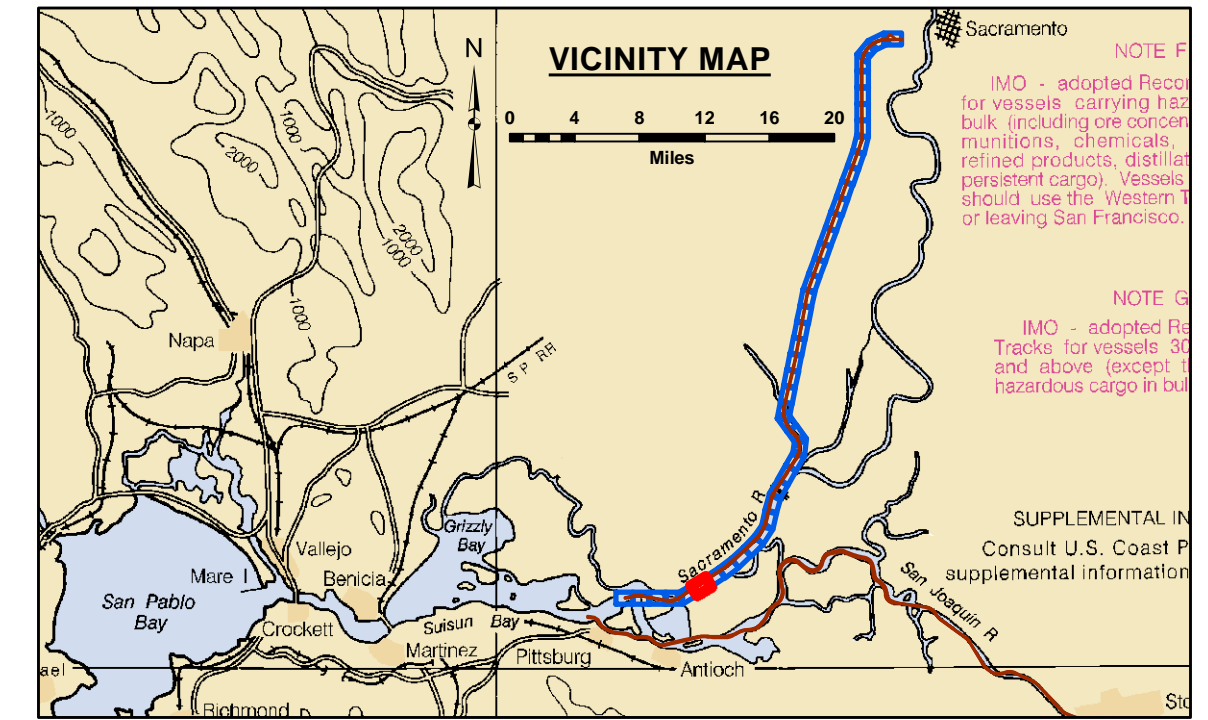


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|                             |              |
|-----------------------------|--------------|
| Chart Date:                 | Apr 09, 2019 |
| Designed by:                |              |
| Drawn by:                   | PDT          |
| Surveyed By:                |              |
| Plotted By:                 | PDT          |
| Checked By:                 | PDT          |
| Approved:                   |              |
| Chief, Hydro Survey Section |              |
| Approved:                   |              |
| Chief, Construction Branch  |              |

CALIFORNIA  
 SAN JOAQUIN COUNTY  
**SACRAMENTO RIVER**  
 CONDITION SURVEY  
 28 MARCH 2019

Sheet Reference Number  
**6 of 45**



0 400 800 1,200 Feet

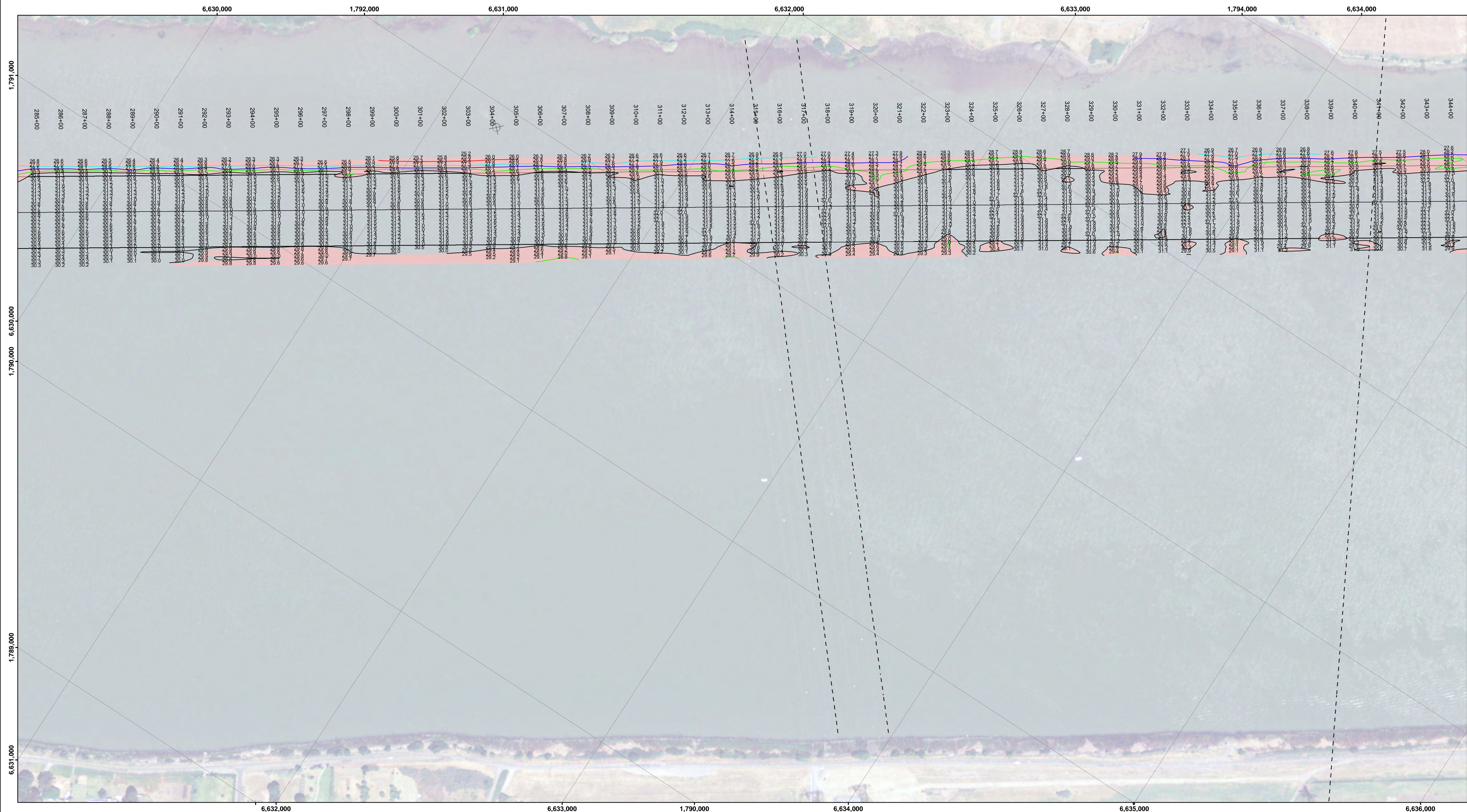
| LEGEND                           |                     | Contours                |       |
|----------------------------------|---------------------|-------------------------|-------|
| --- Federal Navigation Channel   | ▨ Cable Area        | ■ Shoaling Area         | — -35 |
| — Federal Navigation Center Line | □ Placement Area    | ● Shoalest Sounding**   | — -34 |
| ⋯ Cable Submarine                | ⊠ Anchorage Area    | ⊥ Beacon, General       | — -33 |
| - - - Cable Overhead             | ⊗ Obstruction Point | ◆ Red Navigation Buoy   | — -32 |
| — Contour Line                   | ⚡ Wrecks-Submerged  | ◆ Green Navigation Buoy | — -31 |

