbor** – 2017 dredge cycle initiated in mid-August 2017. Significantly larger than expected volumes are requiring additional dredging. Initial estimates indicate approximately 1000kcy resulting in likely need to continue dredging through March 2018 to complete the 2017 dredge cycle. 2018 dredge cycle has a planned start of early August with planned completion in November.
- e. **Redwood City Harbor** – 2018 work plan funding will determine award and quantities.
- f. **San Pablo Bay (Pinole Shoal)** –In alignment with last year’s proposal to alternate Gov’t Hopper dredging Pinole will be deferred in 2018.
- g. **Suisun Bay Channel (and New York Slough)** –2018 Clamshell award is expected to initiate dredging in late August and to complete in late October.

**2. DEBRIS REMOVAL** – Debris removal for February 2018 was 88 tons. Raccoon: 20 tons; Dillard: 18 tons, including 2 abandoned vessels; other boats: 50 tons, including 4 abandoned vessels. Average for February from 2008 to 2017 is 75.4 tons (Range: 12-198 tons).

**BASEYARD DEBRIS COLLECTION TOTALS:**

<b>MONTH</b>	<b>RACCOON</b>	<b>DILLARD</b>	<b>MISC</b>	<b>TOTAL</b>
2018	TONS	TONS	TONS	TONS
JAN	45	0	50	95
FEB	20	18	50	88
MAR	0	0	0	0
APR	0	0	0	0
MAY	0	0	0	0
JUN	0	0	0	0
JUL	0	0	0	0
AUG	0	0	0	0
SEP	0	0	0	0
OCT	0	0	0	0
NOV	0	0	0	0
DEC	0	0	0	0

<b>YR TOTAL</b>
183

**3. UNDERWAY OR UPCOMING HARBOR IMPROVEMENTS**

None to report.

**4. EMERGENCY (URGENT & COMPELLING) DREDGING**

None to report.

## 5. OTHER WORK

**San Francisco Bay to Stockton** – The study is now being conducted by the Wilmington District to more efficiently match the study with available resources. Funding was allocated in the FY17 work plan. The Tentatively Selected Plan (TSP) milestone for Phase I (Western Reach) of the project was held on 29 June 2016 utilizing FY14 carryover funds. The recommended plan is to deepen the Phase I reach of the project from a depth of -35 feet to -38 feet MLLW. The final report is scheduled to be approved in February 2019. Additional funding will be dependent upon FY18 work plan funding.

## HYDROGRAPHIC SURVEY UPDATE

Address of Corps' web site for completed hydrographic surveys:

<http://www.spn.usace.army.mil/Missions/Surveys,StudiesStrategy/HydroSurvey.aspx>

The following surveys are posted:

**Alameda Point Navigation Chanel:** Condition survey of November 7, 2017.  
**Berkeley Marina (Entrance Channel):** Condition survey of November 2, 2017.  
**Islais Creek Channel:** Condition survey of November 17, 2017.  
**Larkspur Ferry Channel:** Condition survey of November 6, 2017.  
**Main Ship Channel:** Condition survey of January 24, 2018.  
**Mare Island Strait:** Condition survey of September 24, 2014.  
**Marinship Channel (Richardson Bay):** Condition survey of December 7, 2017.  
**Napa River:** Condition survey of May 4-9, 2017.  
**Northship Channel:** Condition survey of October 27, 2017.  
**Oakland Entrance Channel (Reach 1A-1C):** Post-dredge surveys of January 17 & 19, 2018.  
**Oakland Inner Harbor (Reach 2):** Post-dredge survey of October 10, 2017 & November 2, 2017.  
**Oakland Inner Harbor (Reach 3A-3C):** Post-dredge survey of February 22, 2018.  
**Oakland Inner Harbor (Reach 4):** Post-dredge survey of January 17, 2018.  
**Oakland Inner Harbor (Reach 5):** Post-dredge survey of January 5, 2018.  
**Oakland Inner Harbor (Reach 6):** Post-dredge survey of December 21, 2017.  
**Oakland Outer Harbor (Reach 7-8):** Post-dredge surveys of September 2 & 11, 2017.  
**Oakland Outer Harbor (Reach 9-10):** Condition survey of May 16-22, 2017.  
**Petaluma River (Across-the-Flats):** Condition survey of September 12-14, 2014.  
**Petaluma River (Main Channel):** Condition survey of December 12-13, 2017.  
**Pinole Shoal Channel:** Post-dredge survey of November 14-17, 2017.  
**Redwood City Harbor:** Condition survey of February 7-8, 2018.  
**Richmond Inner Harbor:** Condition survey of January 31, 2018.  
**Richmond Inner Harbor (Santa Fe Channel):** Condition survey of December 20, 2016.  
**Richmond Outer Harbor (Longwharf):** Condition survey of January 25, 2018.  
**Richmond Outer Harbor (Southampton Shoal):** Condition survey of January 25, 2018.  
**Sacramento River Deep Water Ship Channel:** Post-dredge surveys of August 5, 2017, August 14, 2017, August 23, 2017, September 5 & 27, 2017.  
**San Bruno Shoal:** Condition survey of March 27, 2017.  
**San Leandro Marina (and Channel):** Condition survey of March 30 and April 1, 2015.  
**San Rafael (Across-the-Flats):** Condition survey of October 30-31, 2017.  
**San Rafael (Creek):** Condition survey of October 30, 2017.  
**Stockton Ship Channel:** Condition survey of December 27-28, 2017, January 9-11, 2018 and February 13-15 2018.  
**Suisun Bay Channel:** Post-dredge survey of October 10 & 20, 2017.

**Suisun Bay Channel (Bullshead Reach):** Condition survey of April 19, 2017.  
**Suisun Bay Channel (New York Slough):** Pre-dredge survey of July 13-14, 2017.

Disposal Site Condition Surveys:

**SF-08 (Main Ship Channel Disposal Site):** Condition survey of May 11, 2017.  
**SF-09 (Carquinez):** Condition survey of October 25, 2017.  
**SF-10 (San Pablo Bay):** Condition survey of October 25, 2017.  
**SF-11 (Alcatraz Island):** Condition survey of November 30, 2017.  
**SF-16 (Suisun Bay Disposal Site):** Condition survey of September 1, 2016.  
**SF-17 (Ocean Beach Disposal Site):** Condition survey of May 11, 2017.

**Requested Surveys:**

**Condition surveys are scheduled to occur thru the end of March for all of San Francisco District's in-bay projects which are planned to be dredged in FY18.**

NEW WEB ADDRESS – USACE WORK PLAN:

<http://www.usace.army.mil/Missions/Civil-Works/Budget/>

# O&M DREDGING PLAN FOR FY18\*

8-Mar-18

Project	District	Bid Opening Award Date	FY 2017			FY 2018					FY 2019				Estimated CY	Planned Placement Site	Notes		
			OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP				OCT	NOV
SF Main Ship Channel	SPN/NWP	N/A															350kcy	OBDS/SF-8	Estimated performance period May 15 - May 30
Richmond Outer Harbor	SPN/NWP	N/A															300kcy	SF-11/SF-10	In alignment with last years proposal to alternate Hopper Dredging, Richmond Outer will utilize the Essayons
Richmond Inner Harbor	SPN	Jun 26 Jul 10									♦	♦					350kcy	DODS/upland least cost	Estimated performance period Aug 10- Nov 10
Oakland Harbor	SPN	May 23 June 15									♦	♦					1000kcy	DODS/upland least cost	Estimated performance period Aug 1- Nov 30
Redwood City Harbor	SPN	Jul 3 Jul 17									♦	♦					300kcy	SF-11	Estimated performance period Aug 17- Nov 3
Pinole Shoal	SPN/NWP	N/A																	In alignment with last years proposal to alternate Hopper Dredging, Pinole will be deferred
Suisun Bay Channel	SPN	June 15 July 10									♦	♦					175kcy	SF-16	Estimated performance period Aug 25- Oct 20
Sacramento River (30 Ft)	SPN										♦	♦					100kcy	Various Upland	
San Joaquin, Port of Stockton	SPN	Jun 1 Jun 22															250kcy	Various Upland	Estimated performance period 22 July - Nov 30



Ongoing Contracts  
 New SPN Contract  
 West Coast Hopper Contract  
 Government Dredge



Environmental Window



Bid Opening



Contract Award

\* Program execution is based on the FY18 President's Budget, Workplan and Federal Standard plan for each project.  
 \*\* Window Extension.



