

# BookletChart™

## San Pablo Bay

NOAA Chart 18654

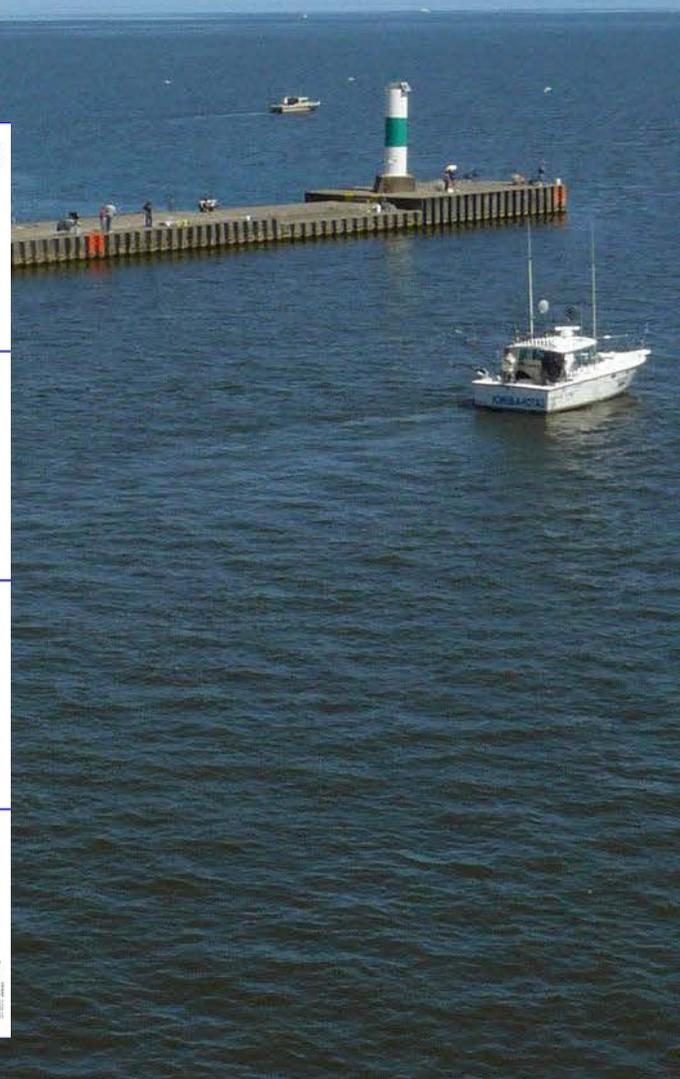
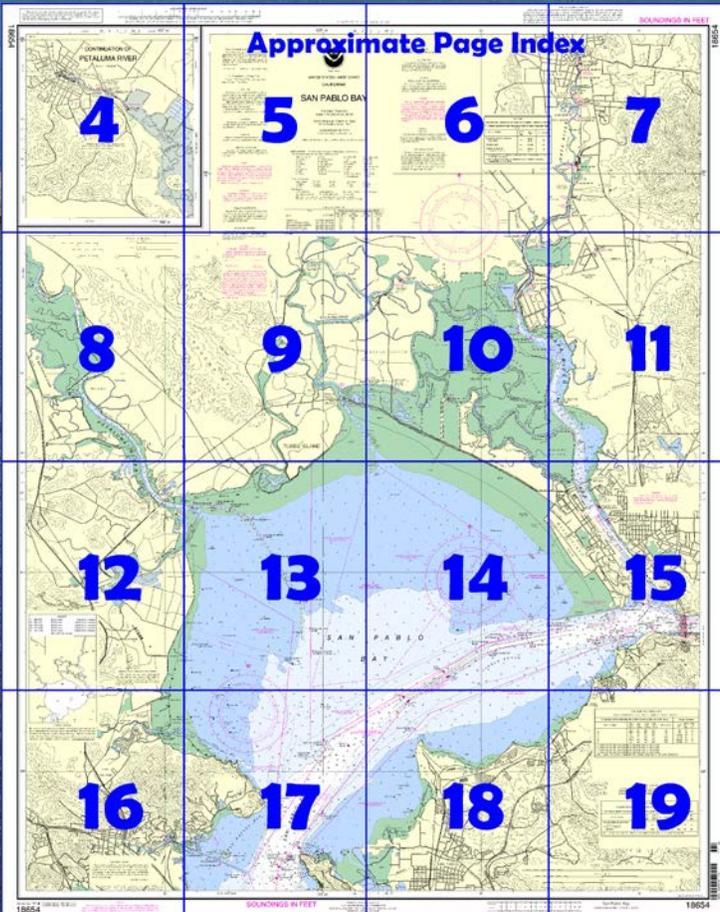


*A reduced-scale NOAA nautical chart for small boaters*

*When possible, use the full-size NOAA chart for navigation.*



- Complete, reduced-scale nautical chart
- Print at home for free
- Convenient size
- Up-to-date with Notices to Mariners
- Compiled by NOAA's Office of Coast Survey, the nation's chartmaker



**Published by the  
National Oceanic and Atmospheric Administration  
National Ocean Service  
Office of Coast Survey  
[www.NauticalCharts.NOAA.gov](http://www.NauticalCharts.NOAA.gov)  
888-990-NOAA**

### What are Nautical Charts?

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

### What is a BookletChart™?

This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

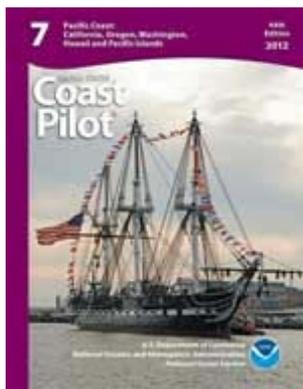
Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at <http://www.NauticalCharts.NOAA.gov>.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

### Notice to Mariners Correction Status

This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.

For latest Coast Pilot excerpt visit the Office of Coast Survey website at <http://www.nauticalcharts.noaa.gov/nsd/searchbychart.php?chart=18654>.



**(Selected Excerpts from Coast Pilot)**  
**San Pablo Bay** is nearly circular, 10 miles long in a NE direction, with a greatest width of 8 miles. The N part consists of low marshes intersected by numerous sloughs and a large area of shoal water and mudflats that bare at extreme low water. The S shore is bolder, except between Point San Pablo and Pinole Point, where it is low and marshy for about 3 miles. Carquinez Strait joins San Pablo Bay with Mare Island Strait and Suisun Bay at its E extremity. There is

considerable traffic through the bay. Lighter draft vessels pass through bound for points on Suisun Bay, and the Sacramento River to Sacramento, and on the San Joaquin River to Stockton.

A **regulated navigation area** has been established in San Pablo Bay N of the Pinole Shoal Channel. (See **33 CFR 165.1184**, chapter 2, for limits and regulations.)

Shoals and flats, which uncover, extend from Point San Pablo to Pinole Point, thence NE to Lone Tree Point.

**Pinole Point** is a moderately high, rocky bluff, projecting about 1 mile from the SE shore of San Pablo Bay. A T-head fishing pier extends NW from the E side of the point. Piles and a light are off the face of the pier. The ruins of a former wharf extend from the E side of the point. A pleasure fishing pier and a small-craft harbor are at **Lone Tree Point**, 4.6 miles E from Pinole Point. (See the small-craft facilities tabulation on chart 18652 for services and supplies available.)

**Gallinas Creek** enters San Pablo Bay about 1.5 miles NW of Point San Pedro. The entrance channel, marked by private markers on the N side, leads across flats to the mouth of the creek. In 1983, the channel had a controlling depth of 2 feet. Local knowledge is advised. Overhead cables crossing the creek have a minimum clearance of 65 feet.

**Petaluma River** enters San Pablo Bay on the NW side. A dredged channel leads from deep water in San Pablo Bay to the mouth of the Petaluma River and continues upstream to the city of Petaluma. A Federal project provides for depths of 8 feet in the entrance and through the river to a turning basin at Petaluma, thence 4 feet to the upstream limit of the project. (See Notice to Mariners and latest edition of the chart for controlling depths.)

**Danger zones** are in the E part of San Pablo Bay adjacent to the W shore of Mare Island and in the N central part of the bay. (See **334.1160 and 334.1170**, chapter 2, for limits and regulations.)

**Napa River**, the continuation of Mare Island Strait above the naval shipyard, is used by barges and pleasure boats. Napa River is marked to Horseshoe Bend by lights and a daybeacon; above Horseshoe Bend, the river is marked by lights and daybeacons to the 3rd Street Bridge in Napa. A visible wreck, marked by a buoy, is on the E side of the channel just N of Slaughterhouse Point. In 2004, a submerged obstruction was reported in the channel E of Knight Island in about 38°08'16.5"N., 122°16'57.2"W.

The railroad bridge across Napa River at **Brazos**, about 6.8 miles above the Vallejo-Mare Island Causeway, has a vertical lift span with a clearance of 2 feet down and 97 feet up. When not in use, the drawspan is maintained in the open to navigation position. (See **117.1 through 117.59 and 117.169**, chapter 2, for drawbridge regulations.) The channel through the bridge crosses from one bank to the other causing a hazardous condition, because the direction of the ebb current is as much as 50° from the axis of the channel.

A fixed highway bridge with a clearance of 107 feet crosses the Napa River at Suscol, about 9.7 miles above the Vallejo-Mare Island Causeway. Near **Imola**, 12 miles above Vallejo-Mare Island Causeway bridge, a fixed highway bridge crosses the river with a clearance of 60 feet. The three fixed bridges in Napa have a minimum width of 47 feet and a clearance of 3.7 feet. The minimum clearance of the power cables crossing the river below Napa is 125 feet, and in Napa, 40 feet.

A small-craft basin is on the W side of Napa River opposite **Bull Island**, 8 miles above the Vallejo-Mare Island Causeway, and several other small-craft facilities are elsewhere on the river.

### U.S. Coast Guard Rescue Coordination Center 24 hour Regional Contact for Emergencies

RCC Alameda      Commander  
11<sup>th</sup> CG District      (510) 437-3700  
Alameda, CA

# Table of Selected Chart Notes

Scale 1:40,000

**NOTE C**  
GALLINAS CREEK  
Local knowledge is advisable.

**HEIGHTS**  
Heights in feet above Mean High Water.

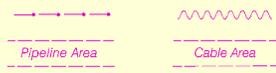
**NOTE E**  
**CAUTION**  
Mariners are warned that numerous uncharted piles, shoals, and obstructions have been reported in Petaluma River.

**NOTE D**  
**CAUTION**  
Mariners are warned that numerous uncharted piles, snags, pipes, shoals, obstructions, and wrecks, some submerged, may exist along the edge of the waterway.

**CAUTION**  
**BASCULE BRIDGE CLEARANCES**  
For bascule bridges, whose spans do not open to a full upright or vertical position, unlimited vertical clearance is not available for the entire charted horizontal clearance.

**MINERAL DEVELOPMENT STRUCTURES**  
Obstruction lights and sound (fog) signals are required for fixed mineral development structures shown on this chart, subject to approval by the District Commander, U.S. Coast Guard (33 CFR 67).

Mercator Projection  
Scale 1:40,000 at Lat 38°08'  
North American Datum of 1983  
(World Geodetic System 1984)  
**SOUNDINGS IN FEET**  
AT MEAN LOWER LOW WATER

**CAUTION**  
**SUBMARINE PIPELINES AND CABLES**  
Charted submarine pipelines and submarine cables and submarine pipeline and cable areas are shown as:  
  
Additional uncharted submarine pipelines and submarine cables may exist within the area of this chart. Not all submarine pipelines and submarine cables are required to be buried, and those that were originally buried may have become exposed. Mariners should use extreme caution when operating vessels in depths of water comparable to their draft in areas where pipelines and cables may exist, and when anchoring, dragging, or trawling.  
Covered wells may be marked by lighted or unlighted buoys.

**AUTHORITIES**  
Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the Corps of Engineers, Geological Survey, and U.S. Coast Guard.

**RADAR REFLECTORS**  
Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

**HORIZONTAL DATUM**  
The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 0.292" southward and 3.910" westward to agree with this chart.