**NOTES:**  
 DRAWING NOT TO BE USED FOR NAVIGATION. ONLY CHANNEL CONDITION AT DATE OF SURVEY.  
 THE LOCATION OF ALL NAVIGATION AIDS ARE BASED ON INFORMATION PROVIDED BY THE U.S. COAST GUARD. BUOY LOCATIONS REPRESENT THE POSITION OF THE SINKER ONLY.  
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 SOUNDINGS ARE BASED ON THE DATUM OF MEAN LOWER LOW WATER AT THE LOCALITY.  
 NORTH AMERICAN DATUM OF 1983 (NAD83), PROJECTED TO THE STATE PLANE COORDINATE SYSTEM (SPCS), CA ZONE II (0402). DISTANCE UNITS IN U.S. SURVEY FEET.  
 PLANE GRID AND COORDINATES ARE BASED ON LAMBERT PROJECTION, NAD 83, ZONE II CALIFORNIA AS DESCRIBED IN SPECIAL PUBLICATION NO. 235, PUBLISHED BY THE NATIONAL OCEAN SURVEY.  
 PROJECT DEPTH: -30'  
 VERTICAL DATUM: MLLW  
 THE LOCATION OF NAVIGATION AIDS ARE BASED ON AND PROVIDED BY THE U.S. COAST GUARD

**CONTROLS:**  
 LOCATION: RIO VISTA  
 NOAA STATION: 9415316  
 BENCHMARK: 5316 B 1996 (NO PID)  
 TIDE GAUGE: NAIL @ 8.2 FT MLLW  
 METADATA: NAIL SET BY USACE 31 MARCH, 2014

LOCATION: PORT OF WEST SACRAMENTO  
 NOAA STATION: 9415311  
 BENCHMARK: POWS1 (NO PID)  
 TIDE GAUGE: NAIL @ 10.0 FT MLLW  
 METADATA: NAIL SET BY USACE 8 APRIL, 2014

ALL HORIZONTAL POSITIONS AND MLLW ELEVATIONS WERE POST-PROCESSED USING PUBLIC GPS REFERENCE STATIONS IN THE AREA.



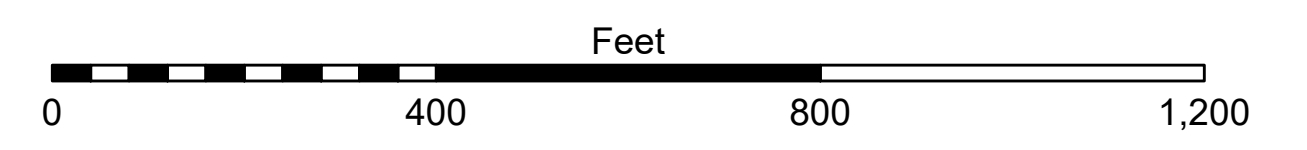
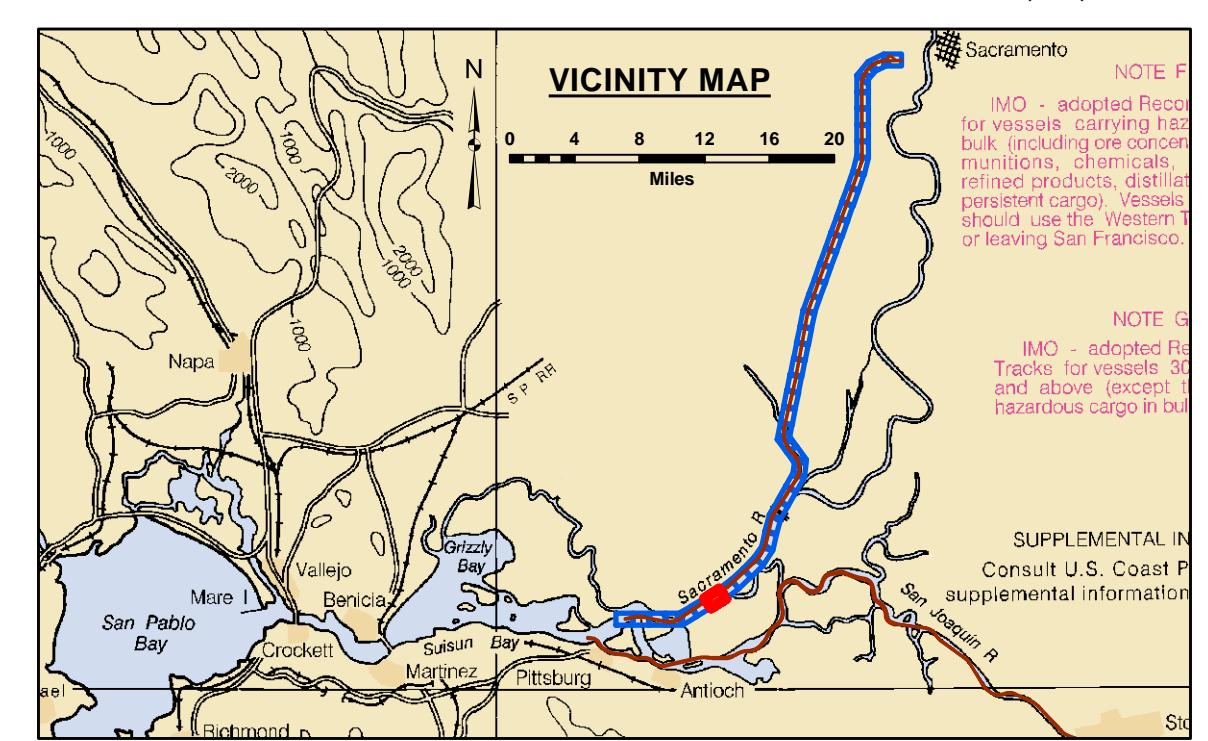
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|                             |              |
|-----------------------------|--------------|
| Chart Date:                 | Apr 09, 2019 |
| Designed by:                |              |
| Drawn by:                   | PDT          |
| Checked by:                 | PDT          |
| Surveyed By:                |              |
| Plotted By:                 | PDT          |
| Approved:                   |              |
| Chief, Hydro Survey Section |              |
| Chief, Construction Branch  |              |

CALIFORNIA  
**SACRAMENTO RIVER**  
 CONDITION SURVEY  
 28 MARCH 2019  
 SAN JOAQUIN COUNTY

Sheet Reference Number  
**7 of 45**



| LEGEND                           |                     |                         |
|----------------------------------|---------------------|-------------------------|
| --- Federal Navigation Channel   | ▨ Cable Area        | ■ Shoaling Area         |
| — Federal Navigation Center Line | □ Placement Area    | ● Shoalest Sounding**   |
| ⋯ Cable Submarine                | ⊠ Anchorage Area    | ⊥ Beacon, General       |
| - - - Cable Overhead             | ⊗ Obstruction Point | ◆ Red Navigation Buoy   |
| — Contour Line                   | ⚡ Wrecks-Submerged  | ◆ Green Navigation Buoy |

**Contours**

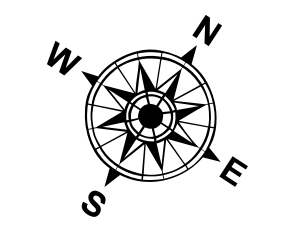
|   |     |
|---|-----|
| — | -35 |
| — | -34 |
| — | -33 |
| — | -32 |
| — | -31 |