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Harbor Safety Committee of the  
San Francisco Bay Region Clearing House  
c/o Marine Exchange of the San Francisco Bay Region  
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San Francisco, California 94133-1131  
415-441-6600 fax 415-441-3080 [hsc@sfmtx.org](mailto:hsc@sfmtx.org)

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## San Francisco Clearinghouse Report

March 8, 2018

- ✎ In February the clearinghouse did not need to contact OSPR regarding any possible escort violations.
- ✎ In February the clearinghouse did not receive any notifications of vessels arriving at the Pilot Station without escort paperwork.
- ✎ The clearinghouse has not contacted OSPR in 2018 regarding possible escort violations. The clearinghouse did not contact OSPR in 2017 about possible escort violations. The clearinghouse contacted OSPR 1 time in 2016 about a possible escort violation. The clearinghouse contacted OSPR 3 time in 2015 about possible escort violations. The clearinghouse contacted OSPR 5 times regarding possible escort violations in 2014. The clearinghouse contacted OSPR 1 time in 2013. The clearinghouse contacted OSPR 3 times in 2012 regarding any possible escort violations, 3 times in 2011, 6 times in 2010, 8 time 2009; 4 times 2008; 9 times in 2007; 9 times in 2006; 16 times in 2005; 24 times in 2004; twice in 2003; twice in 2002; 6 times in 2001; 5 times in 2000.
- ✎ In February there were 84 tank vessel arrivals; 9 ATB's, 8 Chemical Tankers, 15 Chemical/Oil Tankers, 28 Crude Oil Tankers, 1 LPG, 14 Product Tankers, and 8 Tugs with Barges.
- ✎ In February there were 268 total arrivals.

# San Francisco Bay Clearinghouse Report For February 2018

## San Francisco Bay Region Totals

	<u>2018</u>		<u>2017</u>	
Tanker arrivals to San Francisco Bay	66		58	
ATB arrivals	9		14	
Barge arrivals to San Francisco Bay	9		11	
Total Tanker and Barge Arrivals	84		83	
Tank ship movements & escorted barge movements	261		265	
Tank ship movements	142	54.41%	141	53.21%
Escorted tank ship movements	118	45.21%	109	41.13%
Unescorted tank ship movements	24	9.20%	32	12.08%
Tank barge movements	119	45.59%	124	46.79%
Escorted tank barge movements	5	1.92%	15	5.66%
Unescorted tank barge movements	114	43.68%	109	41.13%

Percentages above are percent of total tank ship movements & escorted barge movements for each item.

Escorts reported to OSPR 0 0

<b>Movements by Zone</b>	<b>Zone 1</b>	<b>%</b>	<b>Zone 2</b>	<b>%</b>	<b>Zone 4</b>	<b>%</b>	<b>Zone 6</b>	<b>%</b>	<b>Total</b>	<b>%</b>
Total movements	172		254		0		102		528	
Unescorted movements	82	47.67%	133	52.36%	0	0.00%	48	47.06%	263	49.81%
Tank ships	68	39.53%	109	42.91%	0	0.00%	47	46.08%	224	42.42%
Tank barges	14	8.14%	24	9.45%	0	0.00%	1	0.98%	39	7.39%
Escorted movements	90	52.33%	121	47.64%	0	0.00%	54	52.94%	265	50.19%
Tank ships	86	50.00%	116	45.67%	0	0.00%	51	50.00%	253	47.92%
Tank barges	4	2.33%	5	1.97%	0	0.00%	3	2.94%	12	2.27%

Notes:

1. Information is only noted for zones where escorts are required.
2. All percentages are percent of total movements for the zone.
3. Every movement is counted in each zone transited during the movement.
4. Total movements is the total of all unescorted movements and all escorted movements.

# San Francisco Bay Clearinghouse Report For 2018

## San Francisco Bay Region Totals

	<u>2018</u>		<u>2017</u>	
Tanker arrivals to San Francisco Bay	147		797	
ATB arrivals	19		146	
Barge arrivals to San Francisco Bay	25		150	
Total Tanker and Barge Arrivals	172		1,093	
Tank ship movements & escorted barge movements	614		3,562	
Tank ship movements	334	54.40%	2,075	58.25%
Escorted tank ship movements	263	42.83%	1,618	45.42%
Unescorted tank ship movements	71	11.56%	457	12.83%
Tank barge movements	280	45.60%	1,487	41.75%
Escorted tank barge movements	26	4.23%	218	6.12%
Unescorted tank barge movements	254	41.37%	1,269	35.63%

Percentages above are percent of total tank ship movements & escorted barge movements for each item.

Escorts reported to OSPR 0 0

<b>Movements by Zone</b>	<b>Zone 1</b>	<b>%</b>	<b>Zone 2</b>	<b>%</b>	<b>Zone 4</b>	<b>%</b>	<b>Zone 6</b>	<b>%</b>	<b>Total</b>	<b>%</b>
Total movements	380		595		0		241		1,216	
Unescorted movements	182	47.89%	311	52.27%	0	0.00%	115	47.72%	608	50.00%
Tank ships	143	37.63%	242	40.67%	0	0.00%	106	43.98%	491	40.38%
Tank barges	39	10.26%	69	11.60%	0	0.00%	9	3.73%	117	9.62%
Escorted movements	198	52.11%	284	47.73%	0	0.00%	126	52.28%	608	50.00%
Tank ships	186	48.95%	259	43.53%	0	0.00%	117	48.55%	562	46.22%
Tank barges	12	3.16%	25	4.20%	0	0.00%	9	3.73%	46	3.78%

Notes:

1. Information is only noted for zones where escorts are required.
2. All percentages are percent of total movements for the zone.
3. Every movement is counted in each zone transited during the movement.
4. Total movements is the total of all unescorted movements and all escorted movements.



## CALIFORNIA STATE LANDS COMMISSION

### HARBOR SAFETY COMMITTEE MONTHLY REPORT - FEBRUARY COMPARISON

#### VESSEL TRANSFERS

	Total Transfers	Total Vessels Monitored	Total Transfers Percentage
FEBRUARY 1 - 28, 2017	171	72	42.11
FEBRUARY 1 - 28, 2018	168	50	29.76

#### CRUDE OIL / PRODUCT TOTALS

	Crude Oil ( D )	Crude Oil ( L )	Overall Product ( D )	Overall Product ( L )	GRAND TOTAL
FEBRUARY 1 - 28, 2017	9,961,600	818,000	13,497,300	5,905,793	19,403,093
FEBRUARY 1 - 28, 2018	14,553,000	0	18,267,303	7,900,973	26,168,276

#### OIL SPILL TOTAL

	<u>TERMINAL</u>	<u>VESSEL</u>	<u>Total</u>	<u>Gallons Spilled</u>
FEBRUARY 1 - 28, 2017	0	0	0	0
FEBRUARY 1 - 28, 2018	0	0	0	0

**Disclaimer:**

Please understand that the data is provided to the California State Lands Commission from a variety of sources; the Commission cannot guarantee the validity of the data provided to it.

# Sea level rise and coastal flooding

What does that mean for the SF Bay Area and the Port of Oakland?