**CAUTION**  
Improved channels shown by broken lines are subject to shoaling, particularly at the edges.

**CAUTION**  
Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

**WARNING**  
The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

**NOAA WEATHER RADIO BROADCASTS**  
The NOAA Weather Radio station listed below provides continuous weather broadcasts. The reception range is typically 20 to 40 nautical miles from the antenna site, but can be as much as 100 nautical miles for stations at high elevations.  
Mt. Pise, CA    KHB-49    162.400 MHz WX2

**CAUTION**  
Limitations on the use of radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Geospatial-Intelligence Agency Publication 117. Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution. Station positions are shown thus:  
○ (Accurate location)    ◐ (Approximate location)

**PINOLE SHOAL CHANNEL**  
Vessels weighing less than 1600 gross tons or tugs with tows weighing less than 1600 gross tons are not permitted to enter or cross over Pinole Shoal dredged channel.

**SAN RAFAEL CREEK**  
The controlling depth was 4 feet for a mid-width of 50 feet from the channel entrance 37°57'30"N, 122°27'34"W, to the mouth of San Rafael Creek; thence 2 feet for a mid-width of 30 feet to the turning basin, 2 feet in the turning basin centered at 37°58'09.4"N 122°31'04.9"W, thence 1 foot for a width of 60 feet to the Grand Ave. Bridge, except for shoal to bare for last 125 feet.  
Feb 2011-Jan 2012

**SOURCE DIAGRAM**  
The outlined areas represent the limits of the most recent hydrographic survey information that has been evaluated for charting. Surveys have been banded in this diagram by date and type of survey. Channels maintained by the U.S. Army Corps of Engineers are periodically resurveyed and are not shown on this diagram. Refer to Chapter 1, United States Coast Pilot.

| NAPA RIVER   |                   |              |                |
|--|-------------------|--------------|----------------|
| TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO APR 2012 |                   |              |                |
| CONTROLLING DEPTHS FROM SEAWARD IN FEET AT MEAN LOWER LOW WATER (MLLW) |                   |              |                |
| NAME OF CHANNEL  | DEPTH MLLW (FEET) | WIDTH (FEET) | DATE OF SURVEY |
| HORSESHOE BEND TO BASIN AT JACKS BEND                                  | 4.3               | MIDDLE 50 FT | 4-12           |
| TURNING BASIN  | A2.5              | 100-250      | 4-12           |
| THENCE TO HEAD OF NAVIGATION (GRD ST.)                                 | B2.3              | MIDDLE 50 FT | 4-12           |

A. SHOAL TO BARE AT WESTERN EDGE FROM 38°17'08.4"N, 122°17'07.4"W TO 38°17'12.6"N, 122°17'02.8"W.  
B. SHOALING TO 1.5 FEET AROUND BEND AT 38°17'40.8"N, 122°16'56.9"W AND TO 1.3 FEET AROUND BEND AT 38°17'45.3"N, 122°16'56.2"W.  
NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGING CONDITIONS SUBSEQUENT TO THE ABOVE.

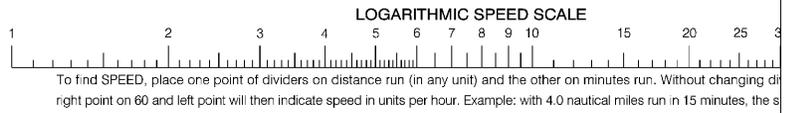
| TIDAL INFORMATION             |  |  |                 |                      |
|-------------------------------|--|--|-----------------|----------------------|
| PLACE                         | HEIGHT REFERRED TO DATUM OF SOUNDINGS (MLLW) | HEIGHT REFERRED TO DATUM OF SOUNDINGS (MLLW) |                 |                      |
|                               |  | MEAN HIGHER HIGH WATER                       | MEAN HIGH WATER | MEAN LOWER LOW WATER |
| NAME                          | (LAT/LONG)                                   | feet   | feet            | feet                 |
| Point Orient                  | (37°58'N/122°26'W)                           | 6.0  | 5.4             | 1.1                  |
| Hercules, Refugio Landing     | (38°01'N/122°18'W)                           | 6.1  | 5.5             | 1.0                  |
| Mare Island, Carquinez Strait | (38°04'N/122°15'W)                           | 5.9  | 5.3             | 1.0                  |
| Petaluma River Entrance       | (38°07'N/122°30'W)                           | 6.1  | 5.6             | 1.0                  |
| Sonoma Creek                  | (38°09'N/122°24'W)                           | 5.6  | 5.0             | 0.8                  |

Dashes (- -) located in datum columns indicate unavailable datum values for a tide station. Real-time water levels, tide predictions, and tidal current predictions are available on the Internet from <http://tidessandcurrents.noaa.gov>. (Dec 2010)

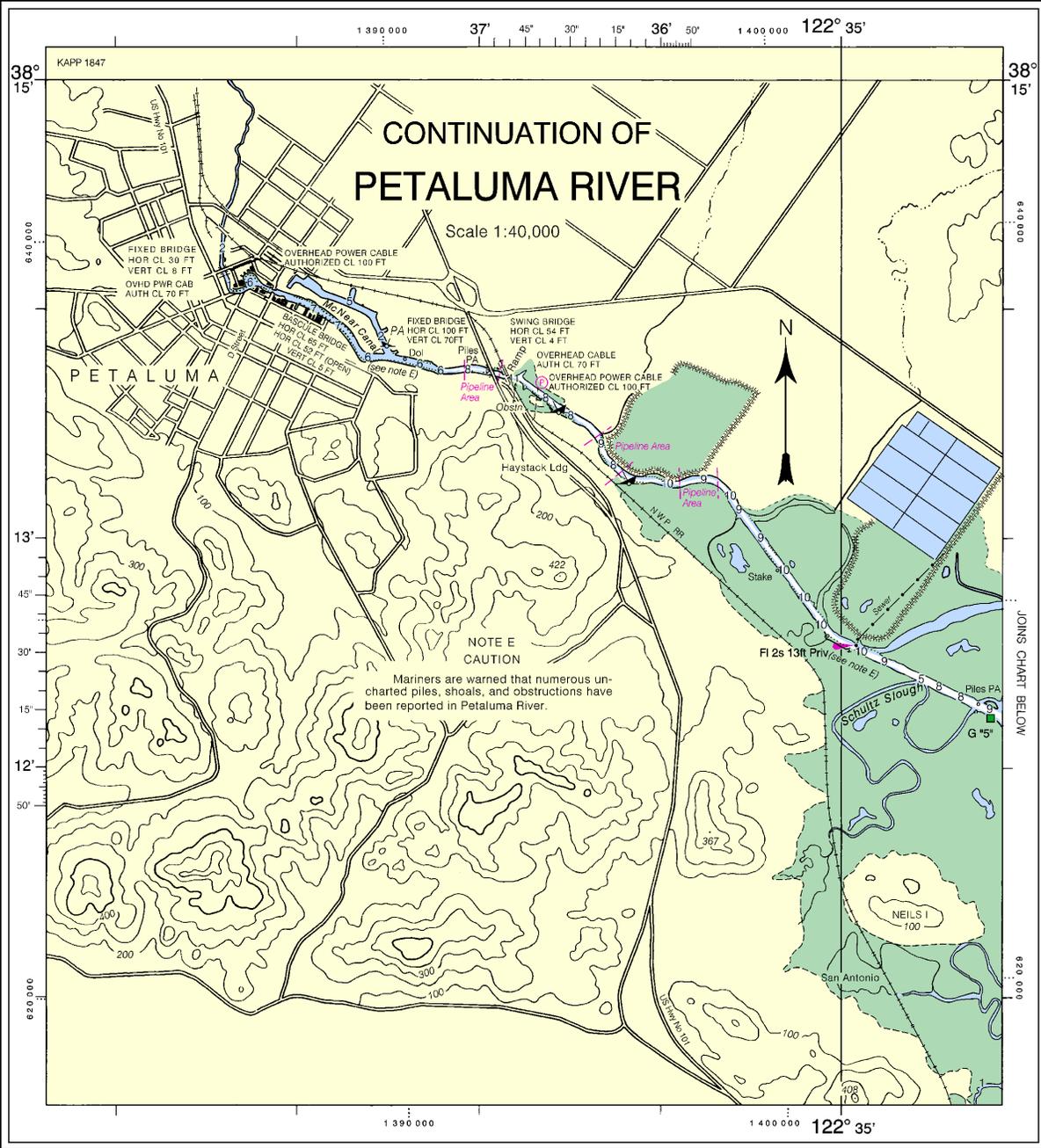
| PINOLE SHOAL CHANNEL DEPTHS  |                      |                        |                       |                |                    |              |
|--|----------------------|------------------------|-----------------------|----------------|--------------------|--------------|
| TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO OCT 2011 |                      |                        |                       |                |                    |              |
| CONTROLLING DEPTHS FROM SEAWARD IN FEET AT MEAN LOWER LOW WATER (MLLW) |                      |                        |                       |                | PROJECT DIMENSIONS |              |
| NAME OF CHANNEL  | LEFT OUTSIDE QUARTER | MIDDLE HALF OF CHANNEL | RIGHT OUTSIDE QUARTER | DATE OF SURVEY | WIDTH (FEET)       | DEPTH (FEET) |
| CHANNEL ENTRANCE TO LT. 11   | 29.0                 | 36.0                   | 35.0                  | 8,10-11        | 600                | 5.1          |
| THENCE TO 38°03'31"N, 122°17'08"W                                      | 26.0                 | 35.0                   | 35.0                  | 10-11          | 600                | 2.2          |

NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

This nautical chart has been designed to promote safe navigation. The National Ocean Service encourages users to submit corrections, additions, or comments for improving this chart to the Chief, Marine Chart Division (N/CS2), National Ocean Service, NOAA, Silver Spring, Maryland 20910-3282.



18654



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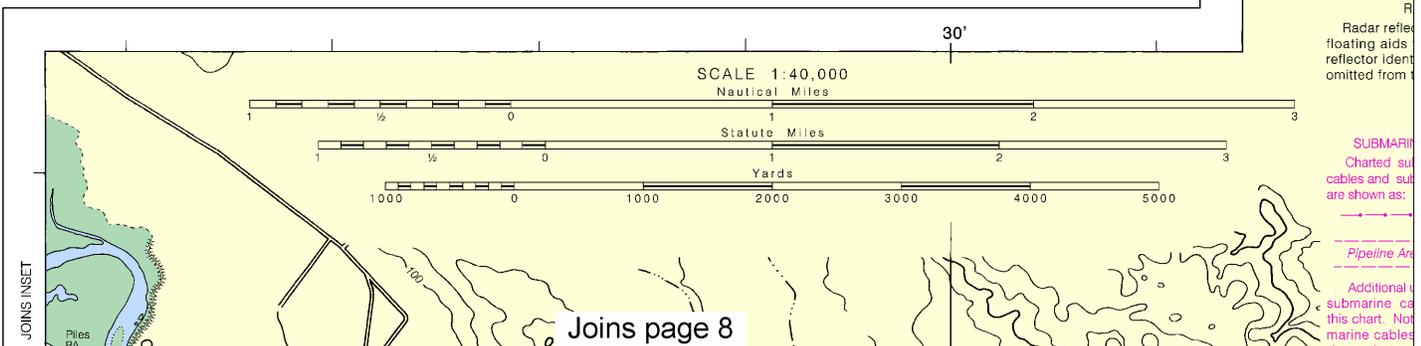
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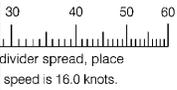
Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

SCALE 1:40,000  
Nautical Miles

See Note on page 5.





Formerly C&GS 5533, 1st Ed., Jan. 1906 G-1954-861 KAPP 1846

122° 25' 24' 45' 30' 15' 23' 50'

**WEATHER RADIO BROADCASTS**  
 AA Weather Radio station listed  
 ces continuous weather broadcasts.  
 ion range is typically 20 to 40  
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 100 nautical miles for stations at  
 ons.

KHB-49 162.400 MHz WX2

**PLEMENTAL INFORMATION**  
 U.S. Coast Pilot 7 for important  
 al information.

**CAUTION**  
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**AIDS TO NAVIGATION**  
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**WARNING**  
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 ast Pilot for details.

**POLLUTION REPORTS**  
 ll spills of oil and hazardous sub-  
 he National Response Center via  
 802 (toll free), or to the nearest U.S.  
 acility if telephone communication  
 (33 CFR 153).

**RADAR REFLECTORS**  
 ectors have been placed on many  
 s to navigation. Individual radar  
 ntification on these aids has been  
 n this chart.

