

# BookletChart™

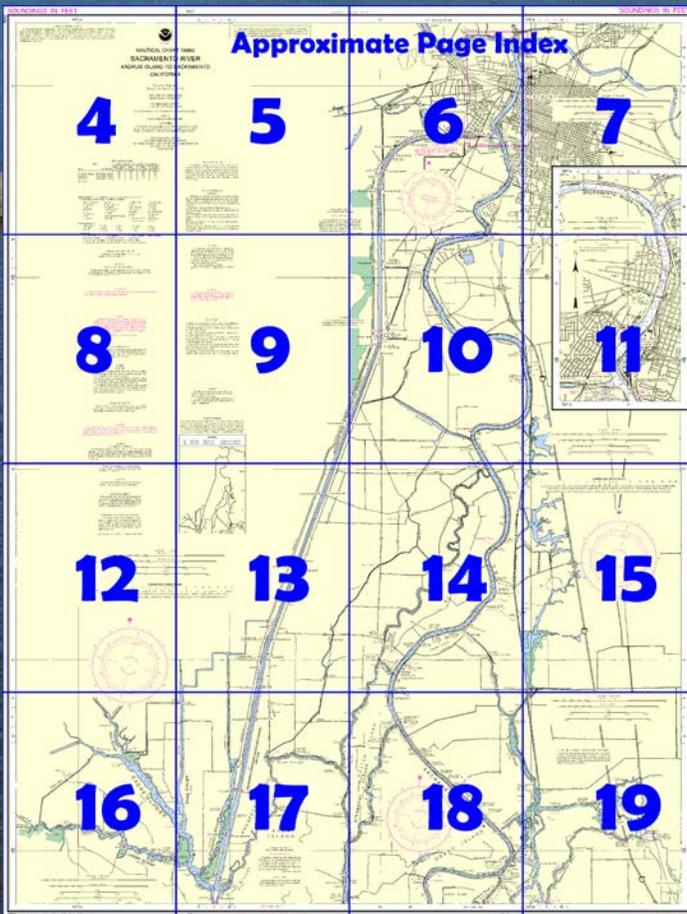


## Sacramento River – Andrus Island to Sacramento NOAA Chart 18662

*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.

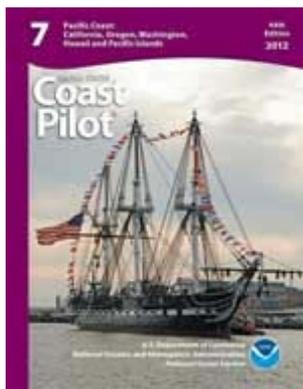
Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at <http://www.NauticalCharts.NOAA.gov>.

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=18662>.



**(Selected Excerpts from Coast Pilot)**

The **Delta Region**, the combined deltas of the San Joaquin and Sacramento Rivers, comprises the feeder rivers, sloughs, and canals that directly or indirectly connect with one or both of the rivers. Hundreds of miles of navigable waterways for small boats are available in the Delta; both local and visiting small craft use these waterways extensively. Bordering the various waterways are levees which are 12 feet or more higher than the land behind them. The

levees are built up from dredged material taken from the adjacent

waterway, and because of the settlement of the levees, dredging has been done periodically to keep the tops at height and grade. As material is needed for levee work, the dredge pays more attention to the requirements of the levee than to the depth of the channel for navigation purposes. This leaves an uneven bottom. Many public and private small-boat harbors, marinas, and boating resorts are spread over the Delta region. All types of facilities and services for small craft are available, though some areas in the Delta are much more developed than others.

**Cable ferries.**—The Sacramento and San Joaquin Rivers, including some of the feeder rivers, sloughs, and canals that directly or indirectly connect with one or both of the rivers, are crossed by cable ferries (see charts 18661 and 18662). These ferries in the delta region are guided by cables and sometimes propelled by a cable rig attached to the shore. Cables to the ferries, which extend from both banks of the waterway, may be at, near, or above the water surface. Operating procedures vary and mariners are advised to use extreme caution and seek local knowledge. **DO NOT ATTEMPT TO PASS A MOVING CABLE FERRY.**

**Threemile Slough** meets the San Joaquin River 5.8 miles above Antioch Bridge and joins the Sacramento River at the N end of Decker Island. The slough is a route frequently used by tugs and barges making passage between Sacramento and Stockton.

**Mokelumne River**, one of the principal tributaries of the San Joaquin River, rises in the Sierra Nevada and empties into it 11.8 miles above Antioch Bridge.