UCB CEC-TFS Modeling Team

March 8<sup>th</sup>, 2018

Presented by Yang Ju

This presentation is part of the following project:



## Assessing Extreme Weather-Related Vulnerability and Identifying Resilience Options for California's Interdependent Transportation Fuel Sector

PI's: John Radke, Greg Biging, Karlene Roberts

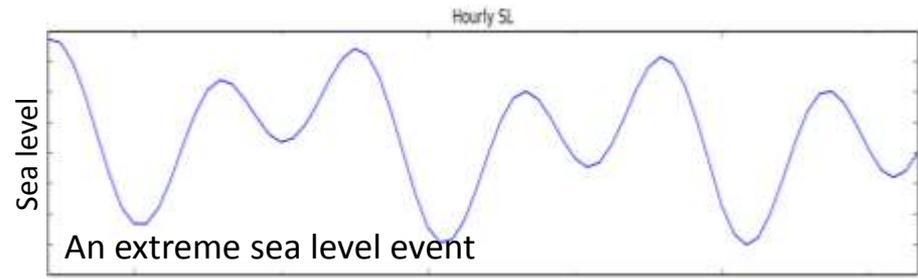
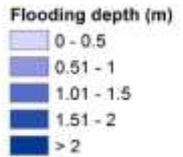
Date: 2016 – May 2018

Website: <http://keystone.gisc.berkeley.edu>

Contact: [martinesp@berkeley.edu](mailto:martinesp@berkeley.edu)

Center for Catastrophic Risk Management  
University of California, Berkeley  
FED-15-001

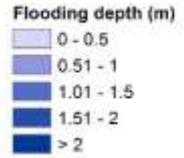




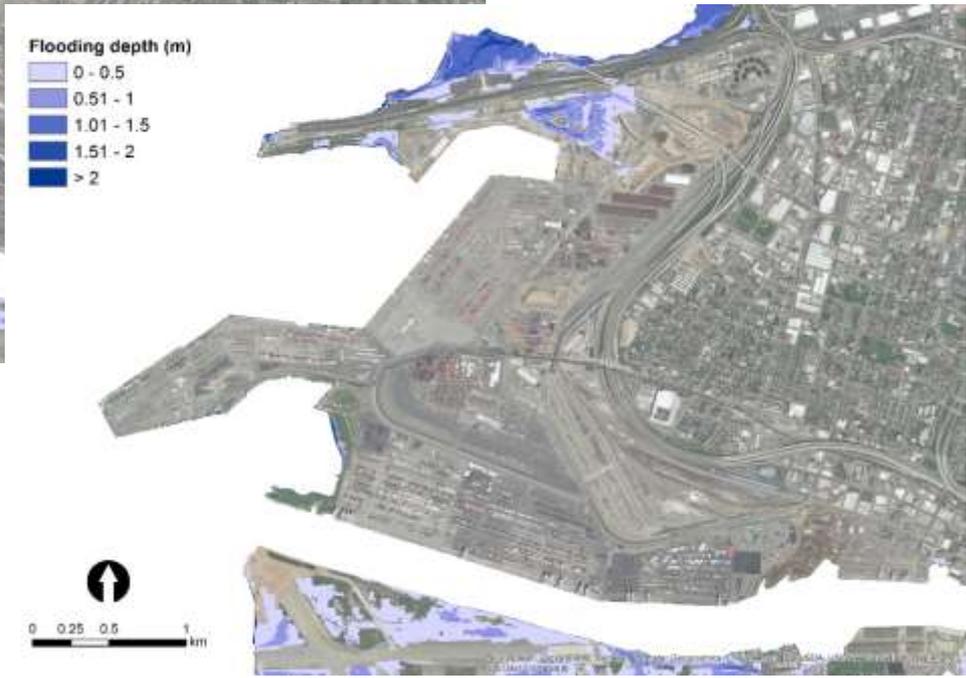
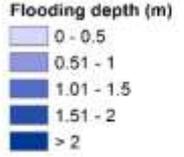
72 hour period



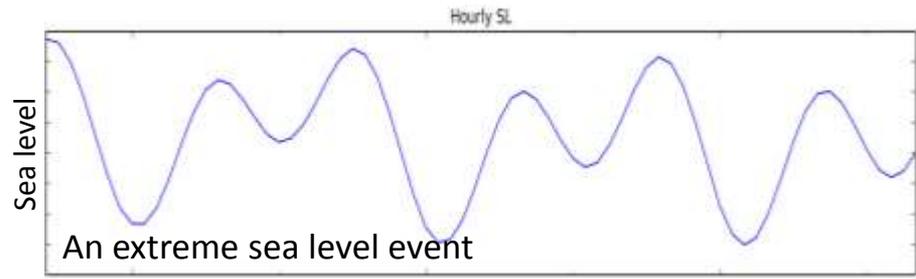
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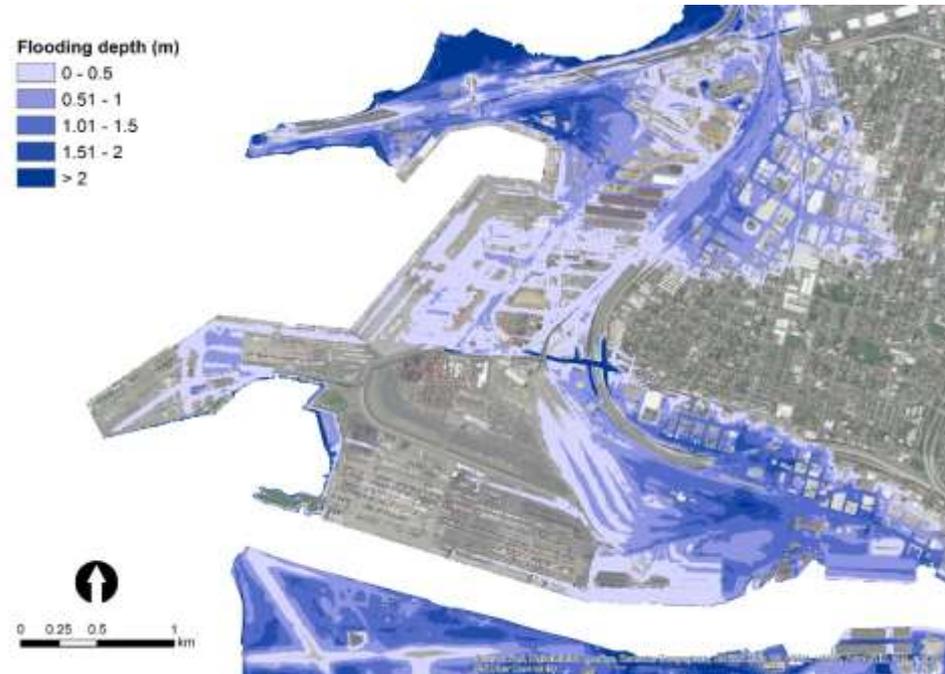
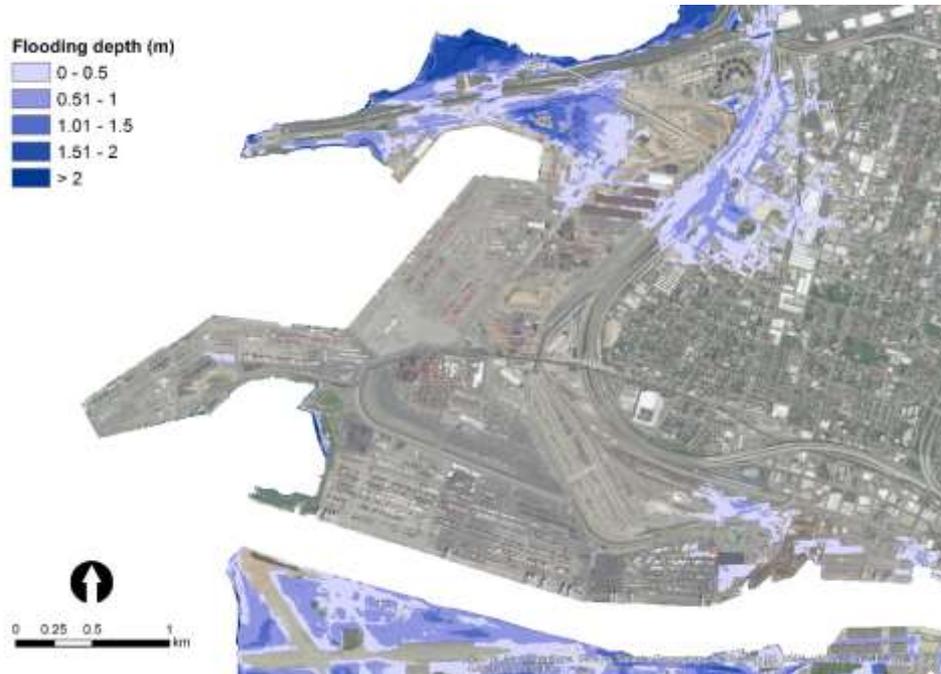
Extreme event of the median scenario, 2020-2040