**CAUTION**  
**RINE PIPELINES AND CABLES**  
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 utable pipeline and cable areas  
 :  
 Area Cable Area  
 If uncharted submarine pipelines and  
 cables may exist within the area of  
 ot all submarine pipelines and sub-  
 es are required to be buried, and



**UNITED STATES - WEST COAST  
 CALIFORNIA**

**SAN PABLO BAY**

Mercator Projection  
 Scale 1:40,000 at Lat 38°08'

North American Datum of 1983  
 (World Geodetic System 1984)

**SOUNDINGS IN FEET  
 AT MEAN LOWER LOW WATER**

Additional information can be obtained at nauticalcharts.noaa.gov.

**HEIGHTS**  
 Heights in feet above Mean High Water.

**AUTHORITIES**  
 Hydrography and topography by the National  
 Ocean Service, Coast Survey, with additional  
 data from the Corps of Engineers, Geological  
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**CAUTION**  
**BASCULE BRIDGE CLEARANCES**  
 For bascule bridges, whose spans do not  
 open to a full upright or vertical position, unlimited  
 vertical clearance is not available for the entire  
 charted horizontal clearance.

**NOTE D**  
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 Mariners are warned that numerous uncharted  
 piles, snags, pipes, shoals, obstructions, and  
 wrecks, some submerged, may exist along the  
 edge of the waterway.

**NOTE H**  
 The U.S. Coast Guard operates a mandatory Vessel Traffic  
 Services (VTS) system in the San Francisco Bay and sur-  
 rounding areas. Vessel operating procedures and designated  
 radiotelephone frequencies are published in 33 CFR 161, the  
 U.S. Coast Pilot, and/or the VTS User's Manual.  
 All of the San Pablo Bay is within the VTS area with the  
 exception of the Petaluma River Entrance Channel.

**NOTE A**  
 Navigation regulations are published in Chapter 2, U.S.  
 Coast Pilot 7. Additions or revisions to Chapter 2 are pub-  
 lished in the Notice to Mariners. Information concerning the  
 regulations may be obtained at the Office of the Commander,  
 11th Coast Guard District in Alameda, California or at the  
 Office of the District Engineer, Corps of Engineers in  
 San Francisco, California.  
 Refer to charted regulation section numbers.

**ABBREVIATIONS** (For complete list of Symbols and Abbreviations, see Chart No. 1.)  
 Aids to Navigation (lights are white unless otherwise indicated):

|                   |                          |                        |                    |
|-------------------|--------------------------|------------------------|--------------------|
| AERO aeronautical | G green                  | Mo morse code          | R TR radio tower   |
| Al alternating    | IQ interrupted quick     | N nun                  | Rot rotating       |
| B black           | Is isophase              | OBSC obscured          | s seconds          |
| Bn beacon         | LT HO lighthouse         | Oc occulting           | SEC sector         |
| C can             | M nautical mile          | Or orange              | St M statute miles |
| DIA diaphone      | m minutes                | Q quick                | VQ very quick      |
| F fixed           | MICRO TR microwave tower | R red                  | W white            |
| Fl flashing       | Mir marker               | Ra Ref radar reflector | WHIS whistle       |
|                   |                          | R Bn radiobeacon       | Y yellow           |

|                                |           |         |             |
|--------------------------------|-----------|---------|-------------|
| <b>Bottom characteristics:</b> |           |         |             |
| Blds boulders                  | Co coral  | gy gray | Oys oysters |
| bk broken                      | G gravel  | h hard  | Rk rock     |
| Cy clay                        | Grs grass | M mud   | S sand      |
|                                |           |         | so soft     |
|                                |           |         | Sh shells   |
|                                |           |         | sy sticky   |

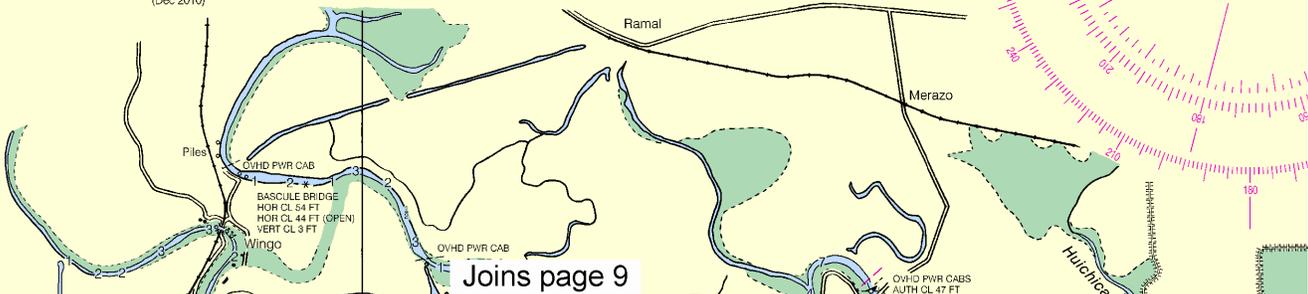
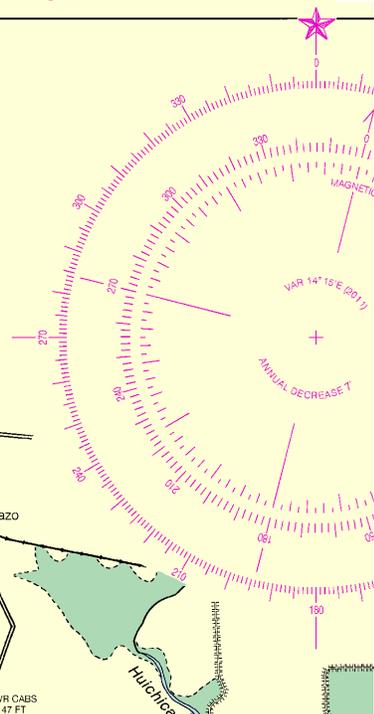
  

|  |                         |                      |                |
|--|-------------------------|----------------------|----------------|
| <b>Miscellaneous:</b>  |                         |                      |                |
| AUTH authorized  | Obsn obstruction        | PD position doubtful | Subm submerged |
| ED existence doubtful  | PA position approximate | Rep reported         |                |
| Wreck, rock, obstruction, or shoal swept clear to the depth indicated.           |                         |                      |                |
| (2) Rocks that cover and uncover, with heights in feet above datum of soundings. |                         |                      |                |

**TIDAL INFORMATION**

| PLACE                         | Height referred to datum of soundings (MLLW) | Height referred to datum of soundings (MLLW) |                 |                |
|-------------------------------|--|--|-----------------|----------------|
|                               |  | Mean Higher High Water                       | Mean High Water | Mean Low Water |
| Point Orient                  | (37°58'N/122°26'W)                           | 6.0  | 5.4             | 1.1            |
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Dashes (---) located in datum columns indicate unavailable datum values for a tide station. Real-time water levels, tide predictions, and tidal current predictions are available on the Internet from <http://tidesandcurrents.noaa.gov> (Dec 2010)



Joins page 6

This BookletChart was reduced to 75% of the original chart scale. The new scale is 1:53333. Barscales have also been reduced and are accurate when used to measure distances in this BookletChart.



122° 25' 24' 45' 30' 15' 23' 50' 20'



THE NATION'S CHARTMAKER SINCE 1807

UNITED STATES - WEST COAST

CALIFORNIA

# SAN PABLO BAY

Mercator Projection  
Scale 1:40,000 at Lat 38°08'

North American Datum of 1983  
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Refer to charted regulation section numbers.

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|                   |                          |                        |                    |
|-------------------|--------------------------|------------------------|--------------------|
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| Al alternating    | IQ interrupted quick     | N nun                  | Rt rotating        |
| B black           | Is isophase              | OBSC obscured          | s seconds          |
| Bn beacon         | LT HO lighthouse         | Oc occulting           | SEC sector         |
| C can             | M nautical mile          | Or orange              | St M statute miles |
| DIA diaphone      | m minutes                | Q quick                | VQ very quick      |
| F fixed           | MICRO TR microwave tower | R red                  | W white            |
| Fl flashing       | Mkr marker               | Ra Ref radar reflector | WHIS whistle       |
|                   |                          | R Bn radiobeacon       | Y yellow           |

**Bottom characteristics:**

|               |           |         |             |           |
|---------------|-----------|---------|-------------|-----------|
| Blds boulders | Co coral  | gy gray | Oys oysters | so soft   |
| bk broken     | G gravel  | h hard  | Rk rock     | Sh shells |
| Cy clay       | GrS grass | M mud   | S sand      | sy sticky |

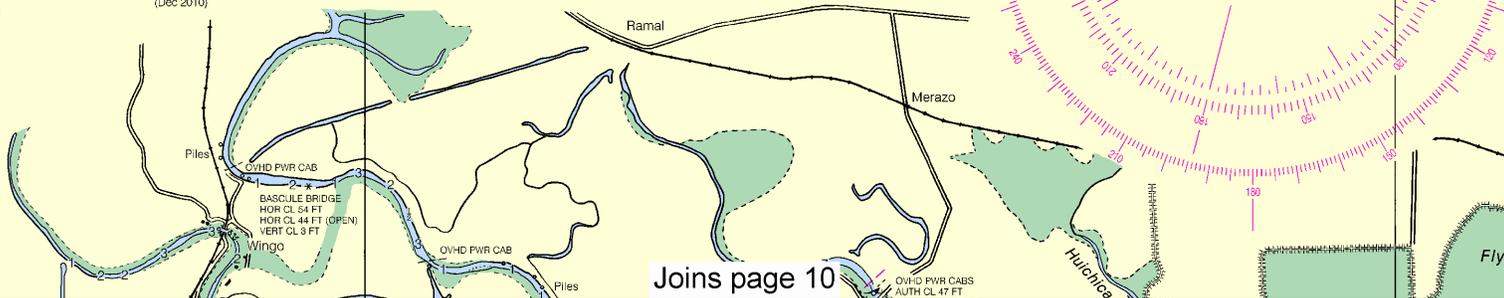
**Miscellaneous:**

|  |                         |                      |                |
|--|-------------------------|----------------------|----------------|
| AUTH authorized  | Obstn obstruction       | PD position doubtful | Subm submerged |
| ED existence doubtful  | PA position approximate | Rep reported         |                |
| ⚓ Wreck, rock, obstruction, or shoal swept clear to the depth indicated.         |                         |                      |                |
| (2) Rocks that cover and uncover, with heights in feet above datum of soundings. |                         |                      |                |

**TIDAL INFORMATION**

| NAME                          | PLACE (LAT/LONG)   | Height referred to datum of soundings (MLLW) |                 |                |
|-------------------------------|--------------------|--|-----------------|----------------|
|                               |                    | Mean Higher High Water                       | Mean High Water | Mean Low Water |
| Point Orient                  | (37°58'N/122°26'W) | 6.0  | 5.4             | 1.1            |
| Hercules, Refuge Landing      | (38°01'N/122°18'W) | 6.1  | 5.5             | 1.0            |
| Mare Island, Carquinez Strait | (38°04'N/122°15'W) | 5.9  | 5.3             | 1.0            |
| Petaluma River Entrance       | (38°07'N/122°30'W) | 6.1  | 5.6             | 1.0            |
| Sonoma Creek                  | (38°09'N/122°24'W) | 5.6  | 5.0             | 0.8            |

Dashes (---) located in datum columns indicate unavailable datum values for a tide station. Real-time water levels, tide predictions, and tidal current predictions are available on the Internet from <http://tidesandcurrents.noaa.gov> (Dec 2010)



|                |               |
|----------------|---------------|
| TABULATED FROM | CONTROLING D  |
| NAME           |               |
| HORSESHOE BE   | JACKS BEND    |
| TURNING BASIN  |               |
| THENCE TO HE   | NAVIGATION (  |
| A. SHOAL TO BA | 38°17'12.6"N, |
| B. SHOALING TO | 1.3 FEET AFO  |
| NOTE - CONSU   | SUBSEQUEN     |

Joins page 5

Joins page 10

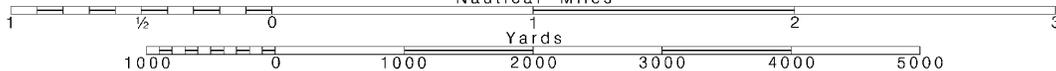


Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

SCALE 1:40,000  
Nautical Miles

See Note on page 5.