**Sacramento River** rises in the Trinity Mountains in N central California, flows S for 325 miles, and enters Suisun Bay on the N side of **Sherman Island**.

A cable ferry crosses the Steamboat Slough about 5 miles above the junction with Cache Slough.

**Sacramento River Deep Water Ship Channel** extends from Suisun Bay through lower Sacramento River, Cache Slough, and a 22-mile land cut to a triangular harbor and turning basin at the Port of Sacramento.

The **William G. Stone Lock** is on the barge canal that once connected the Deep Water Ship Channel with the Sacramento River; the lock is closed to all navigation.

The project depth in the ship channel is generally maintained. (See Notice to Mariners and latest editions of charts for controlling depths.) The controlling depth in the river route is about 10 feet. Above Sacramento, the controlling depth is about 6 feet to Colusa. The sounding datum is **mean lower low water at low-river stage**.

Numerous uncharted piles, snags, pumps, and pipes, some submerged, may exist along the edges of the river. Mariners are advised to exercise extreme caution while navigating close to the banks of the river.

**Note.**—Care should be exercised at all times to keep clear of the levees, as most of them are faced with rock which may damage vessels that drag along them.

**Pilotage, Sacramento River.**—River pilots, commissioned by the Port of Sacramento, are arranged for by the ship's agents, but may be obtained through the office of the port of Sacramento or the San Francisco Bar Pilots

**Quarantine, customs, immigration, and agricultural quarantine.**—(See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

**Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

**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

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

**Mercator Projection**  
Scale 1:40,000 at Lat 38° 25'

North American Datum of 1983  
(World Geodetic System 1984)

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

**SACRAMENTO RIVER**  
DEEP WATER SHIP CHANNEL  
162.205 (see note A)

Controlling depth for a width of 200 feet was 26.0 feet from the channel entrance (38°03'46.7"N, 121°51'17"W) to Lt. "40", thence 27.6 feet to Lt. "52", thence 30.9 feet to Lt. "60", thence 27.5 feet to Lt. "70", thence 18.4 feet to Lt. "86" and 29.4 feet in the turning basin at West Sacramento.  
May 2005 - May 2006

**CABLE FERRY**  
Cable across the river may be at or near the water surface. Mariners should exercise caution when navigating in this area.

**SACRAMENTO RIVER**  
DEEP WATER SHIP CHANNEL  
162.205 (see note A)

Controlling depth for a width of 200 feet was 26.0 feet from the channel entrance (38°03'46.7"N, 121°51'17"W) to Lt. "40", thence 27.6 feet to Lt. "52", thence 30.9 feet to Lt. "60", thence 27.5 feet to Lt. "70", thence 18.4 feet to Lt. "86" and 29.4 feet in the turning basin at West Sacramento.  
May 2005 - May 2006

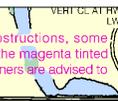
**CAUTION**  
Limitations on the use of radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Geospatial-Intelligence Agency Publication 117. Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used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

**CAUTION**  
Small craft should stay clear of large commercial and government vessels even if small craft have the right-of-way.  
All craft should avoid areas where the skin divers flag, a red square with a diagonal white stripe, is displayed.

**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.  
Sacramento, CA   KEC-57   162.550 MHz WX1

**CAUTION**  
Small craft operators are warned to beware of severe water turbulence caused by large vessels traversing narrow waterways.

**CAUTION**  
Fixed and floating obstructions, some submerged, may exist within the magenta tinted bridge construction area. Mariners are advised to proceed with caution.



**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.

**CAUTION**  
During flood stage levels, bridge clearances may be reduced by 29½ feet or more.

**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.

**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 of 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 0.318" southward and 3.838" westward to agree with this chart.

**NOTE B**  
**CAUTION**  
Mariners are warned that numerous uncharted piles, snags, pumps, pipes, and wrecks, some submerged, may exist along the edges of the waterway.  
Numerous buoys and signs mark the wing dams along the Sacramento River. Mariners should never attempt to pass between the warning buoys and the shores.  
The depths shown in backwaters, sloughs and cuts are from surveys of 1934. Channels are not maintained by the Corps of Engineers and numerous uncharted shoals and obstructions have been reported.

**SAFETY HINT**

1. Keep your chart up to date by applying all Notices to Mariners corrections when you receive them.
2. Read carefully all notes printed on your chart, each is vital to your safety.
3. Learn the meaning of each symbol and abbreviation on your chart from Chart No. 1.
4. The compass on your chart shows the variation from true north, however you must also correct your bearing for the deviation of your boat.
5. Constantly use your chart from the beginning to the end of each trip. Keep in mind the orientation of your boat with respect to the chart.
6. Maintain your position on the chart by relating charted features with those you can identify in your surroundings.