Extreme event the median scenario, 2040-2060



72 hour period



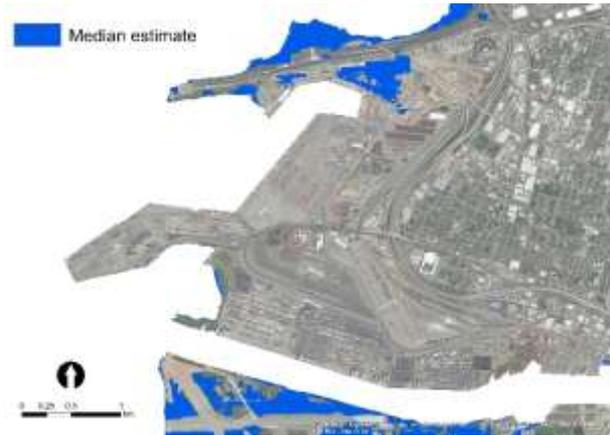
Extreme event the median scenario, 2060-2080

Extreme event the median scenario, 2080-2100

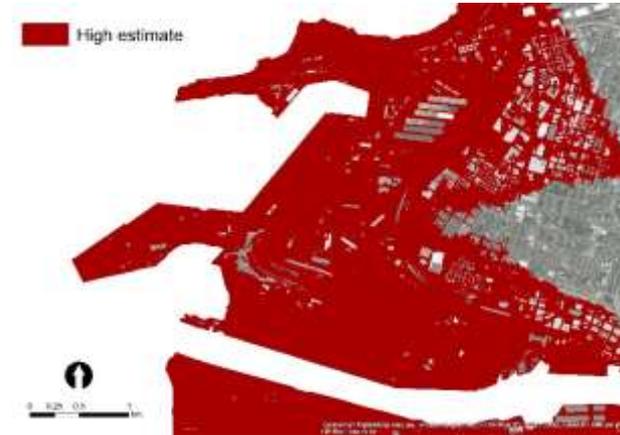
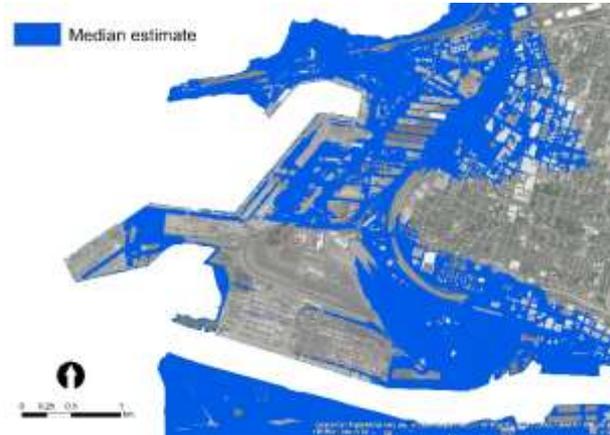
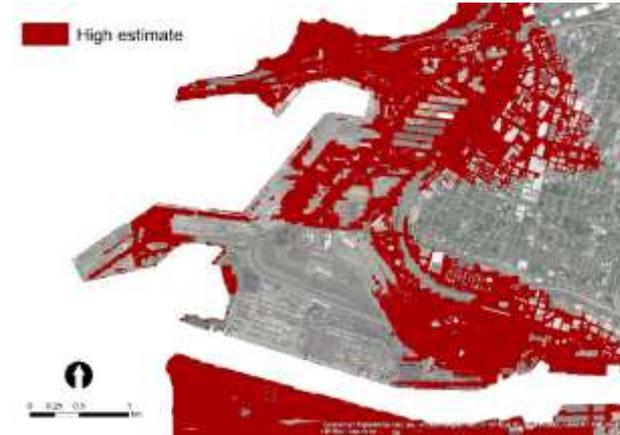
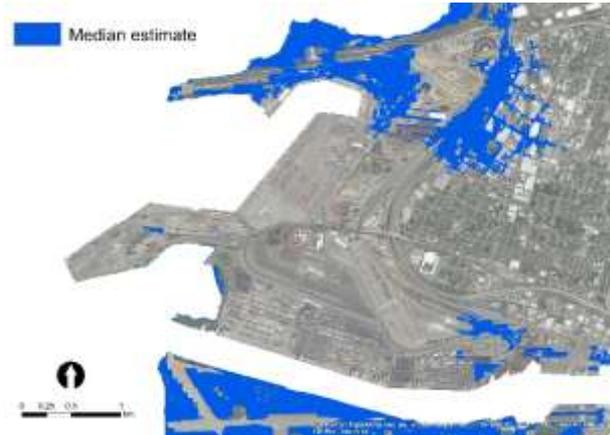
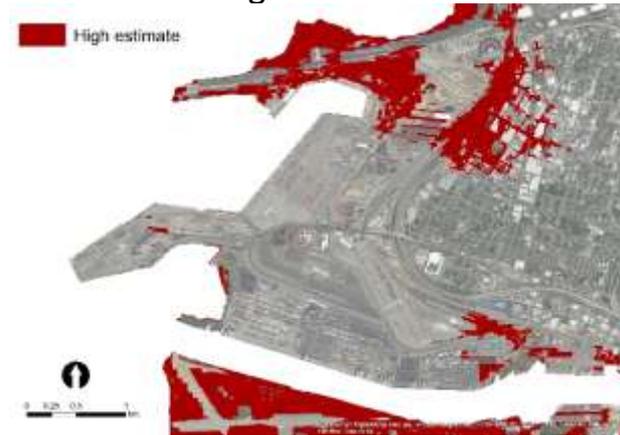
### Low estimate