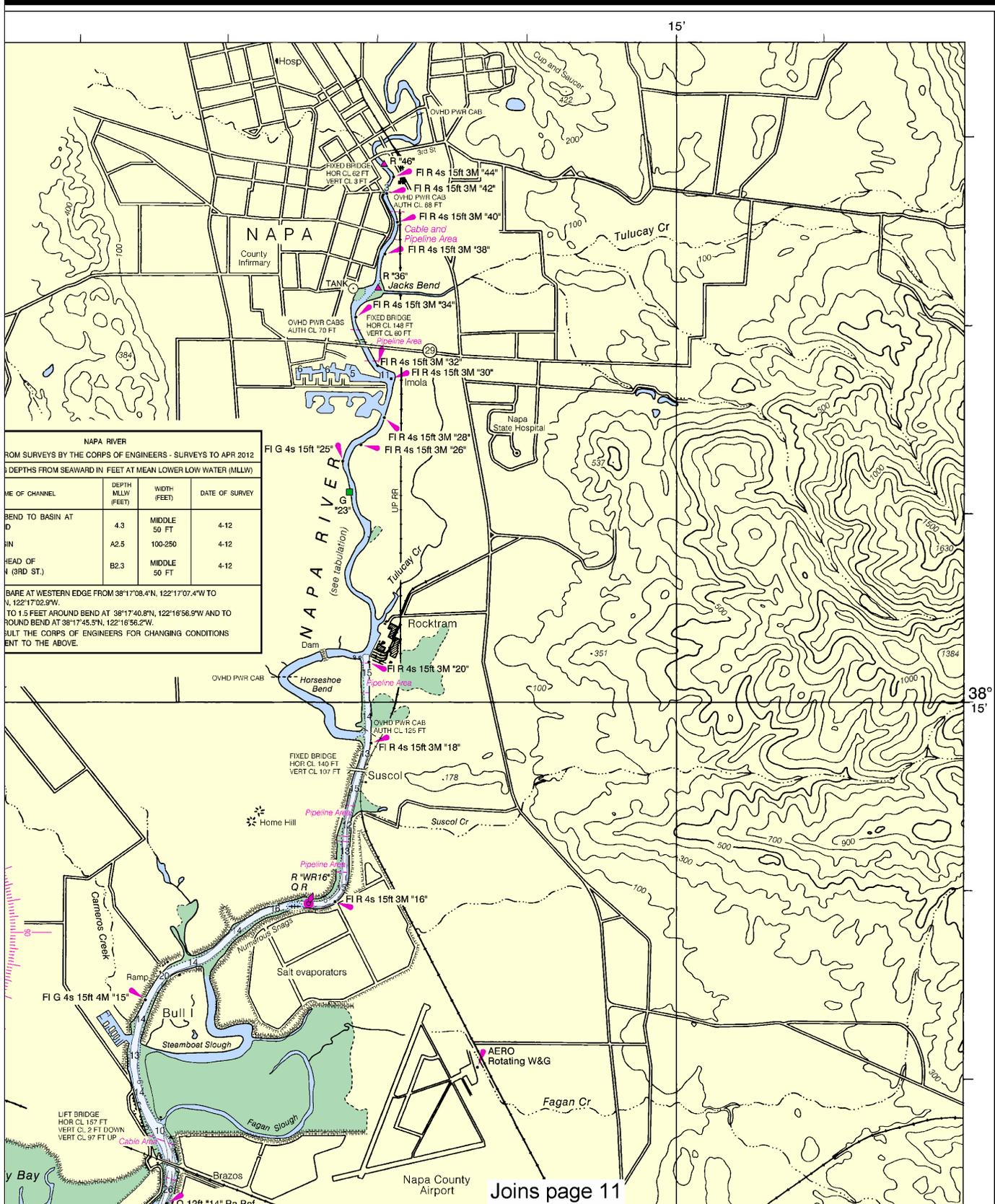


PRINT-ON-DEMAND CHARTS

NOAA and its partner, OceanGrafix, offer this chart updated weekly by NOAA for Notices to Mariners and critical corrections. Charts are printed when ordered using Print-on-Demand technology. New Editions are available 2-8 weeks before their release as traditional NOAA charts. Ask your chart agent about Print-on-Demand charts or contact NOAA at <http://ocedata.ncd.noaa.gov/idrs/inquiry.aspx>, or OceanGrafix at 1-877-56CHART or <http://www.oceangrafix.com>.

SOUNDINGS IN FEET

18654



Joins page 11

This BookletChart has been updated through: Coast Guard Local Notice To Mariners: 4612 11/13/2012, NGA Weekly Notice to Mariners: 4812 12/1/2012, Canadian Coast Guard Notice to Mariners: n/a.



1 390 000

Joins page 4

1 400 000

122° 35'

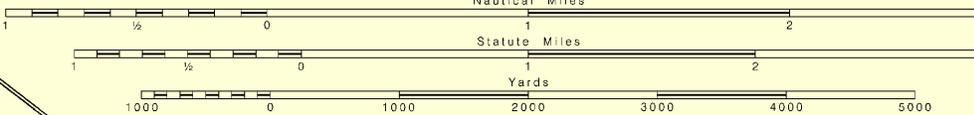
Coast Guard f... is impossible

R  
Radar reflex  
floating aids  
reflector ident  
omitted from

SCALE 1:40,000  
Nautical Miles

Statute Miles

Yards



SUBMARINE  
Charted sub  
cables and sub  
are shown as:

Pipeline An

Additional  
submarine ca  
this chart. Not  
marine cables  
those that wa  
become expos  
water compar  
pipelines an  
anchoring, dr  
Covered w  
unlighted buo

JOINS INSET

10'

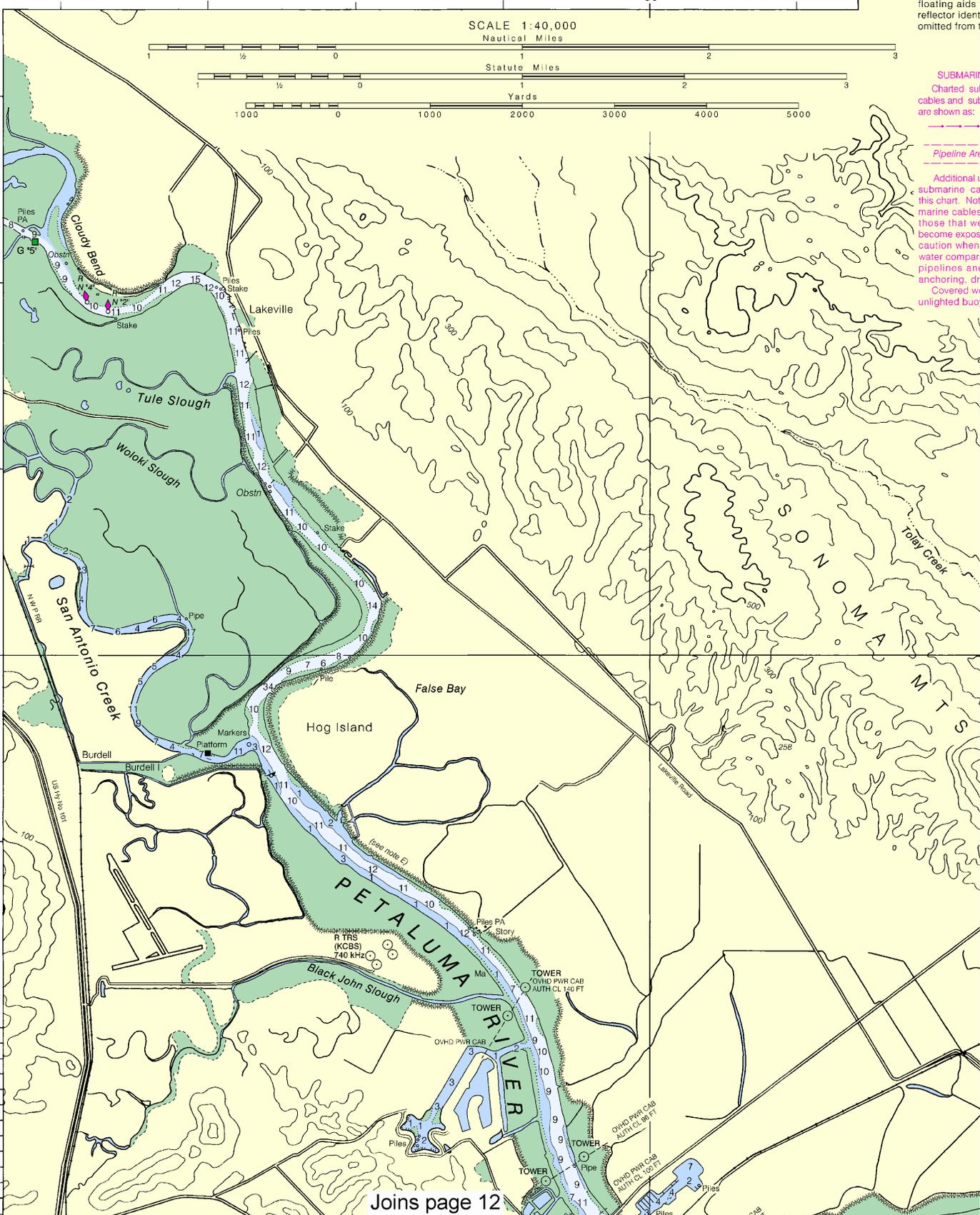
08'

45'

30'

15'

07'



Joins page 12



Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

SCALE 1:40,000  
Nautical Miles

See Note on page 5.



facility if telephone communication (33 CFR 153).

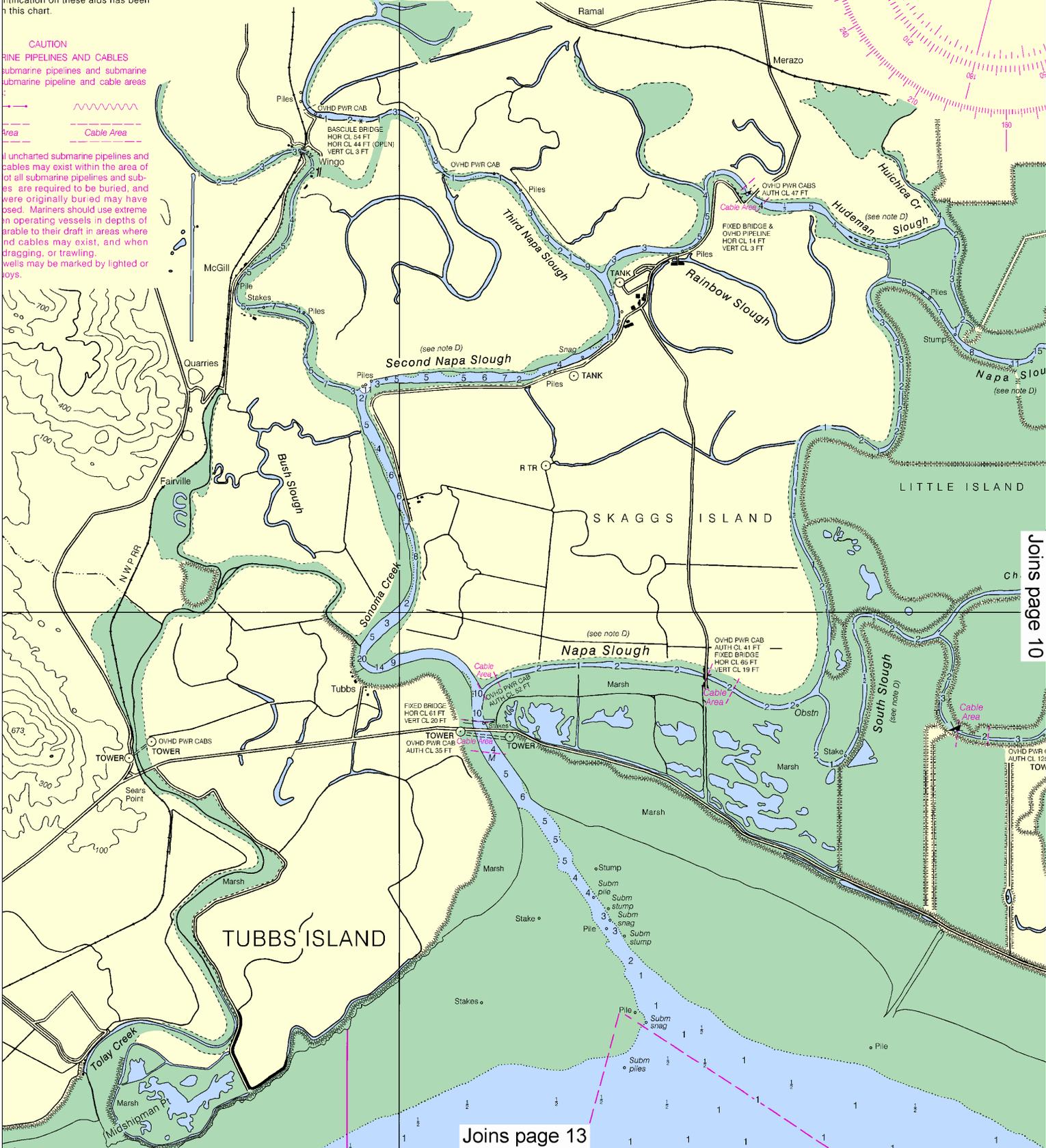
**RADAR REFLECTORS**

Reflectors have been placed on many shoals to navigation. Individual radar identification on these aids has been shown on this chart.