**POLLUTION REPORTS**  
Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

**NOTE A**  
Navigation regulations are published in Chapter 2, U.S. Coast Pilot 7. Additions or revisions to Chapter 2 are published 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 Sacramento, California.  
Refer to charted regulation section numbers.

**RULES OF THE ROAD**  
(ABRIDGED)  
Motorless craft have the right-of-way in almost all cases. Sailing vessels and motorboats less than sixty-five feet in length shall not hamper, in a narrow channel, the safe passage of a vessel which can navigate only inside that channel.  
A motorboat being overtaken has the right-of-way. Motorboats approaching head to head or nearly so should pass port to port.  
When motorboats approach each other at right angles or obliquely, the boat on the right has the right-of-way in most cases.  
Motorboats must keep to the right in narrow channels when safe and practicable.  
Mariners are urged to become familiar with the complete text of the Rules of the Road in U.S. Coast Guard publication "Navigation Rules."

**BRIDGE AND OVERHEAD POWER CABLE CLEARANCES**  
Clearances of overhead cables are charted as furnished by the Corps of Engineers and bridge clearances are charted as furnished by the Coast Guard. Overhead cable clearances are referred to high water. Bridge clearances are referred to High Water (HW) and Low Water (LW).

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

**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.

**CAUTION**  
**POTABLE WATER INTAKE**  
Vessels operating in fresh water lakes or rivers shall not discharge sewage, or ballast, or bilge water within such areas adjacent to domestic water intakes as are designated by the Commissioner of Food and Drugs (21 CFR 1250.93). Consult U.S. Coast Pilot 7 for important supplemental information.

**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.

**ABBREVIATIONS** (For complete list of Symbols and Abbreviations, see Chart No. 1.)  
Aids to Navigation (lights as 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	Iso isophase	OBSC obscured	s seconds
Bn beacon	LT HO Light-house	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 muc	S sand	sy sticky

Miscellaneous:

AUTH authorized	Obstn obstruction	PD position doubtful	Subm submerged
ED existence doubtful	PA position approximate	Rep reported	

① 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.

18662

121° 45'

41' 45' 30' 15'

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 5-8 weeks before their release as traditional NOAA charts. Ask your chart agent about Print-on-Demand charts or contact NOAA at 1-800-584-4683, <http://NauticalCharts.gov>, [help@NauticalCharts.gov](mailto:help@NauticalCharts.gov), or OceanGrafix at 1-877-56CHART, <http://OceanGrafix.com>, or [help@OceanGrafix.com](mailto:help@OceanGrafix.com).



THE NATION'S CHARTMAKER SINCE 1807

## NAUTICAL CHART 18662 SACRAMENTO RIVER ANDRUS ISLAND TO SACRAMENTO CALIFORNIA

Mercator Projection  
Scale 1:40,000 at Lat 38° 25'

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](http://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 Survey, U.S. Coast Guard, and National Geospatial-Intelligence Agency.

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

TIDAL INFORMATION

NAME	PLACE (LAT/LONG)	Height referred to datum of soundings (MLLW)		
		Mean Higher High Water	Mean High Water	Mean Low Water
Snodgrass Slough	(38°16.5'N/121°29.2'W)	feet 2.5	feet 2.1	feet 0.3
Sacramento	(38°35'N/121°30'W)	2.9	2.6	0.3
Clarksburg	(38°25'N/121°31'W)	2.9	2.6	0.3

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>. (Apr 2009)

HORIZONTAL DATUM

The horizontal reference datum of this chart is the North American Datum of 1983 (NAD 83), which for purposes is considered equivalent to the World Geodetic System of 1984 (WGS 84). Geographic positions are given to the North American Datum of 1927 must be corrected by an average of 0.318" southward and 3.838" westward with this chart.

RULES OF THE ROAD (ABRIDGED)

Motorless craft have the right-of-way in all cases. Sailing vessels and motorboats less than sixty feet in length shall not hamper, in a narrow channel, the passage of a vessel which can navigate only in that channel. Motorboats approaching head to head or near head to head shall pass port to port. When motorboats approach each other at right angles, the boat on the right has the right-of-way. Motorboats must keep to the right in narrow channels and shall be kept clear of. Mariners are urged to become familiar with the Rules of the Road in U.S. Coast Guard "Navigation Rules."

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	iso 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	VO 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	Obstrn obstruction	PD position doubtful	Subm submerged
ED existence doubtful	PA position approximate	Rep reported	

① 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.