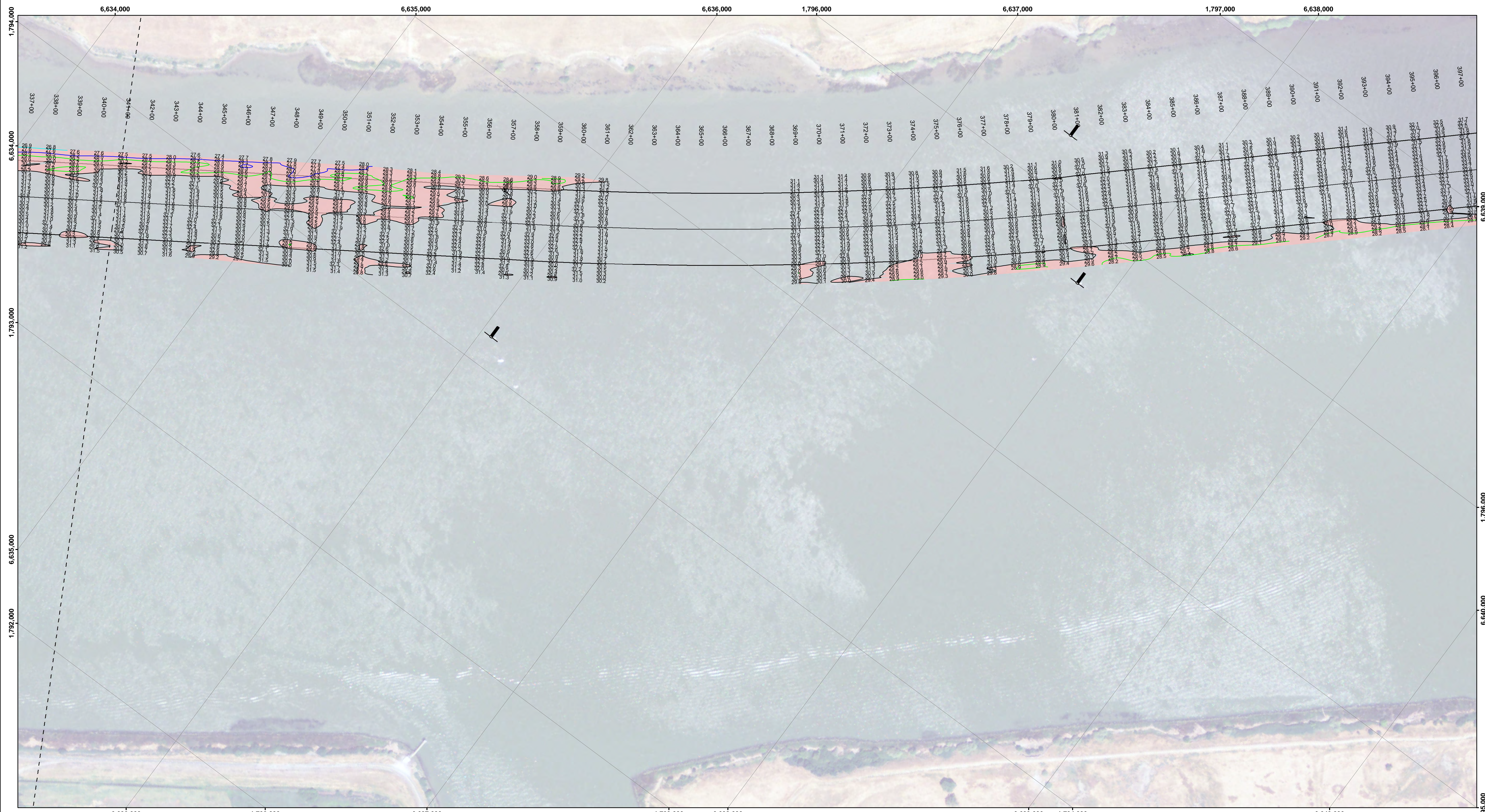
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 PROJECT DEPTH: -30'  
 VERTICAL DATUM: MLLW  
 THE LOCATION OF NAVIGATION AIDS ARE BASED ON AND PROVIDED BY THE U.S. COAST GUARD

**CONTROLS:**  
 LOCATION: RIO VISTA  
 NOAA STATION: 9415316  
 BENCHMARK: 5316 B 1996 (NO PID)  
 TIDE GAUGE: NAIL @ 8.2 FT MLLW  
 METADATA: NAIL SET BY USACE 31 MARCH, 2014

LOCATION: PORT OF WEST SACRAMENTO  
 NOAA STATION: 9415311  
 BENCHMARK: POWS1 (NO PID)  
 TIDE GAUGE: NAIL @ 10.0 FT MLLW  
 METADATA: NAIL SET BY USACE 8 APRIL, 2014

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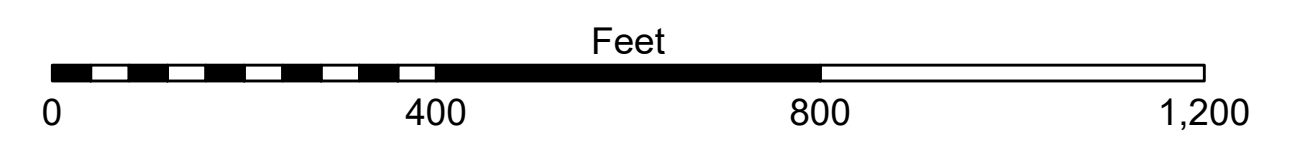
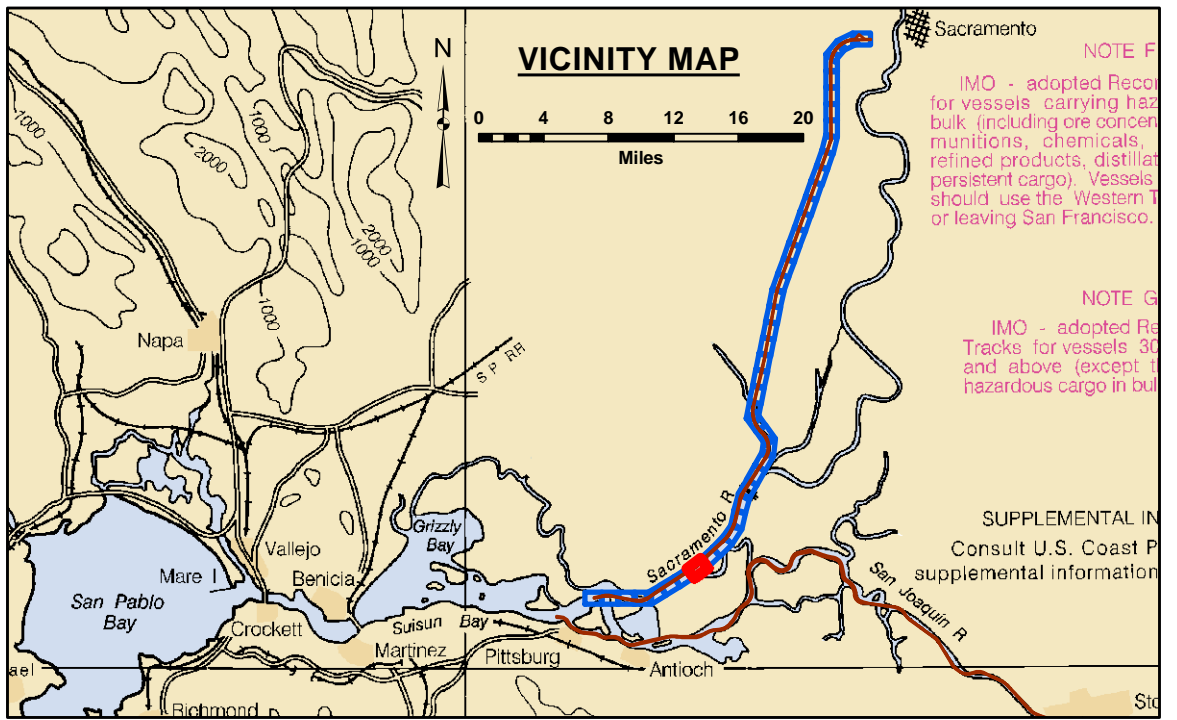
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|                            |              |
|----------------------------|--------------|
| Chart Date:                | Apr 09, 2019 |
| Designed by:               |              |
| Drawn by:                  | PDT          |
| Surveyed By:               |              |
| Plotted By:                | PDT          |
| Checked By:                | PDT          |
| Approved:                  |              |
| Chief, Construction Branch |              |