**CAUTION**  
**UNDERGROUND PIPELINES AND CABLES**  
 Submarine pipelines and submarine cable areas are shown on this chart. Uncharted submarine pipelines and cables may exist within the area of all submarine pipelines and cables shown. Mariners should use extreme caution in operating vessels in depths shallower than their draft in areas where uncharted cables may exist, and when dragging, or trawling. Wells may be marked by lighted or unlighted buoys.

|                               |                    |     |
|-------------------------------|--------------------|-----|
| Point Orient                  | (37°58'N/122°24'   | 1.1 |
| Hercules, Refugio Landing     | (38°01'N/122°11'   | 1.0 |
| Mare Island, Carquinez Strait | (38°04'N/122°11'   | 1.0 |
| Petaluma River Entrance       | (38°07'N/122°30'W) | 1.0 |
| Sonoma Creek                  | (38°09'N/122°24'W) | 0.8 |

Dashes (---) located in datum columns indicate unavailable datum values for a tide station. Real-time water levels, tide predictions, and tidal current predictions are available on the Internet from <http://tidesandcurrents.noaa.gov>. (Dec 2010)

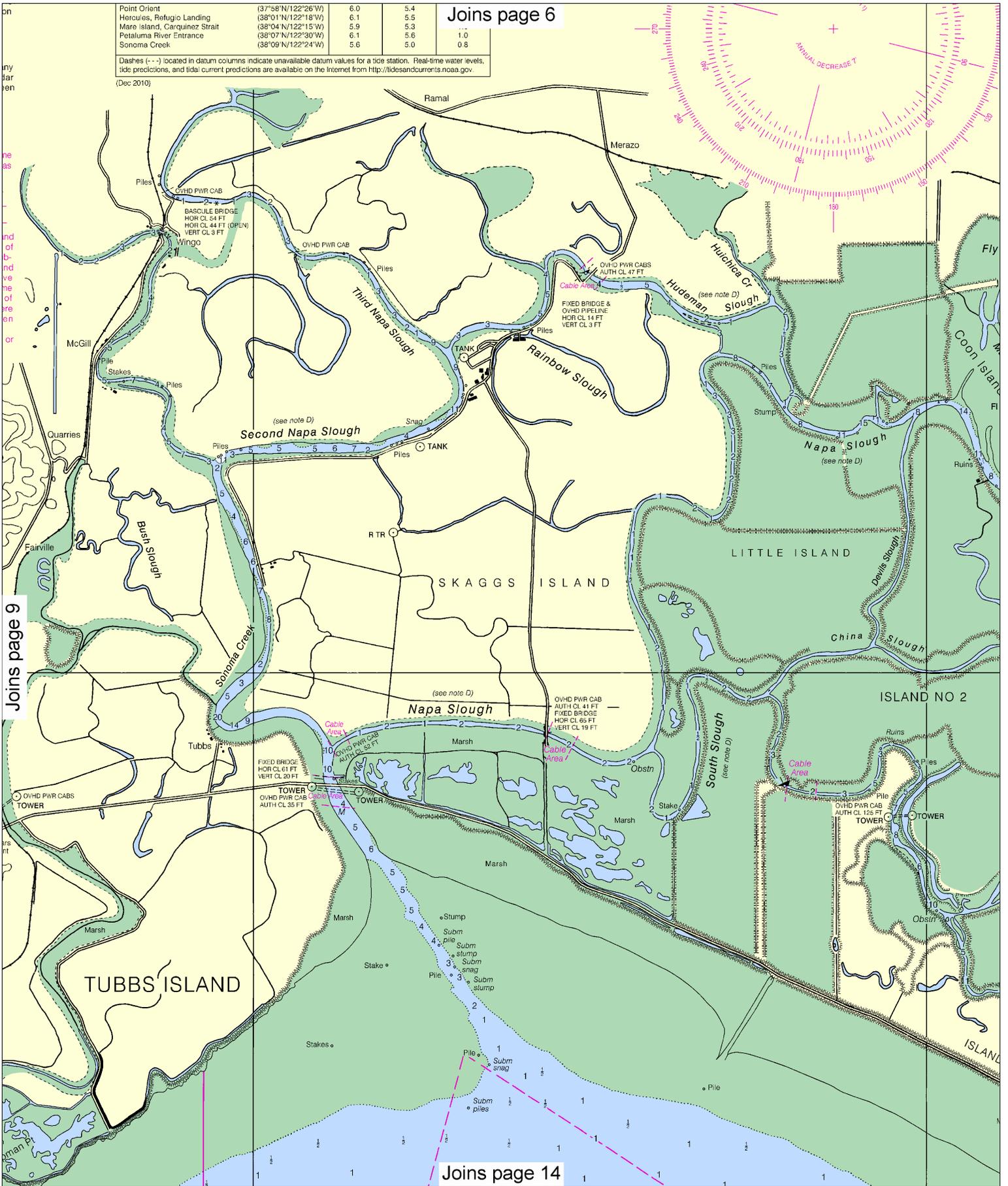


Joins page 13

Joins page 10

|                               |                    |     |     |              |
|-------------------------------|--------------------|-----|-----|--------------|
| Point Orient                  | (37°58'N/122°26'W) | 6.0 | 5.4 | Joins page 6 |
| Hercules, Refugio Landing     | (38°01'N/122°18'W) | 6.1 | 5.5 |              |
| Mare Island, Carquinez Strait | (38°04'N/122°15'W) | 5.9 | 5.3 |              |
| Petaluma River Entrance       | (38°07'N/122°30'W) | 6.1 | 5.6 |              |
| Sonoma Creek                  | (38°09'N/122°24'W) | 5.6 | 5.0 |              |

Dashes (---) located in datum columns indicate unavailable datum values for a tide station. Real-time water levels, tide predictions, and tidal current predictions are available on the Internet from <http://tidesandcurrents.noaa.gov>. (Dec 2010)



Joins page 9

Joins page 14

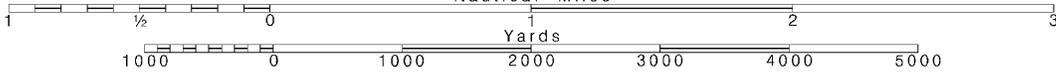
10

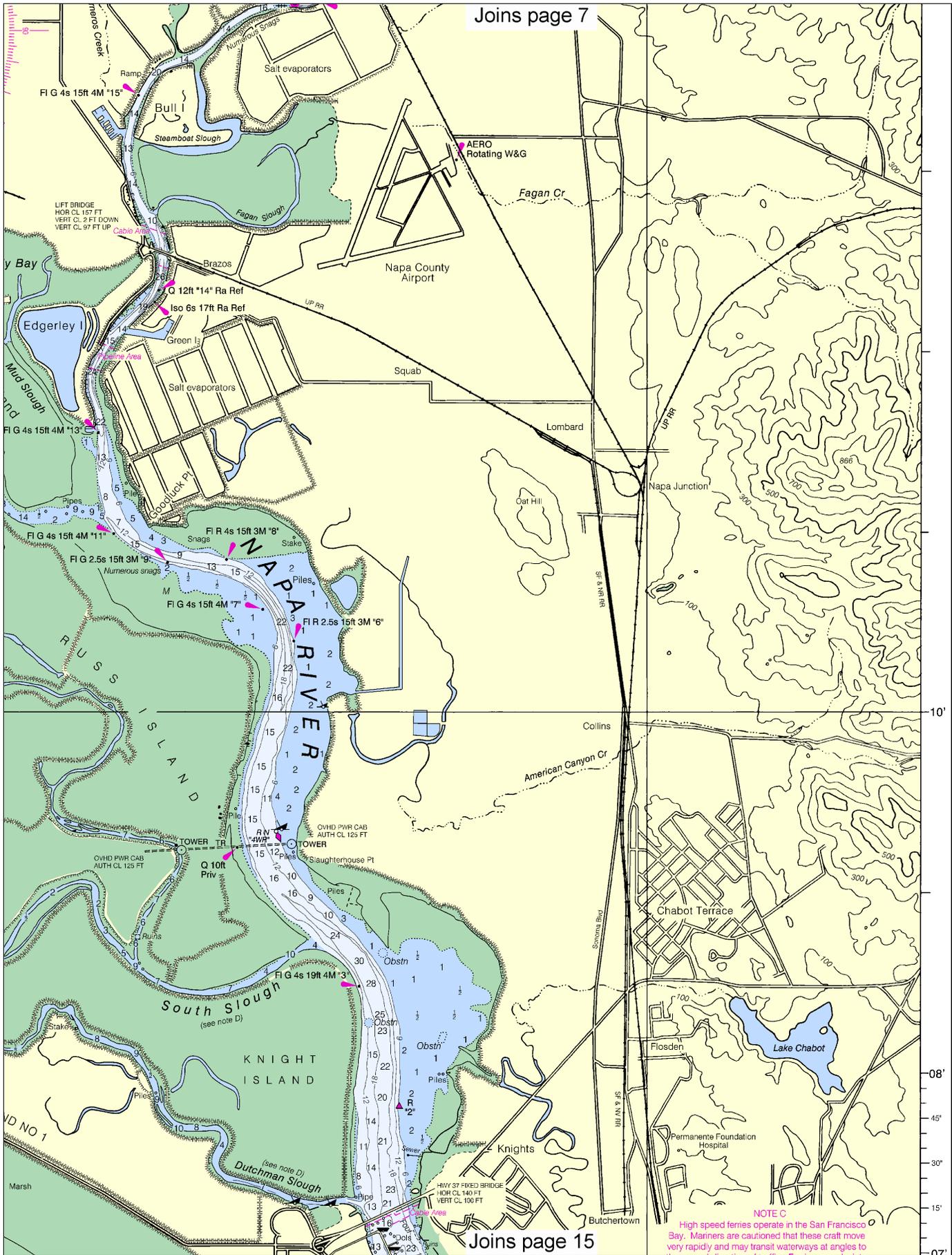
Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