### Median estimate



### High estimate



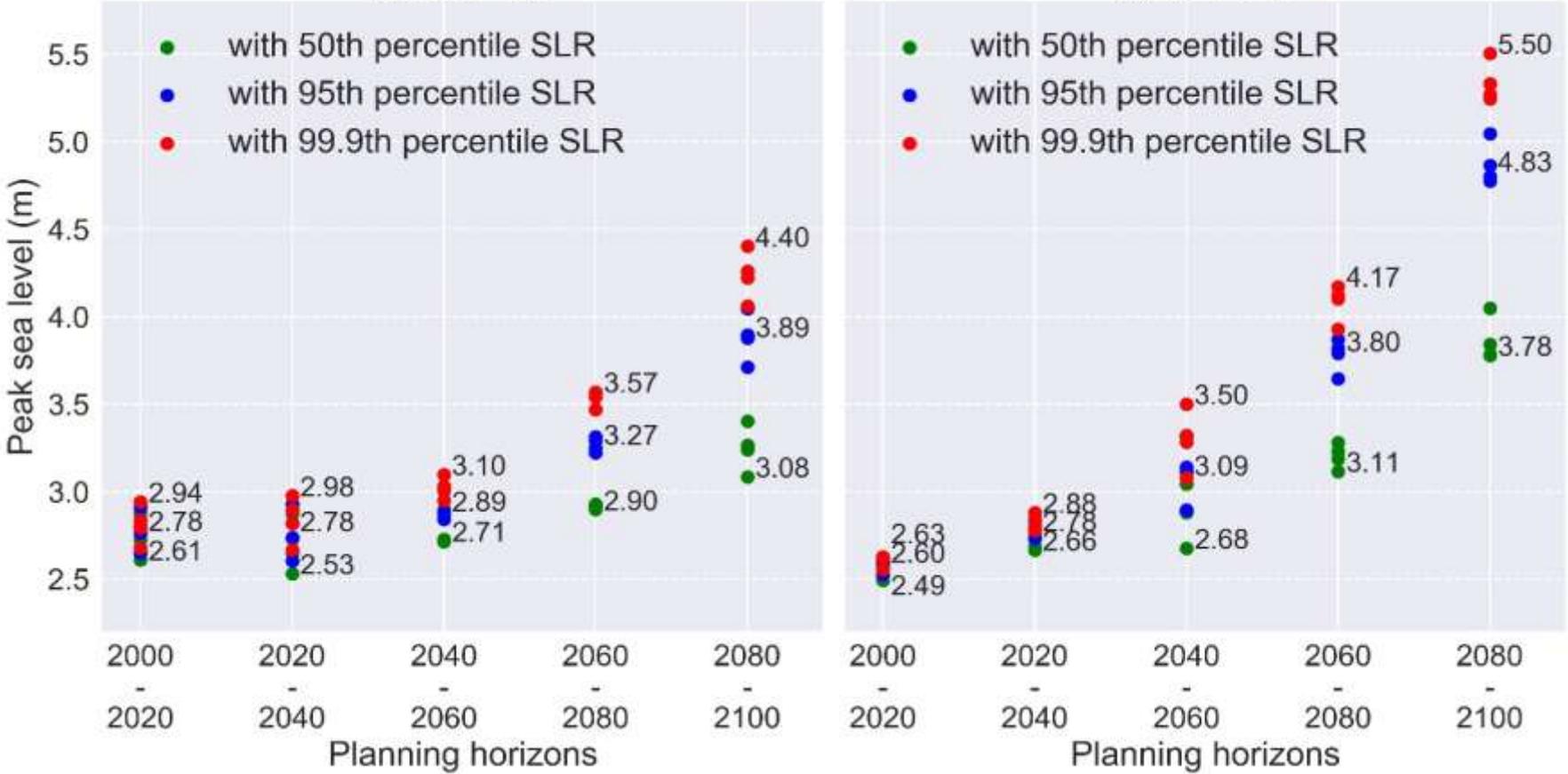
# High sea level events as the input

Sea level = sea level rise + storm surge + tide

Peak sea levels at San Francisco

(a) RCP 4.5

(b) RCP 8.5

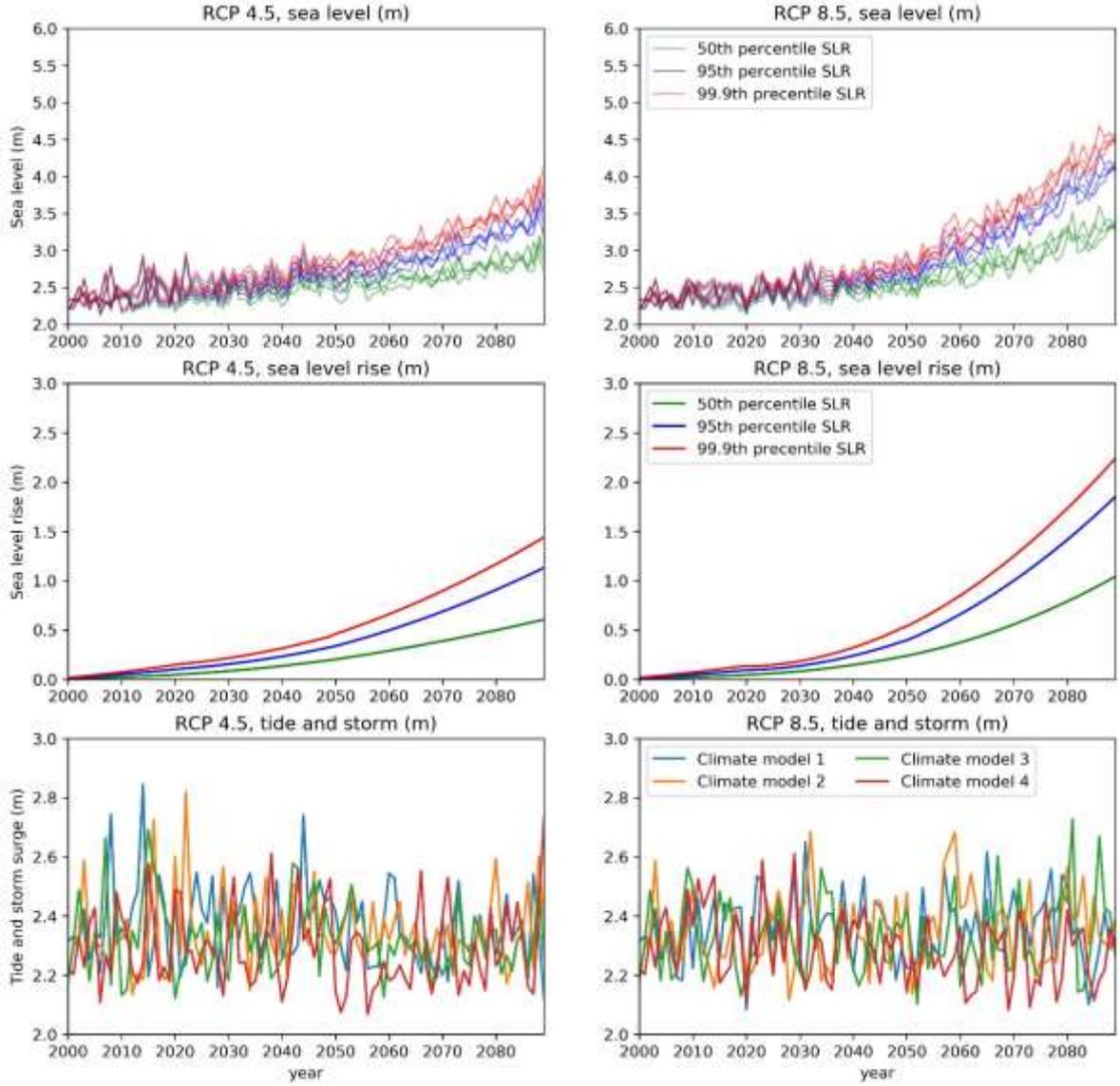


Cayan, D. R., Kalansky, J., Iacobellis, S., & Pierce, D. (2016). *Creating Probabilistic Sea Level Rise Projections to support the 4th California Climate Assessment* (No. 16- IEPR-04). California Energy Commission. Retrieved from [http://docketpublic.energy.ca.gov/PublicDocuments/16-IEPR-04/TN211806\\_20160614T101823\\_Creating\\_Probabilistic\\_Sea\\_Leve\\_Rise\\_Projections.pdf](http://docketpublic.energy.ca.gov/PublicDocuments/16-IEPR-04/TN211806_20160614T101823_Creating_Probabilistic_Sea_Leve_Rise_Projections.pdf)