CALIFORNIA  
 SAN JOAQUIN COUNTY  
**SACRAMENTO RIVER**  
 CONDITION SURVEY  
 28 MARCH 2019

Sheet Reference Number  
**8 of 45**



| LEGEND                           |                     |                         |
|----------------------------------|---------------------|-------------------------|
| --- Federal Navigation Channel   | ▨ Cable Area        | ■ Shoaling Area         |
| — Federal Navigation Center Line | □ Placement Area    | ● Shoalest Sounding**   |
| ..... Cable Submarine            | ▭ Anchorage Area    | ⊥ Beacon, General       |
| - - - Cable Overhead             | ⊗ Obstruction Point | ◆ Red Navigation Buoy   |
| — Contour Line                   | ➤ Wrecks-Submerged  | ◆ Green Navigation Buoy |

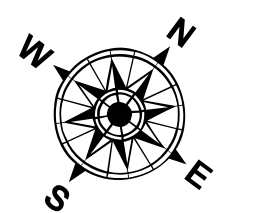
| Contours |     |
|----------|-----|
| —        | -35 |
| —        | -34 |
| —        | -33 |
| —        | -32 |
| —        | -31 |

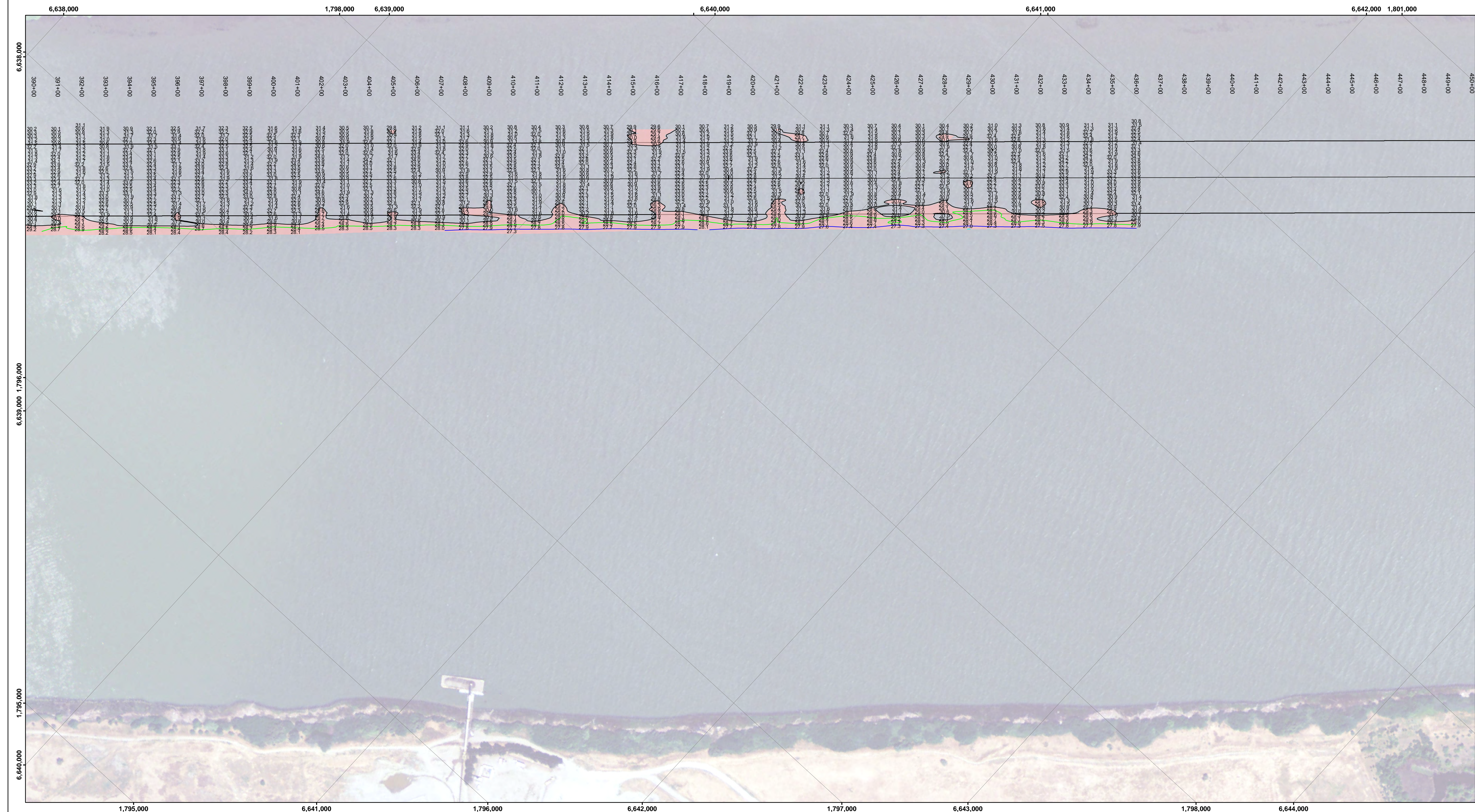
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 NORTH AMERICAN DATUM OF 1983 (NAD83), PROJECTED TO THE STATE PLANE COORDINATE SYSTEM (SPCS), CA ZONE II (0402). DISTANCE UNITS IN U.S. SURVEY FEET.  
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 PROJECT DEPTH: -30'  
 VERTICAL DATUM: MLLW  
 THE LOCATION OF NAVIGATION AIDS ARE BASED ON AND PROVIDED BY THE U.S. COAST GUARD

**CONTROLS:**  
 LOCATION: RIO VISTA  
 NOAA STATION: 9415316  
 BENCHMARK: 5316 B 1996 (NO PID)  
 TIDE GAUGE: NAIL @ 8.2 FT MLLW  
 METADATA: NAIL SET BY USACE 31 MARCH, 2014

LOCATION: PORT OF WEST SACRAMENTO  
 NOAA STATION: 941531  
 BENCHMARK: POWS1 (NO PID)  
 TIDE GAUGE: NAIL @ 10.0 FT MLLW  
 METADATA: NAIL SET BY USACE 8 APRIL, 2014

ALL HORIZONTAL POSITIONS AND MLLW ELEVATIONS WERE POST-PROCESSED USING PUBLIC GPS REFERENCE STATIONS IN THE AREA.