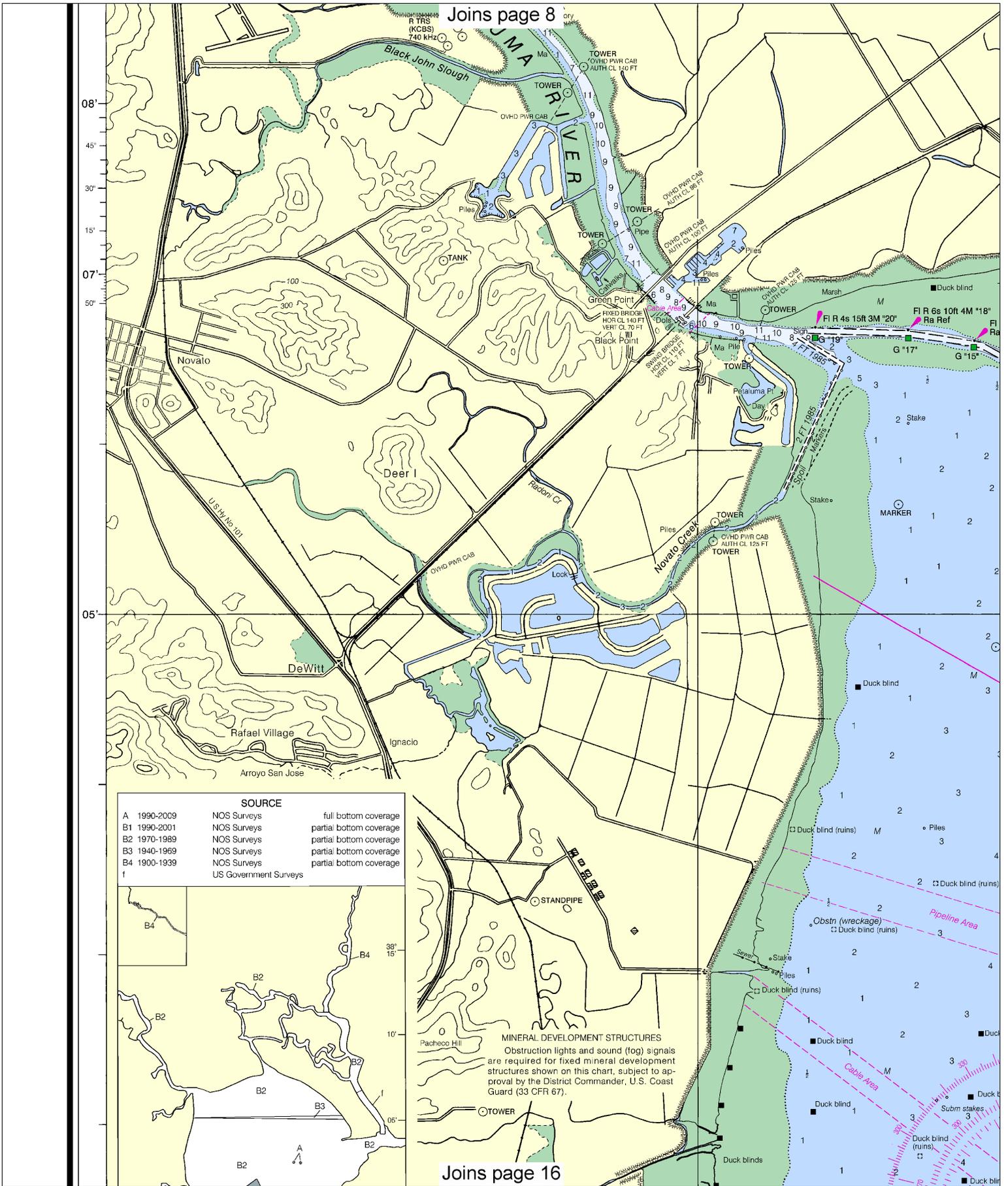
SCALE 1:40,000

See Note on page 5.

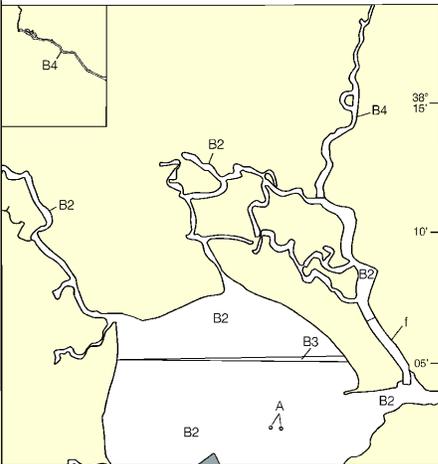




NOTE C  
 High speed ferries operate in the San Francisco Bay. Manners are cautioned that these craft move very rapidly and may transit waterways at angles to



| SOURCE |           |                                     |
|--------|-----------|-------------------------------------|
| A      | 1990-2009 | NOS Surveys full bottom coverage    |
| B1     | 1990-2001 | NOS Surveys partial bottom coverage |
| B2     | 1970-1989 | NOS Surveys partial bottom coverage |
| B3     | 1940-1969 | NOS Surveys partial bottom coverage |
| B4     | 1900-1939 | NOS Surveys partial bottom coverage |
| f      |           | US Government Surveys               |

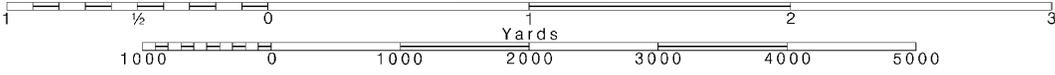


Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

SCALE 1:40,000 Nautical Miles

See Note on page 5.



# TUBBS ISLAND

Tolay Creek  
Marsh  
Michigan Pt

FI R 4s 20ft 3M \*16\*  
Ra Ref

G \*13\*  
FI R 4s 20ft 3M \*14\*  
Ra Ref

FI R 4s 10R 3M \*12\*  
Ra Ref

REGULATED NAVIGATION AREA  
165.1185 (see note A)

FI R 4s 10ft 3M \*10\*  
G \*9\*

MARKER

FI R 4s 15ft 3M \*8\*  
Ra Ref

FI R 2.5s 15ft 3M \*6\*  
G \*5\*

GENERAL ANCHORAGE NO 18  
110.224 (see note A)

REGULATED NAVIGATION AREA  
165.1185 (see note A)

FI R 4s 15ft 3M \*4\*  
Ra Ref

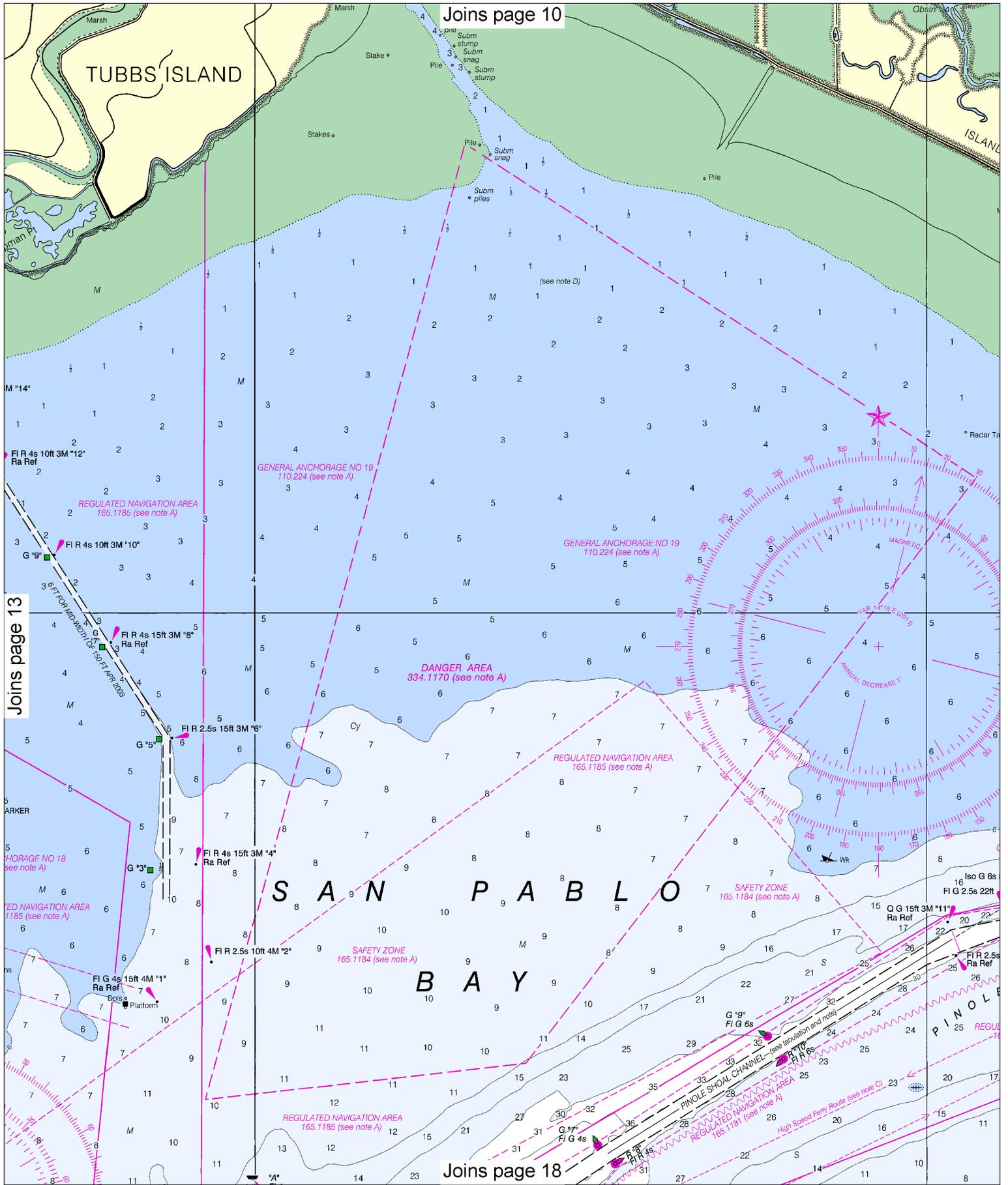
FI R 2.5s 10ft 4M \*2\*  
G \*3\*

FI G 4s 15ft 4M \*11\*  
Ra Ref

# SAN PABLO BAY

SAFETY ZONE  
165.1184 (see note A)

REGULATED NAVIGATION AREA  
165.1185 (see note A)



Joins page 13

Joins page 10

Joins page 18

**14**

Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

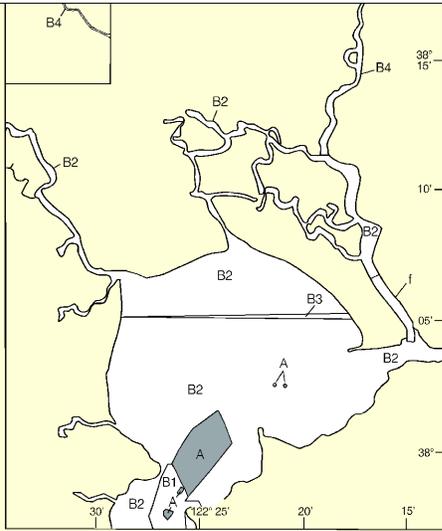
SCALE 1:40,000  
Nautical Miles

See Note on page 5.





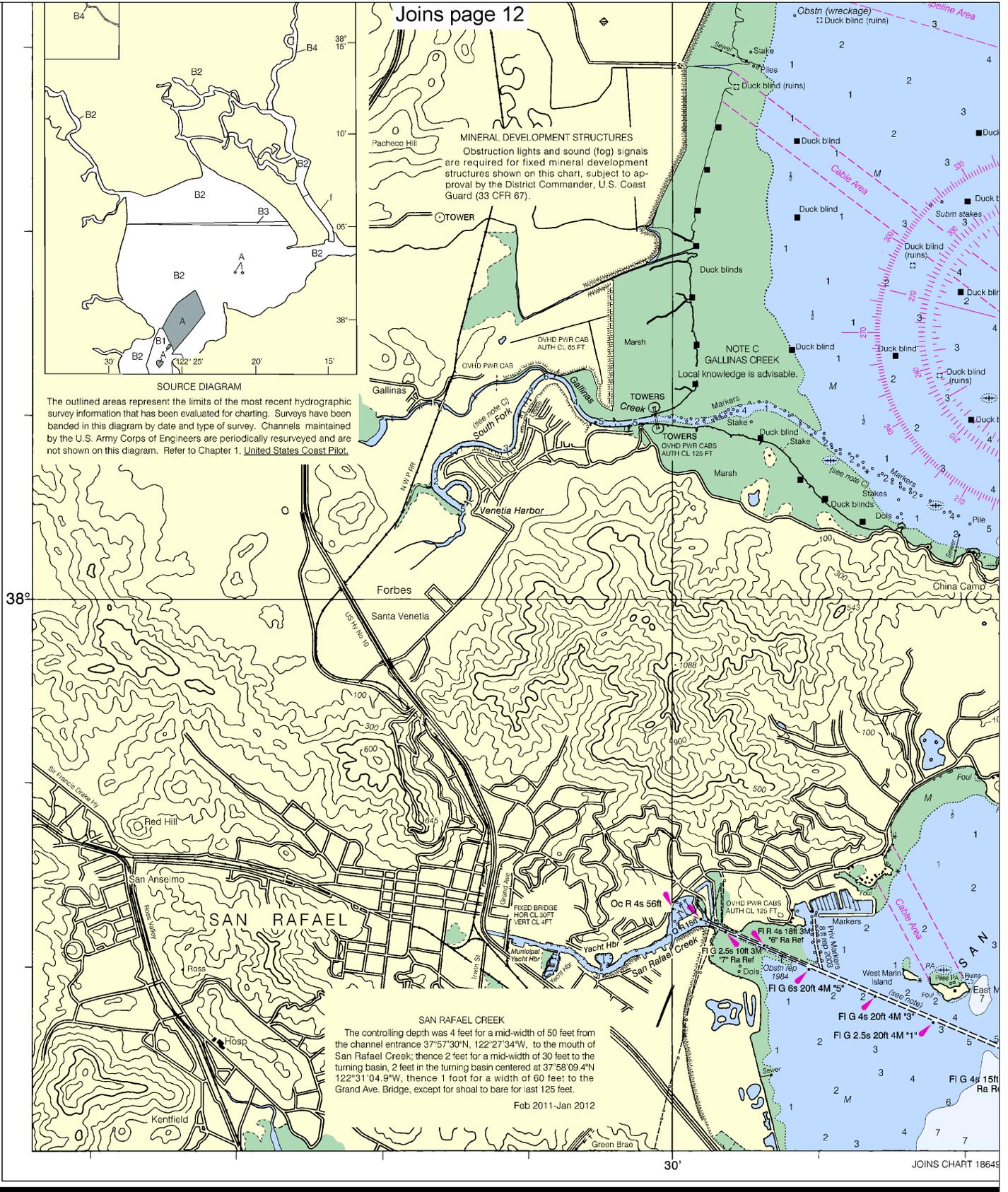
Joins page 12



SOURCE DIAGRAM

The outlined areas represent the limits of the most recent hydrographic survey information that has been evaluated for charting. Surveys have been banded in this diagram by date and type of survey. Channels maintained by the U.S. Army Corps of Engineers are periodically resurveyed and are not shown on this diagram. Refer to Chapter 1, *United States Coast Pilot*.