High sea level events as the input

“Sea level” in our study = sea level rise + tide & storm surge

Projected annual maximum  
San Francisco gauge

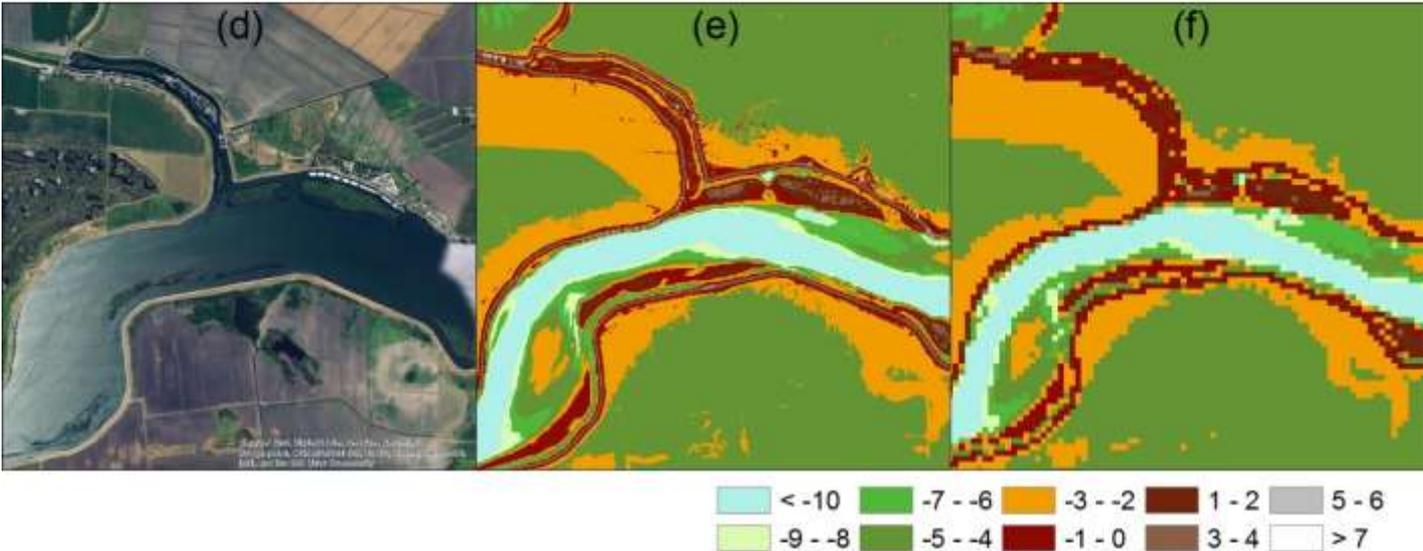
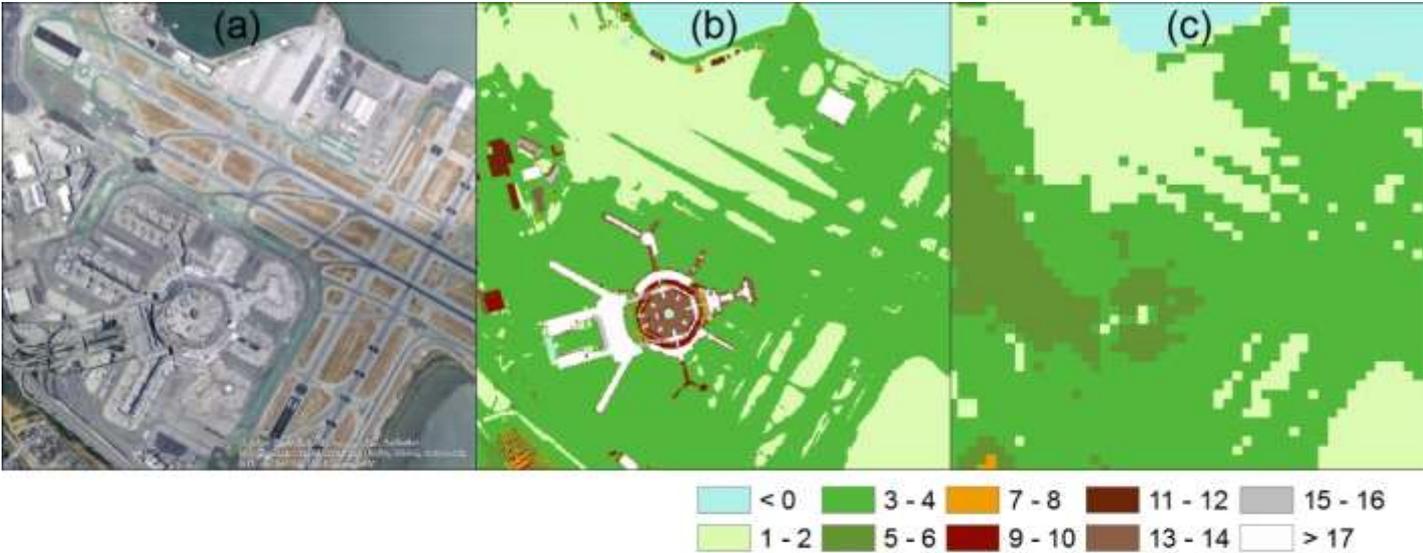


# Fine resolution, example of high accuracy topographic information

Aerial image

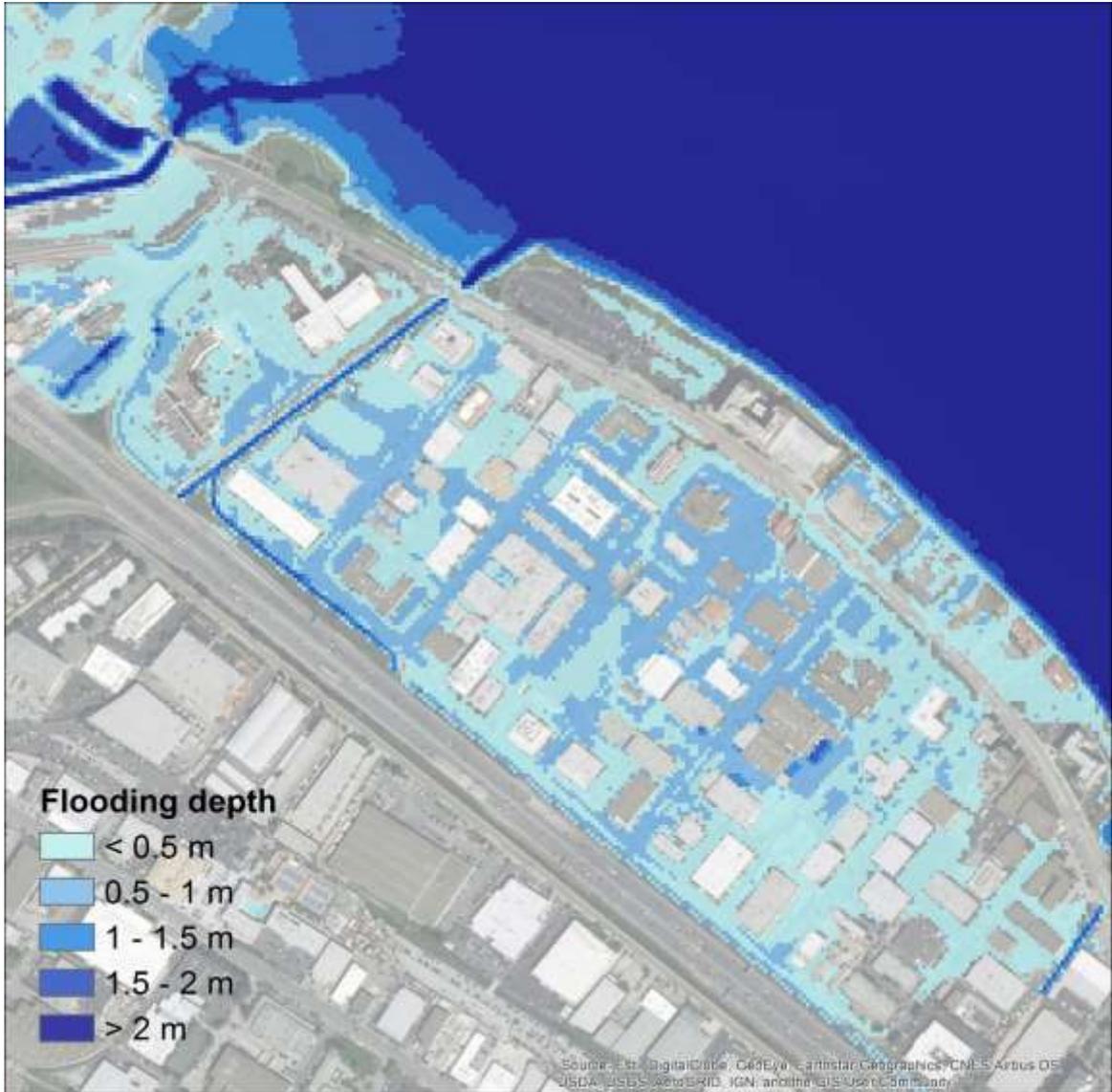
5 m resolution (our model)