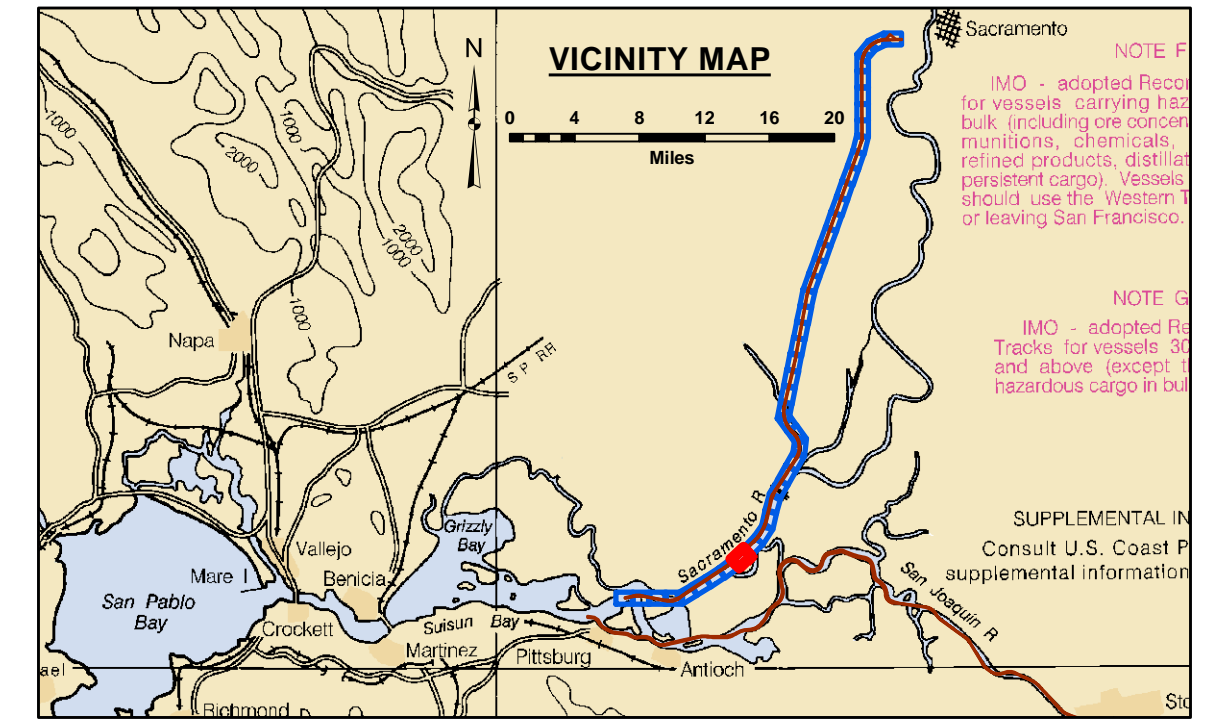


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|              |                             |
|--------------|-----------------------------|
| Chart Date:  | Apr 09, 2019                |
| Designed by: | PDT                         |
| Drawn by:    | PDT                         |
| Surveyed By: | Travis J. Rayfield          |
| Plotted By:  | PDT                         |
| Checked By:  | PDT                         |
| Approved:    | Chief, Hydro Survey Section |
| Approved:    | Chief, Construction Branch  |

CALIFORNIA  
 SAN JOAQUIN COUNTY  
**SACRAMENTO RIVER**  
 CONDITION SURVEY  
 28 MARCH 2019

Sheet Reference Number  
**9 of 45**



Feet  
 0 400 800 1,200

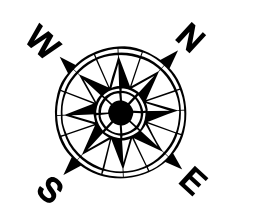
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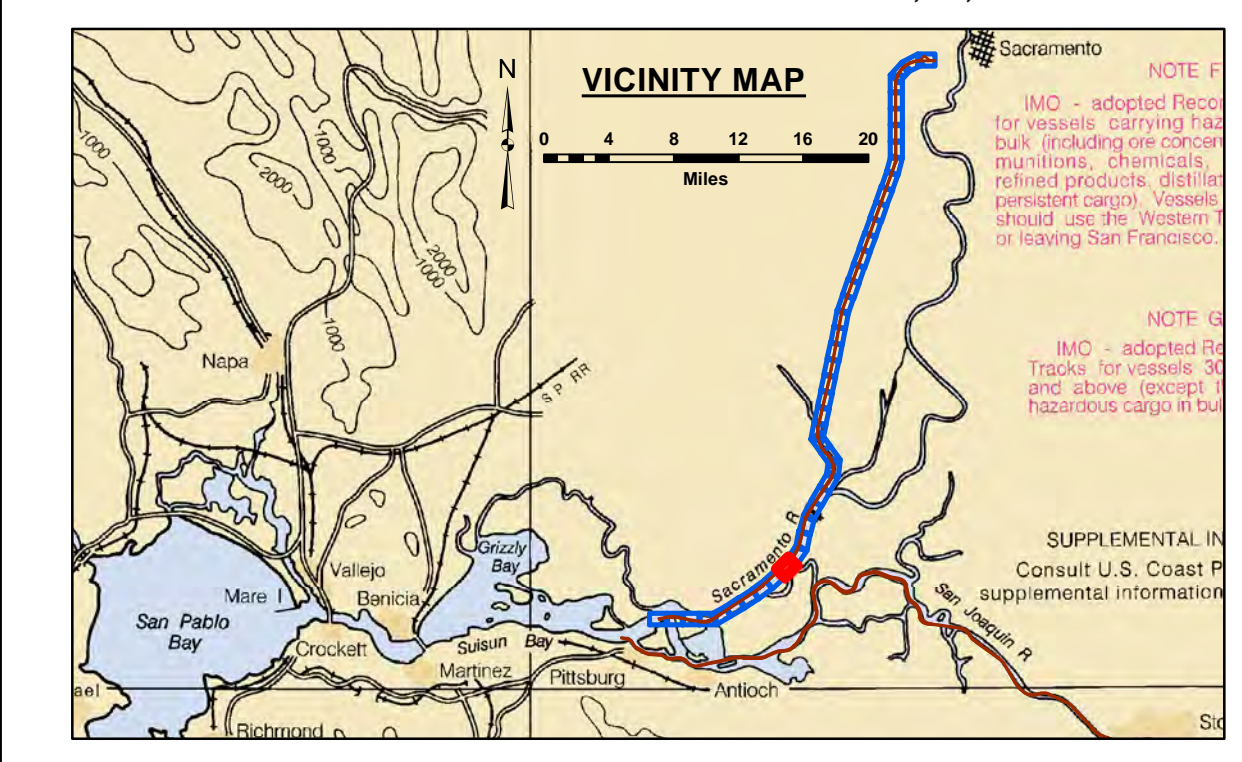
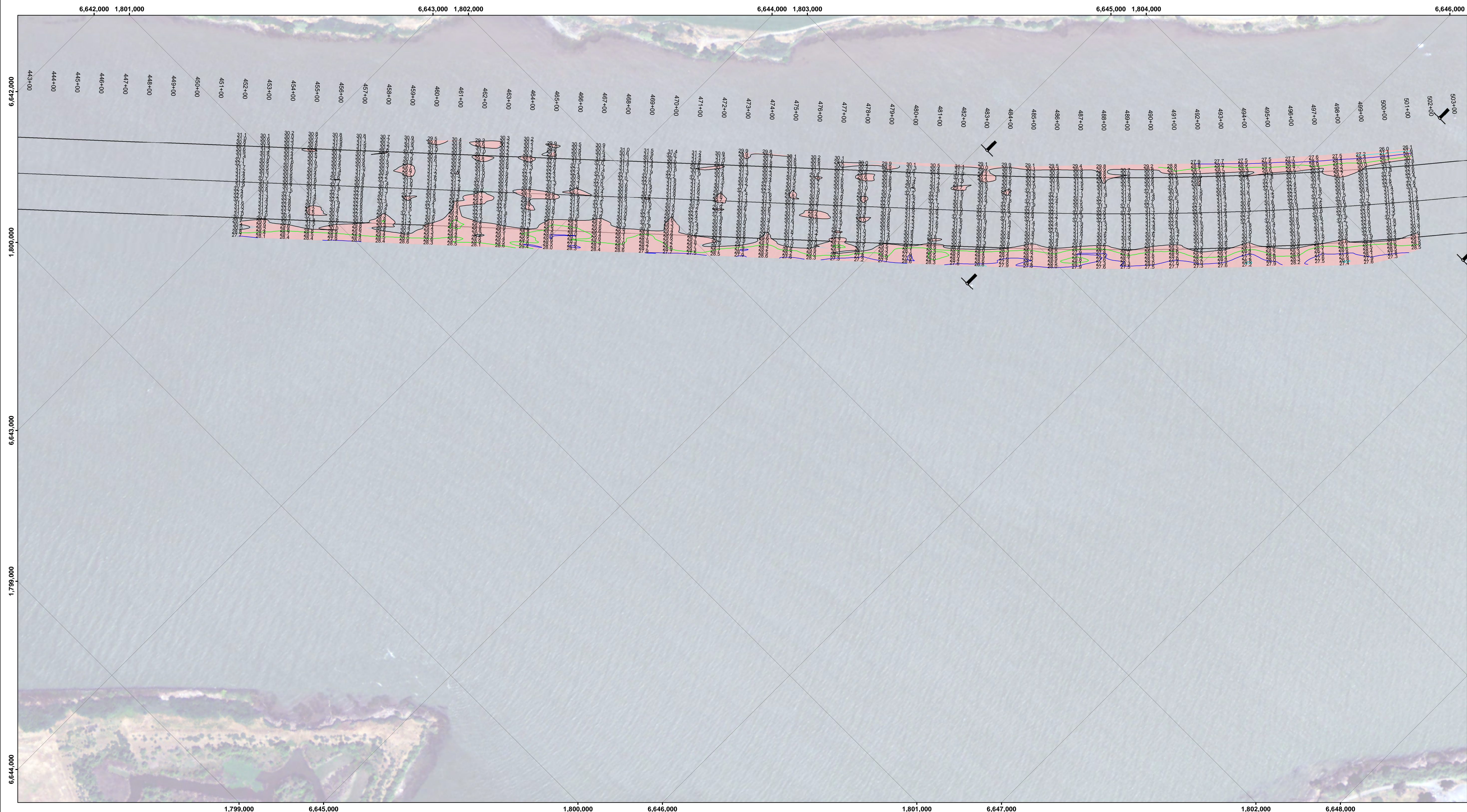
|                                  |                     |                         |            |
|----------------------------------|---------------------|-------------------------|------------|
| --- Federal Navigation Channel   | ▨ Cable Area        | ■ Shoaling Area         | — Contours |
| — Federal Navigation Center Line | □ Placement Area    | ● Shoalest Sounding**   | — -35      |
| ..... Cable Submarine            | ▭ Anchorage Area    | ⊥ Beacon, General       | — -34      |
| - - - Cable Overhead             | ⊗ Obstruction Point | ◆ Red Navigation Buoy   | — -33      |
| — Contour Line                   | ⚓ Wrecks-Submerged  | ◆ Green Navigation Buoy | — -32      |
|                                  |                     |                         | — -31      |