**MINERAL DEVELOPMENT STRUCTURES**  
Obstruction lights and sound (fog) signals are required for fixed mineral development structures shown on this chart, subject to approval by the District Commander, U.S. Coast Guard (33 CFR 67).



**SAN RAFAEL CREEK**  
The controlling depth was 4 feet for a mid-width of 50 feet from the channel entrance 37°57'30"N, 122°27'34"W, to the mouth of San Rafael Creek; then 2 feet for a mid-width of 30 feet to the turning basin, 2 feet in the turning basin centered at 37°58'09.4"N 122°31'04.9"W, then 1 foot for a width of 60 feet to the Grand Ave. Bridge, except for shoal to bare for last 125 feet.

Feb 2011-Jan 2012

45th Ed., Jan./ 11 ■ Corrected through NM Jan. 01/11  
Corrected through LNM Dec. 21/10

18654

**CAUTION**  
This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner. Chart updates corrected from Notice to Mariners published after the dates shown in the lower left hand corner are available at [nauticalcharts.noaa.gov](http://nauticalcharts.noaa.gov).

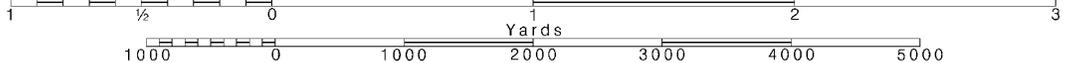
16

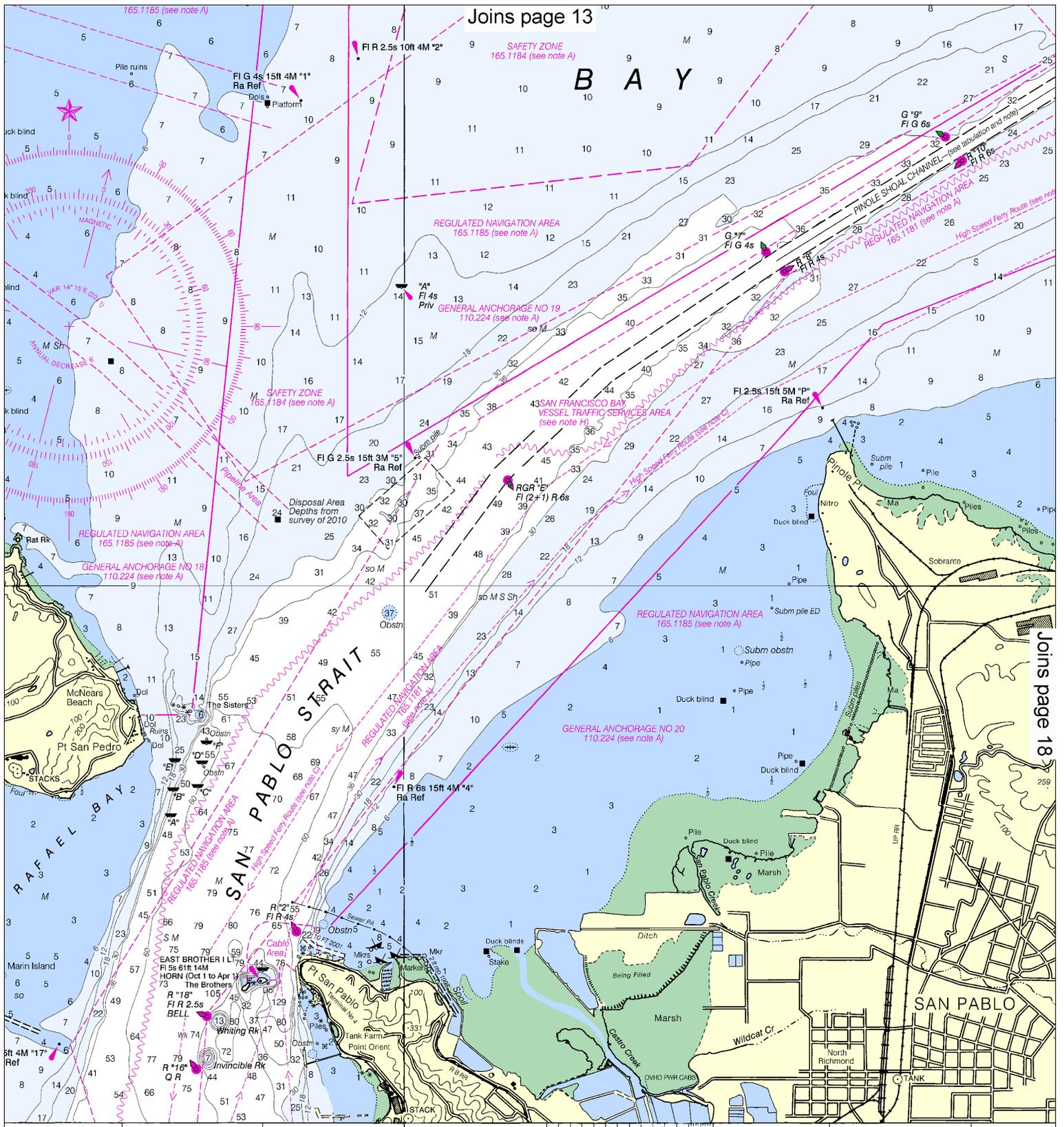
Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

SCALE 1:40,000  
Nautical Miles

See Note on page 5.



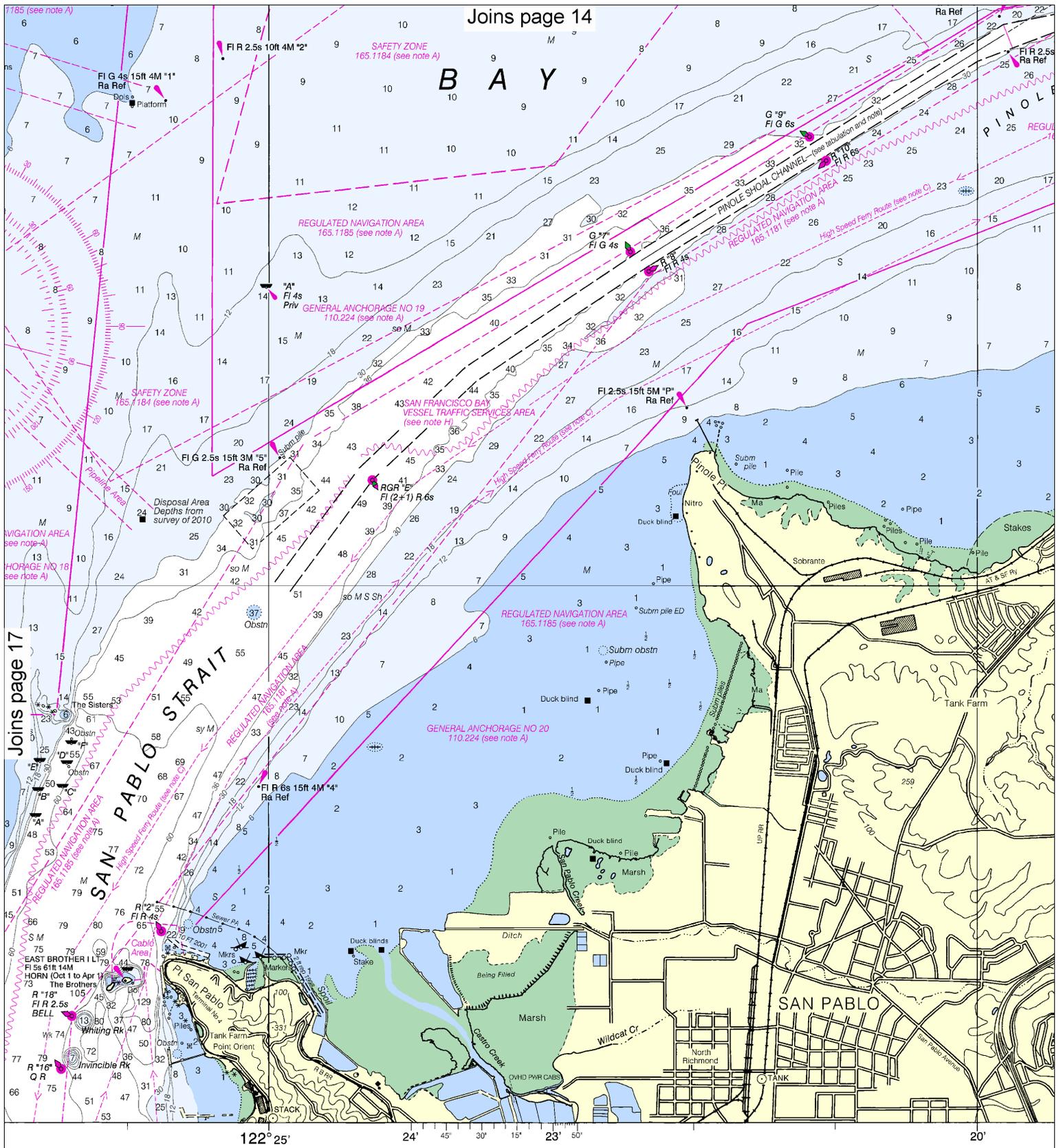


Joins page 13

Joins page 18

**SOUNDINGS IN FEET**

Published at Washington, D.C.  
 U.S. DEPARTMENT OF COMMERCE  
 NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
 NATIONAL OCEAN SERVICE  
 COAST SURVEY