50 m resolution



Fine resolution, example of high accuracy topographic information in our model

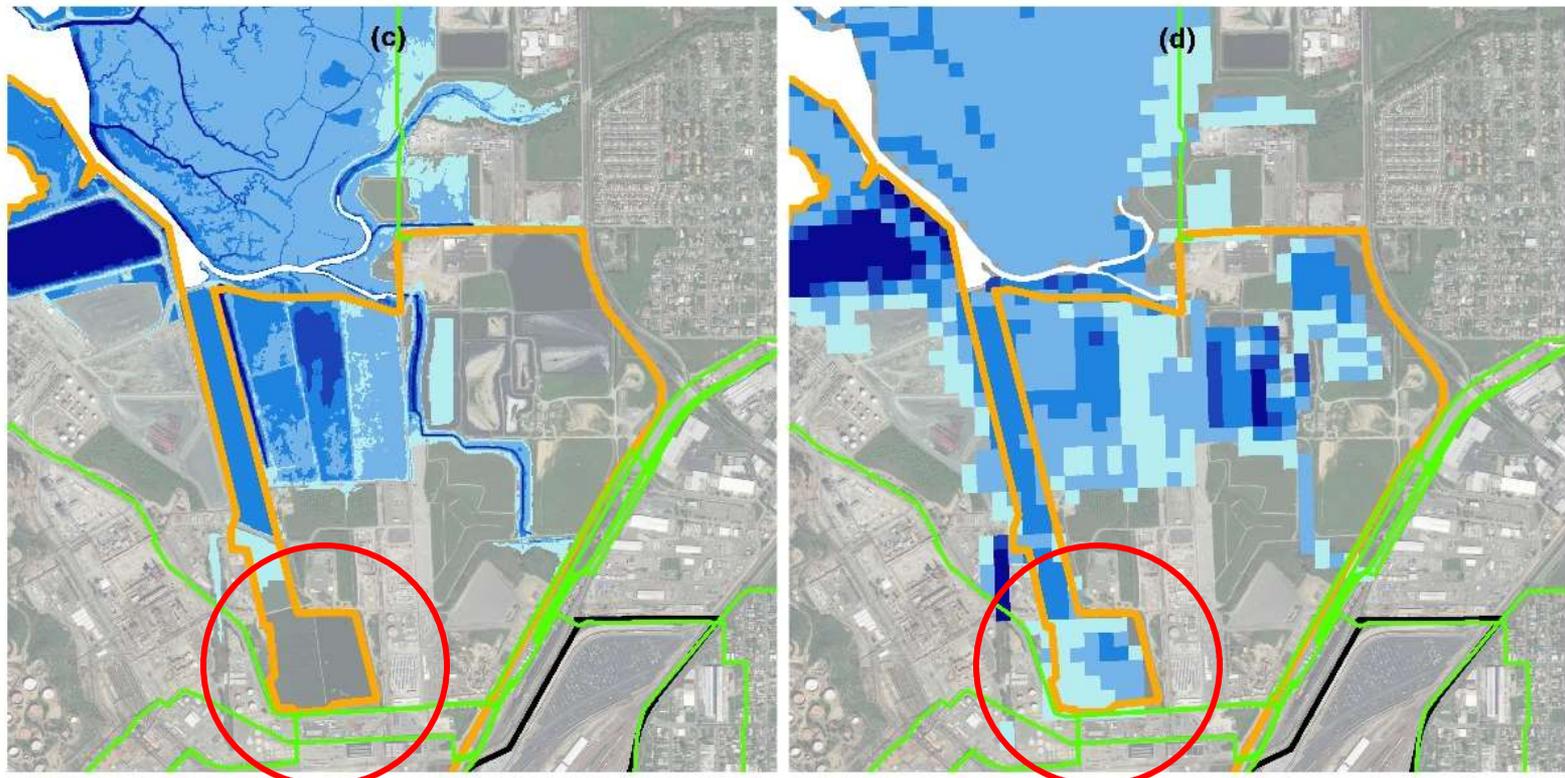
5 m resolution



# Fine resolution, example of high accuracy topographic information

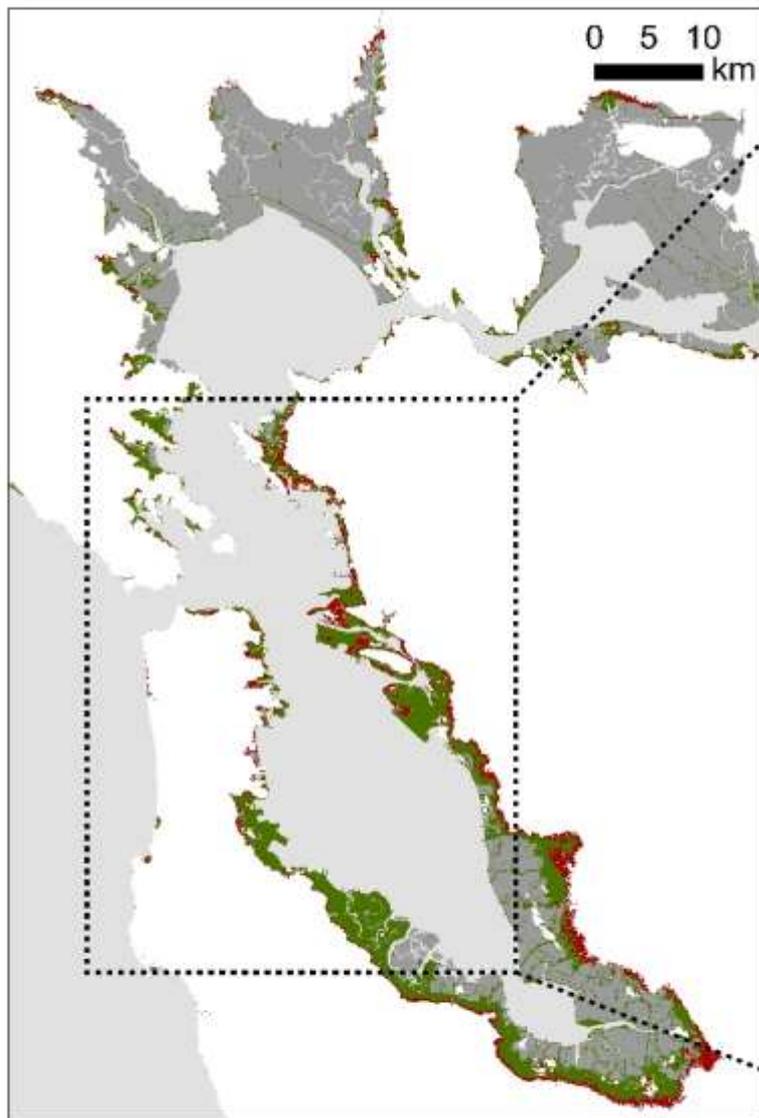
5 m resolution

50 m resolution



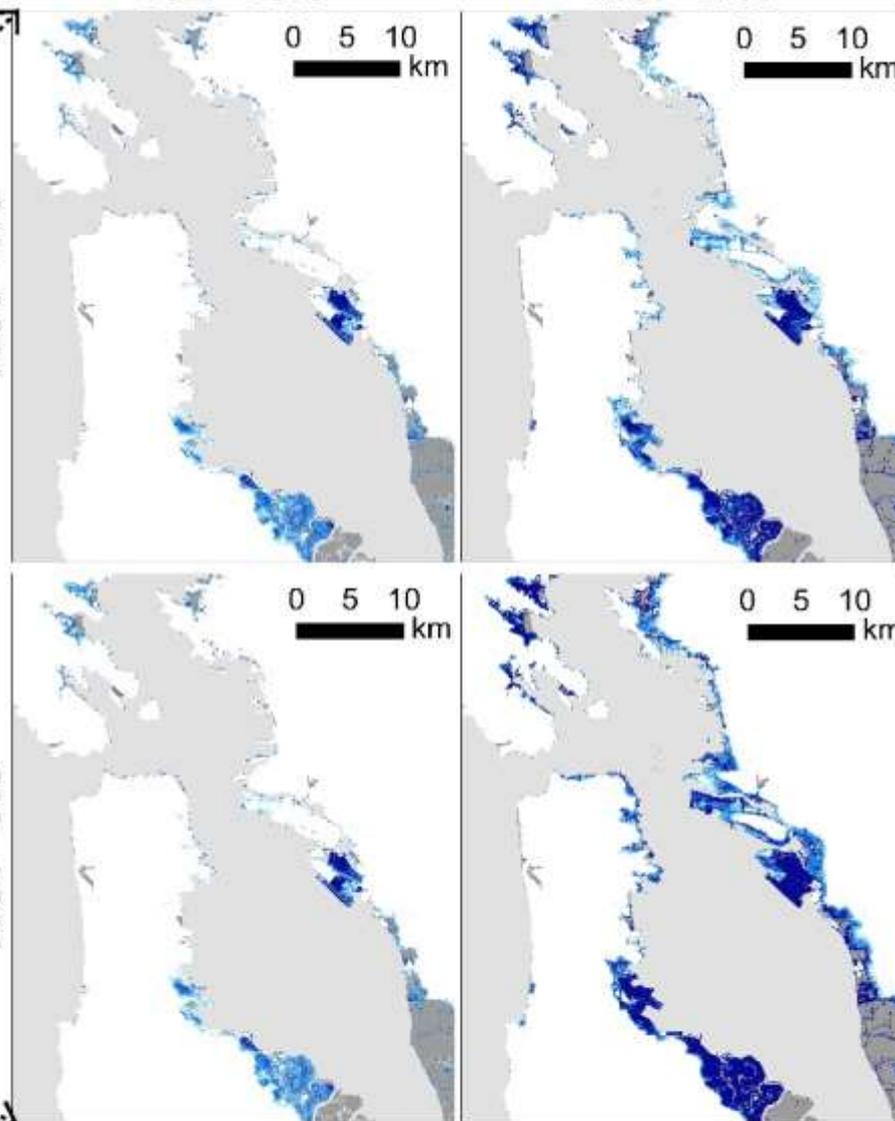
Dynamic simulation



**(a)**

Overall exposure in developed areas

- Median event, RCP 4.5, 2080 - 2100
- Median event, RCP 8.5, 2080 - 2100
- Exposure in non-development
- Current water

**(b)****RCP 4.5****RCP 8.5****2020 - 2040****2080 - 2100**

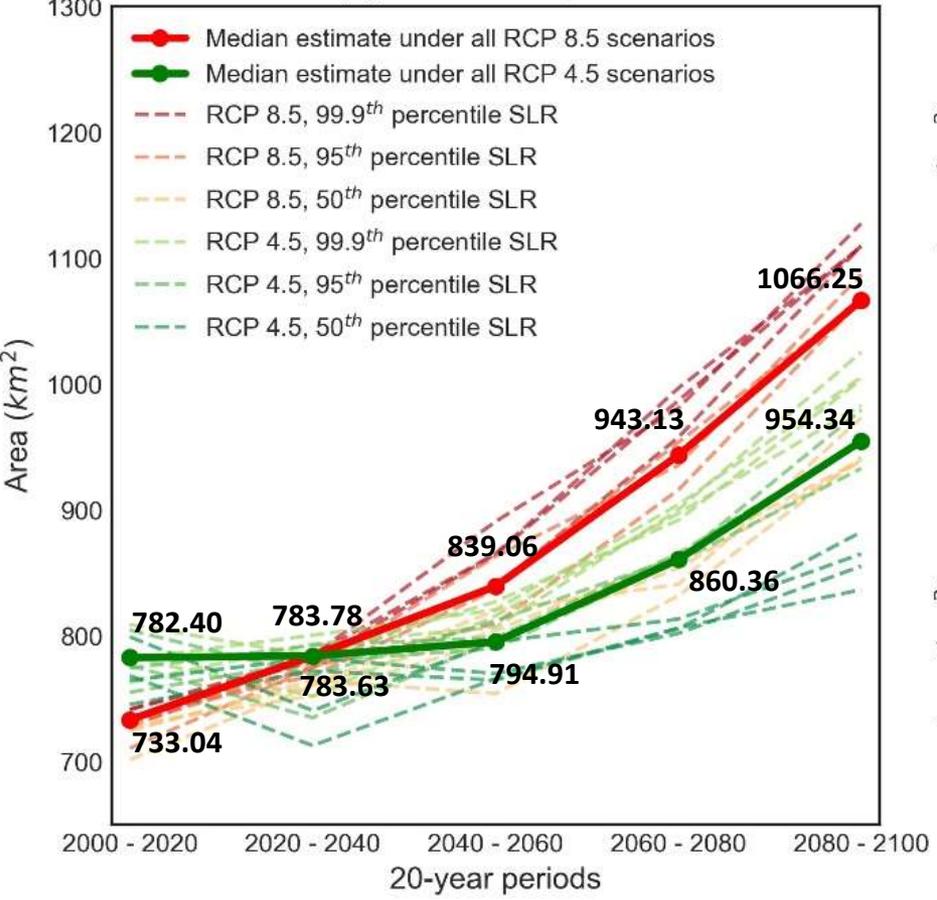