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 VERTICAL DATUM: MLLW  
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**CONTROLS:**  
 LOCATION: RIO VISTA  
 NOAA STATION: 9415316  
 BENCHMARK: 5316 B 1996 (NO PID)  
 TIDE GAUGE: NAIL @ 8.2 FT MLLW  
 METADATA: NAIL SET BY USACE 31 MARCH, 2014  
 LOCATION: PORT OF WEST SACRAMENTO  
 NOAA STATION: 9415311  
 BENCHMARK: POWS1 (NO PID)  
 TIDE GAUGE: NAIL @ 10.0 FT MLLW  
 METADATA: NAIL SET BY USACE 8 APRIL, 2014

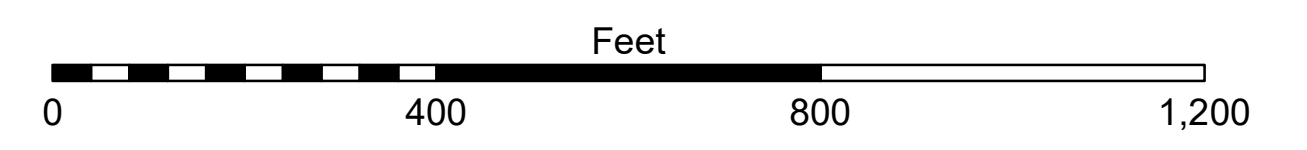
ALL HORIZONTAL POSITIONS AND MLLW ELEVATIONS WERE POST-PROCESSED USING PUBLIC GPS REFERENCE STATIONS IN THE AREA.





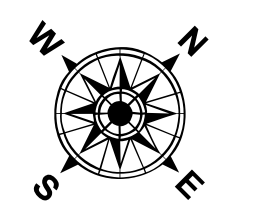
| LEGEND                           |                     |                         |
|----------------------------------|---------------------|-------------------------|
| --- Federal Navigation Channel   | ▨ Cable Area        | ■ Shoaling Area         |
| — Federal Navigation Center Line | □ Placement Area    | ● Shoalest Sounding**   |
| ⋯ Cable Submarine                | ⊠ Anchorage Area    | ⊥ Beacon, General       |
| - - - Cable Overhead             | ⊗ Obstruction Point | ⬮ Red Navigation Buoy   |
| — Contour Line                   | ⚡ Wrecks-Submerged  | ⬮ Green Navigation Buoy |

| Contours |     |
|----------|-----|
| —        | -35 |
| —        | -34 |
| —        | -33 |
| —        | -32 |
| —        | -31 |



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PROJECT DEPTH: -30'  
VERTICAL DATUM: MLLW  
THE LOCATION OF NAVIGATION AIDS ARE BASED ON AND PROVIDED BY THE U.S. COAST GUARD