**DEPTH SOUNDINGS IN FEET**

Published at Washington, D.C.  
 U.S. DEPARTMENT OF COMMERCE  
 NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
 NATIONAL OCEAN SERVICE  
 COAST SURVEY

|         |
|---------|
| FATHOMS |
| FEET    |
| METERS  |

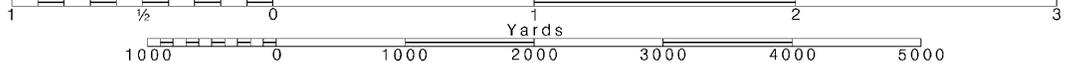
**18**

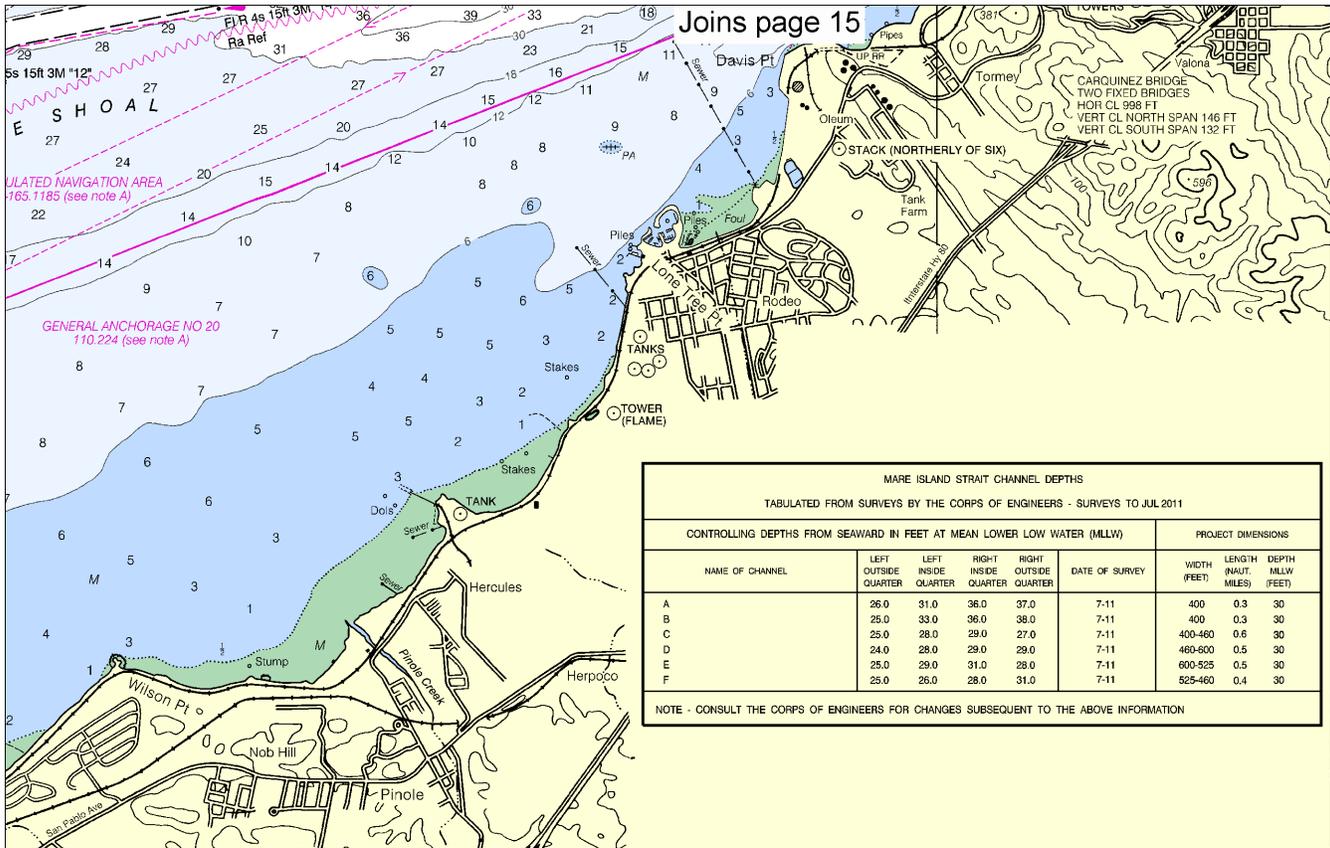
Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

SCALE 1:40,000  
 Nautical Miles

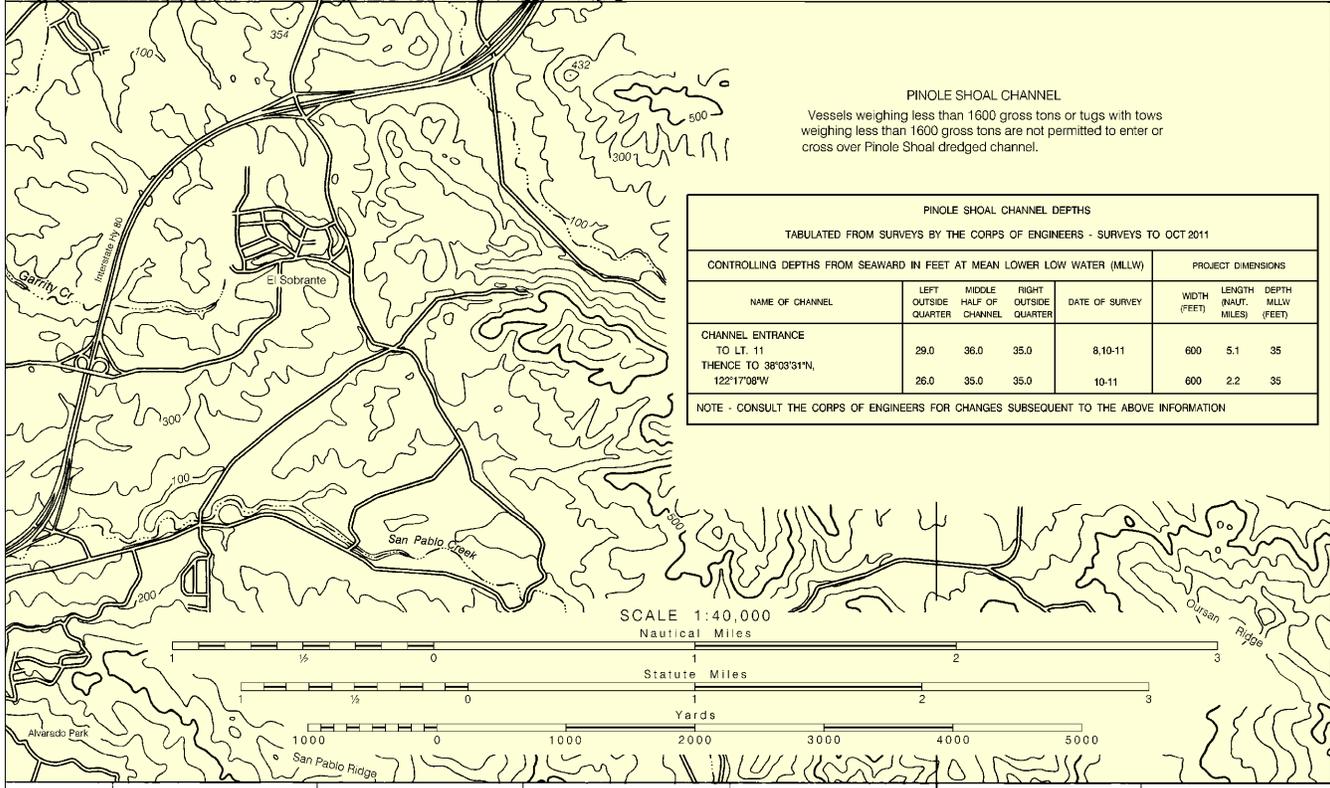
See Note on page 5.





| MARE ISLAND STRAIT CHANNEL DEPTHS                                      |                      |                     |                      |                       |                    |   |
|--|----------------------|---------------------|----------------------|-----------------------|--------------------|---|
| TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO JUL 2011 |                      |                     |                      |                       |                    |   |
| CONTROLLING DEPTHS FROM SEAWARD IN FEET AT MEAN LOWER LOW WATER (MLLW) |                      |                     |                      |                       | PROJECT DIMENSIONS |   |
| NAME OF CHANNEL  | LEFT OUTSIDE QUARTER | LEFT INSIDE QUARTER | RIGHT INSIDE QUARTER | RIGHT OUTSIDE QUARTER | DATE OF SURVEY     | WIDTH (FEET) LENGTH (NAUT. MILES) DEPTH (MLLW) (FEET) |
| A  | 26.0                 | 31.0                | 36.0                 | 37.0                  | 7-11               | 400 0.3 30  |
| B  | 25.0                 | 33.0                | 36.0                 | 38.0                  | 7-11               | 400 0.3 30  |
| C  | 25.0                 | 28.0                | 29.0                 | 27.0                  | 7-11               | 400-460 0.6 30  |
| D  | 24.0                 | 28.0                | 29.0                 | 29.0                  | 7-11               | 460-600 0.5 30  |
| E  | 25.0                 | 29.0                | 31.0                 | 28.0                  | 7-11               | 600-525 0.5 30  |
| F  | 25.0                 | 26.0                | 28.0                 | 31.0                  | 7-11               | 525-460 0.4 30  |

NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION



**PINOLE SHOAL CHANNEL**  
 Vessels weighing less than 1600 gross tons or tugs with tows weighing less than 1600 gross tons are not permitted to enter or cross over Pinole Shoal dredged channel.

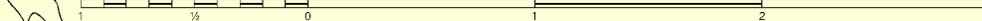
| PINOLE SHOAL CHANNEL DEPTHS  |                      |                        |                       |                |                    |  |
|--|----------------------|------------------------|-----------------------|----------------|--------------------|--|
| TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO OCT 2011 |                      |                        |                       |                |                    |  |
| CONTROLLING DEPTHS FROM SEAWARD IN FEET AT MEAN LOWER LOW WATER (MLLW) |                      |                        |                       |                | PROJECT DIMENSIONS |  |
| NAME OF CHANNEL  | LEFT OUTSIDE QUARTER | MIDDLE HALF OF CHANNEL | RIGHT OUTSIDE QUARTER | DATE OF SURVEY | WIDTH (FEET)       | LENGTH (NAUT. MILES) DEPTH (MLLW) (FEET) |
| CHANNEL ENTRANCE TO LT. 11   | 29.0                 | 36.0                   | 35.0                  | 8,10-11        | 600                | 5.1 35                                   |
| THENCE TO 38°03'31"N, 122°17'08"W                                      | 26.0                 | 35.0                   | 35.0                  | 10-11          | 600                | 2.2 35                                   |

NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

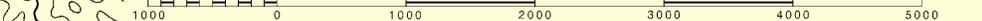
SCALE 1:40,000  
 Nautical Miles



Statute Miles

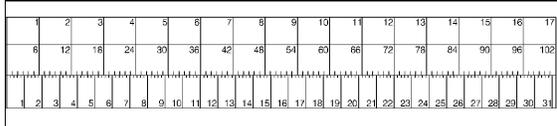


Yards



15'

994.6 X 779.3 mm



San Pablo Bay  
 SOUNDINGS IN FEET - SCALE 1:40,000

18654





EMERGENCY INFORMATION

### VHF Marine Radio channels for use on the waterways:

**Channel 6** – Inter-ship safety communications.

**Channel 9** – Communications between boats and ship-to-coast.

**Channel 13** – Navigation purposes at bridges, locks, and harbors.

**Channel 16** – Emergency, distress and safety calls to Coast Guard and others, and to initiate calls to other vessels. Contact the other vessel, agree to another channel, and then switch.

**Channel 22A** – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here.

**Channels 68, 69, 71, 72 and 78A** – Recreational boat channels.

**Getting and Giving Help** — Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.

### Distress Call Procedures

- Make sure radio is on.
- Select Channel 16.
- Press/Hold the transmit button.
- Clearly say: "MAYDAY, MAYDAY, MAYDAY."
- Also give: Vessel Name and/or Description; Position and/or Location; Nature of Emergency; Number of People on Board.
- Release transmit button.
- Wait for 10 seconds — If no response Repeat MAYDAY call.

**HAVE ALL PERSONS PUT ON LIFE JACKETS!**



**NOAA Weather Radio All Hazards (NWR)** is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service office. NWR broadcasts official Weather Service warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week.

<http://www.nws.noaa.gov/nwr/>

### Quick References

- Nautical chart related products and information — <http://www.nauticalcharts.noaa.gov>
- Online chart viewer — <http://www.nauticalcharts.noaa.gov/mcd/NOAChartViewer.html>
- Report a chart discrepancy — <http://ocsddata.ncd.noaa.gov/idrs/discrepancy.aspx>
- Chart and chart related inquiries and comments — <http://ocsddata.ncd.noaa.gov/idrs/inquiry.aspx?frompage=ContactUs>
- Chart updates (LNM and NM corrections) — [http://www.nauticalcharts.noaa.gov/mcd/updates/LNM\\_NM.html](http://www.nauticalcharts.noaa.gov/mcd/updates/LNM_NM.html)
- Coast Pilot online — <http://www.nauticalcharts.noaa.gov/nsd/cpdownload.htm>
- Tides and Currents — <http://tidesandcurrents.noaa.gov>
- Marine Forecasts — <http://www.nws.noaa.gov/om/marine/home.htm>
- National Data Buoy Center — <http://www.ndbc.noaa.gov/>
- NowCoast web portal for coastal conditions — <http://www.nowcoast.noaa.gov/>
- National Weather Service — <http://www.weather.gov/>
- National Hurricane Center — <http://www.nhc.noaa.gov/>
- Pacific Tsunami Warning Center — <http://ptwc.weather.gov/>
- Contact Us — <http://www.nauticalcharts.noaa.gov/staff/contact.htm>



— For the latest news from Coast Survey, follow @nauticalcharts



This Booklet chart has been designed for duplex printing (printed on front and back of one sheet). If a duplex option is not available on your printer, you may print each sheet and arrange them back-to-back to allow for the proper layout when viewing.