Exposure levels in developed areas

- |  |   |
|--|---|
| <span style="color: lightblue;">■</span> Low (0 - 0.5 m)   | <span style="color: darkblue;">■</span> Very high (1.5 - 2.0 m) |
| <span style="color: blue;">■</span> Moderate (0.5 - 1.0 m) | <span style="color: navy;">■</span> Extreme (>2.0 m)            |
| <span style="color: blue;">■</span> High (1.0 - 1.5 m)     |   |

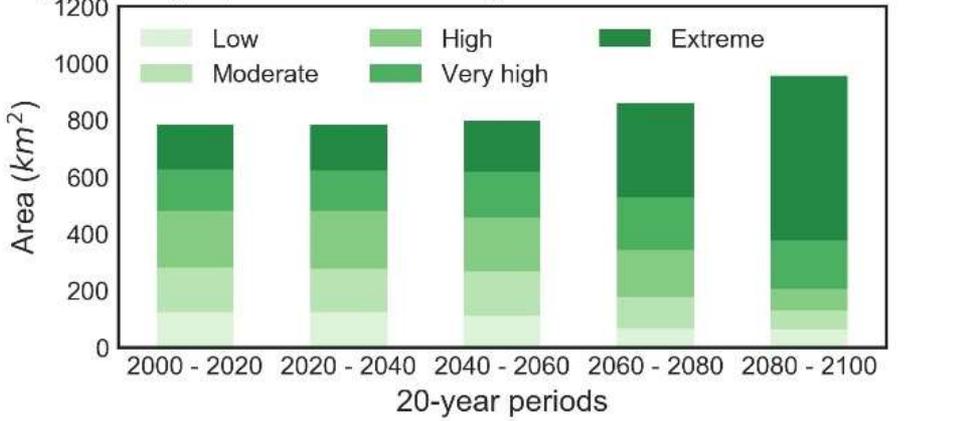


# Overall flooding exposure in the San Francisco Bay Area

(a) Total area exposed



(b) Area by exposure levels during the median events under RCP 4.5



(c) Area by exposure levels during the median events under RCP 8.5