CONTROLS:  
LOCATION: RIO VISTA  
NOAA STATION: 9415316  
BENCHMARK: POWS1 (No PID)  
TIDE GAUGE: NAIL @ 9.2 FT MLLW  
METADATA: NAIL SET BY USACE 31 MARCH, 2014  
LOCATION: PORT OF WEST SACRAMENTO  
NOAA STATION: 941531  
BENCHMARK: POWS1 (No PID)  
TIDE GAUGE: NAIL @ 10.0 FT MLLW  
METADATA: NAIL SET BY USACE 8 APRIL, 2014  
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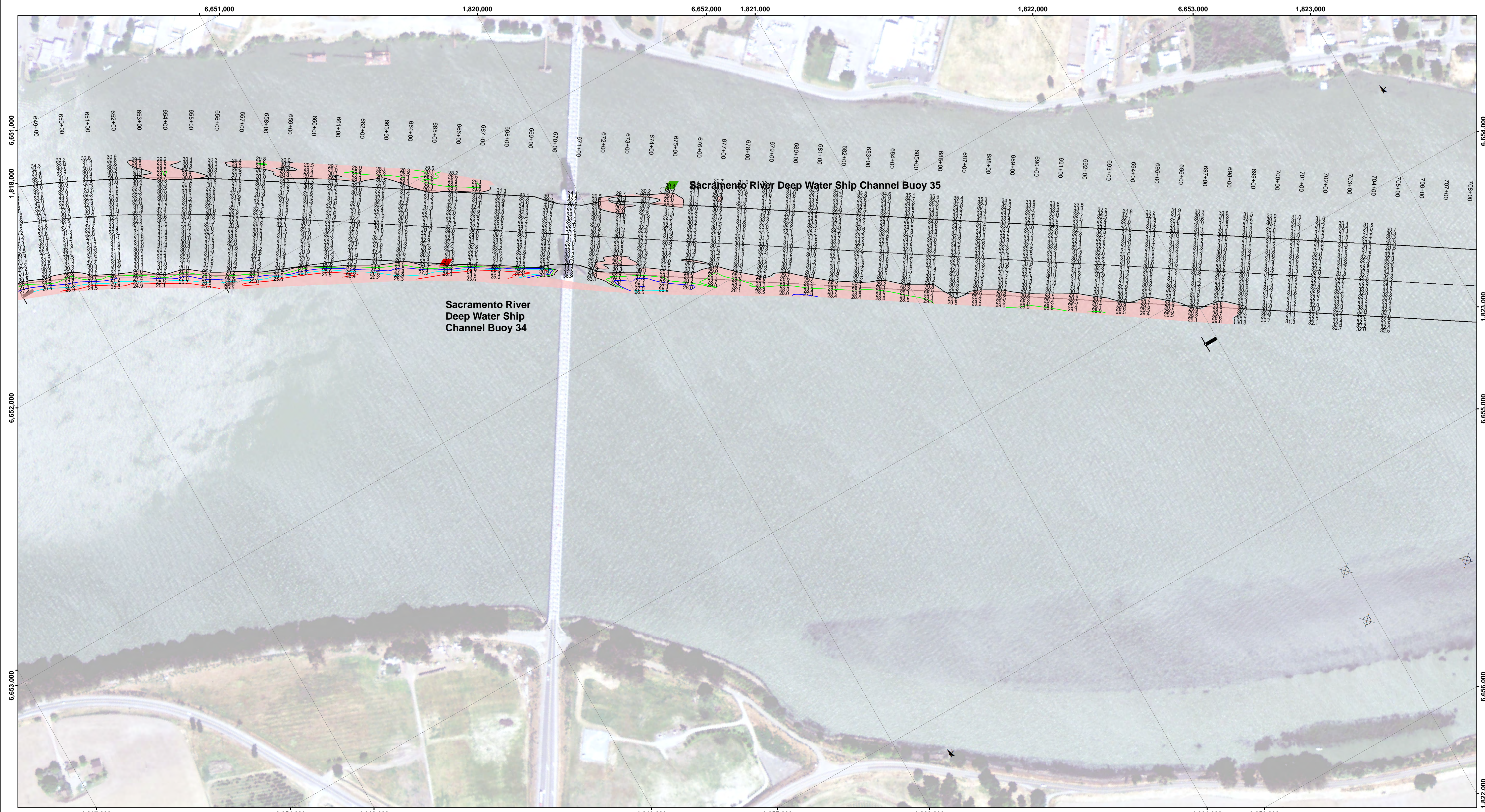


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|--------------|--------------|
| Chart Date:  | Jul 31, 2019 |
| Designed by: |              |
| Drawn by:    | PDT          |
| Surveyed By: |              |
| Plotted By:  | PDT          |
| Checked By:  | PDT          |
| Drawn By:    | PDT          |

CALIFORNIA  
SAN JOAQUIN COUNTY  
**SACRAMENTO RIVER**  
CONDITION SURVEY  
28 MARCH 2019

Sheet Reference Number  
**10 of 45**



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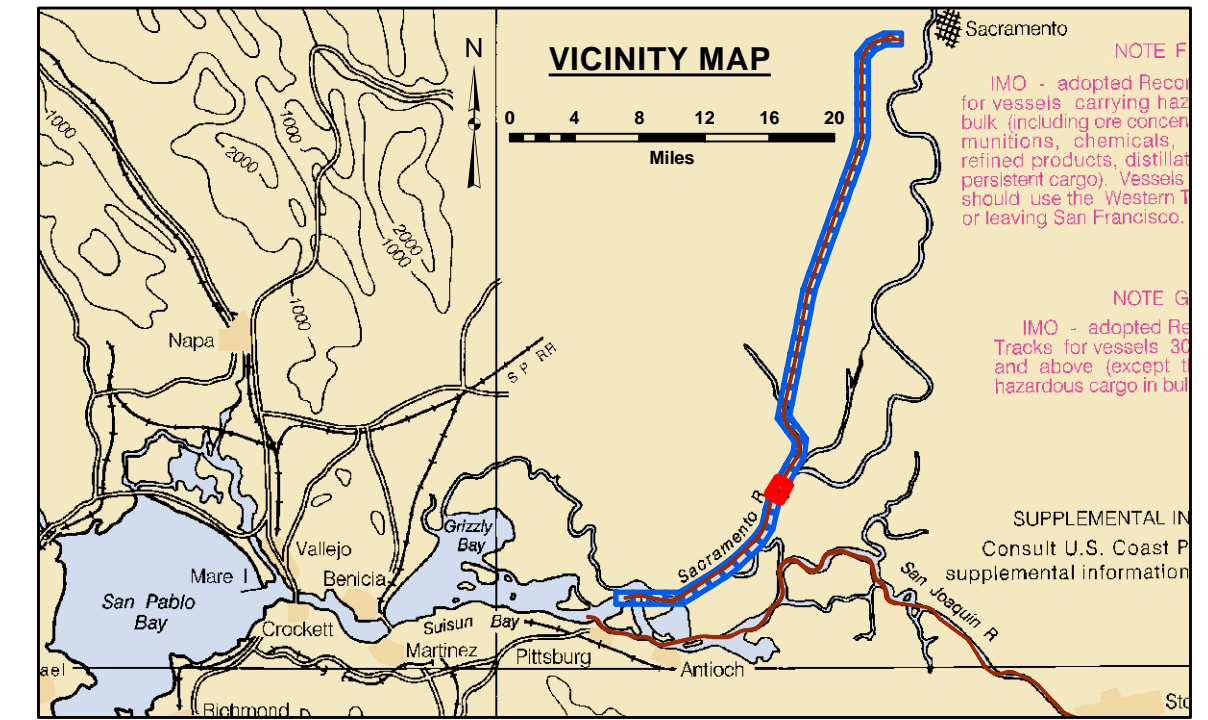
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|                             |              |
|-----------------------------|--------------|
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| Designed by:                |              |
| Drawn by:                   | PDT          |
| Surveyed By:                |              |
| Plotted By:                 | PDT          |
| Checked By:                 | PDT          |
| Approved:                   |              |
| Chief, Hydro Survey Section |              |
| Chief, Construction Branch  |              |

CALIFORNIA

**SACRAMENTO RIVER**  
CONDITION SURVEY  
28 MARCH 2019

SAN JOAQUIN COUNTY



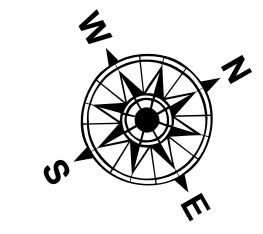
Feet  
0 400 800 1,200

| LEGEND                           |                     |                         |
|----------------------------------|---------------------|-------------------------|
| --- Federal Navigation Channel   | ▨ Cable Area        | ■ Shoaling Area         |
| — Federal Navigation Center Line | □ Placement Area    | ● Shoalest Sounding**   |
| ..... Cable Submarine            | ⊠ Anchorage Area    | ⊥ Beacon, General       |
| - - - Cable Overhead             | ⊗ Obstruction Point | ◆ Red Navigation Buoy   |
| — Contour Line                   | ⚓ Wrecks-Submerged  | ◆ Green Navigation Buoy |

| Contours |     |
|----------|-----|
| —        | -35 |
| —        | -34 |
| —        | -33 |
| —        | -32 |
| —        | -31 |

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PROJECT DEPTH: -30'  
VERTICAL DATUM: MLLW  
THE LOCATION OF NAVIGATION AIDS ARE BASED ON AND PROVIDED BY THE U.S. COAST GUARD

**CONTROLS:**  
LOCATION: RIO VISTA  
NOAA STATION: 9415316  
BENCHMARK: 5316 B 1996 (NO PID)  
TIDE GAUGE: NAIL @ 8.2 FT MLLW  
METADATA: NAIL SET BY USACE 31 MARCH, 2014  
LOCATION: PORT OF WEST SACRAMENTO  
NOAA STATION: 941531  
BENCHMARK: POWS1 (NO PID)  
TIDE GAUGE: NAIL @ 10.0 FT MLLW  
METADATA: NAIL SET BY USACE 8 APRIL, 2014  
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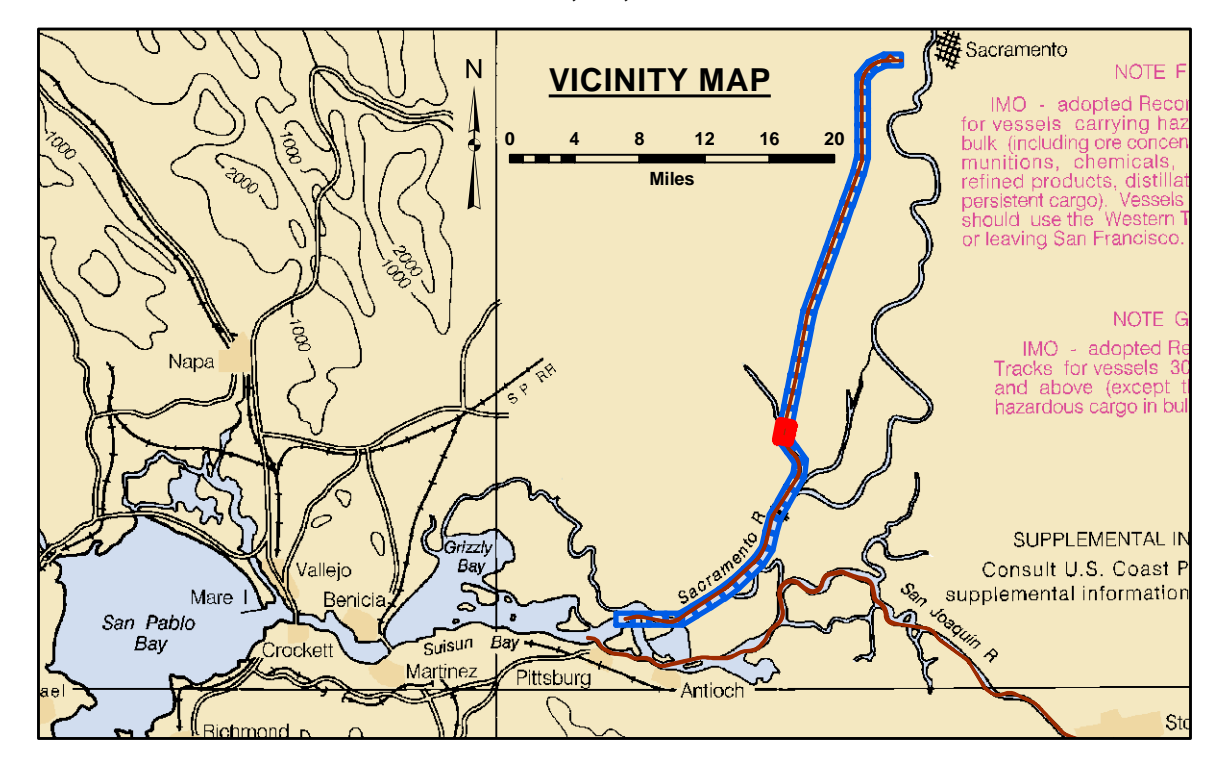
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|              |              |
|--------------|--------------|
| Chart Date:  | Apr 09, 2019 |
| Designed by: | PDT          |
| Drawn by:    | PDT          |
| Surveyed By: | PDT          |
| Plotted By:  | PDT          |
| Checked By:  | PDT          |

PREPARED UNDER THE DIRECTION OF  
**TRAVIS J. RAYFIELD**  
 LT COLONEL, C.E. DISTRICT ENGINEER

San Joaquin County  
**SACRAMENTO RIVER**  
 CONDITION SURVEY  
 28 MARCH 2019

Sheet Reference Number  
**20 of 45**



Feet  
 0 400 800 1,200

| LEGEND                           |                     |                         |            |
|----------------------------------|---------------------|-------------------------|------------|
| --- Federal Navigation Channel   | ▨ Cable Area        | ■ Shoaling Area         | — Contours |
| — Federal Navigation Center Line | □ Placement Area    | ● Shoalest Sounding**   | — -35      |
| ..... Cable Submarine            | ▭ Anchorage Area    | ⊥ Beacon, General       | — -34      |
| - - - Cable Overhead             | ⊗ Obstruction Point | ◆ Red Navigation Buoy   | — -33      |
| — Contour Line                   | ⚓ Wrecks-Submerged  | ◆ Green Navigation Buoy | — -32      |
|                                  |                     |                         | — -31      |

**NOTES:**  
 DRAWING NOT TO BE USED FOR NAVIGATION. ONLY CHANNEL CONDITION AT DATE OF SURVEY.  
 THE LOCATION OF ALL NAVIGATION AIDS ARE BASED ON INFORMATION PROVIDED BY THE U.S. COAST GUARD. BUOY LOCATIONS REPRESENT THE POSITION OF THE SINKER ONLY.  
 SOUNDINGS WERE TAKEN BY FATHOMETER AND ARE SHOWN TO THE NEAREST TENTH OF A FOOT.  
 SOUNDINGS ARE BASED ON THE DATUM OF MEAN LOWER LOW WATER AT THE LOCALITY.  
 NORTH AMERICAN DATUM OF 1983 (NAD83), PROJECTED TO THE STATE PLANE COORDINATE SYSTEM (SPCS), CA ZONE II (0402). DISTANCE UNITS IN U.S. SURVEY FEET.  
 PROJECT DEPTH: -30'  
 VERTICAL DATUM: MLLW  
 THE LOCATION OF NAVIGATION AIDS ARE BASED ON AND PROVIDED BY THE U.S. COAST GUARD

**CONTROLS:**  
 LOCATION: RIO VISTA  
 NOAA STATION: 9415316  
 BENCHMARK: 5316 B 1996 (NO PID)  
 TIDE GAUGE: NAIL @ 8.2 FT MLLW  
 METADATA: NAIL SET BY USACE 31 MARCH, 2014

LOCATION: PORT OF WEST SACRAMENTO  
 NOAA STATION: 941531  
 BENCHMARK: POWS1 (NO PID)  
 TIDE GAUGE: NAIL @ 10.0 FT MLLW  
 METADATA: NAIL SET BY USACE 8 APRIL, 2014

ALL HORIZONTAL POSITIONS AND MLLW ELEVATIONS WERE POST-PROCESSED USING PUBLIC GPS REFERENCE STATIONS IN THE AREA.