SUPPLEMENTAL INFORMATION

Consult U.S. Coast Pilot for important supplemental information.

CAUTION

For bascule Joins page 8 NCES open to a full upright or

CAUTION

Limitations on the use of radio signals for marine navigation can be found in U.S. Coast Guard Light Lists and National Geospatial-Intelligence Agency Publications. 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)

4

Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

SCALE 1:40,000  
Nautical Miles

See Note on page 5.



40' 50'

35'

CONTINUED ON CHART 186

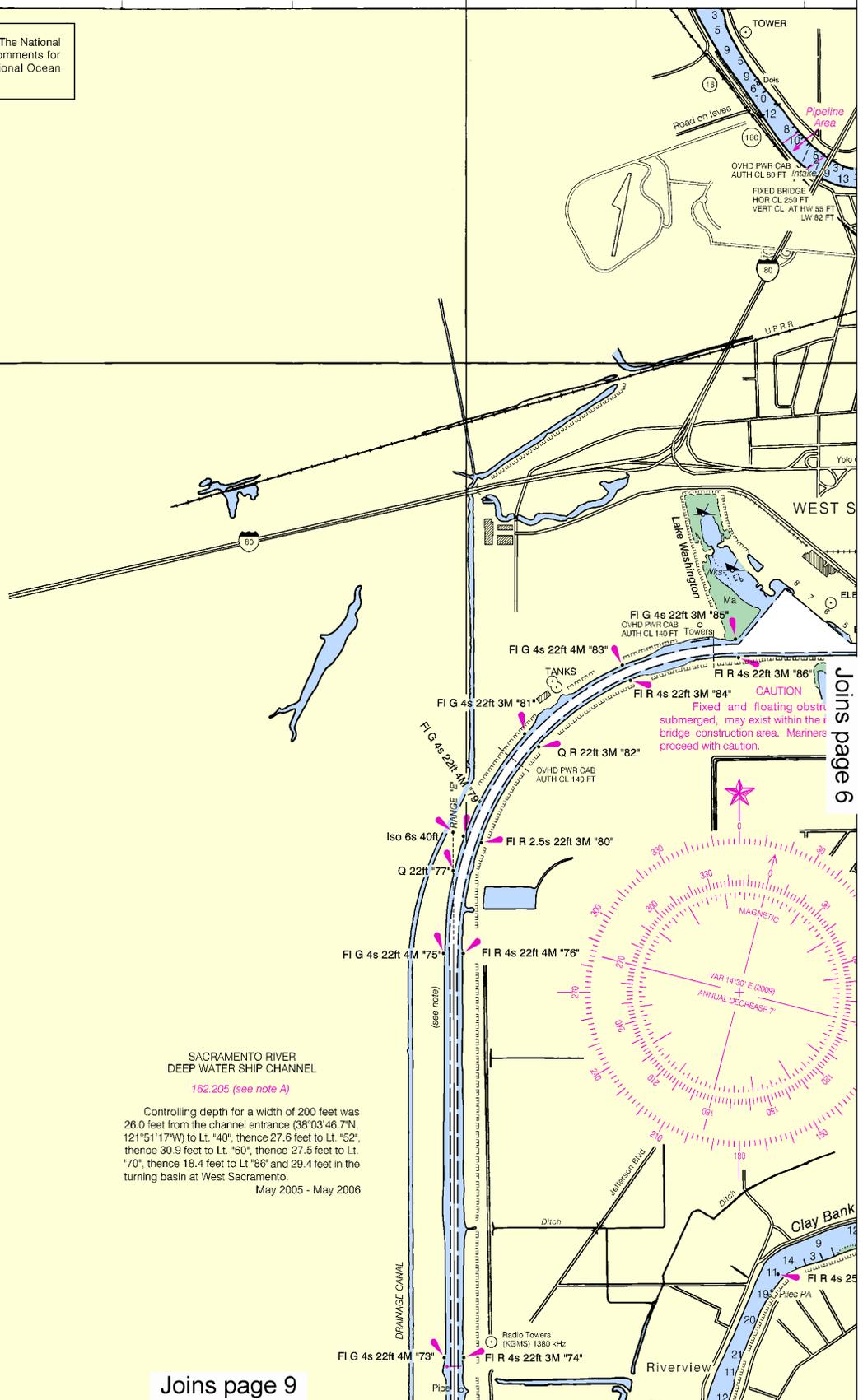
This nautical chart has been designed to promote safe navigation. The National Ocean Service encourages users to submit corrections, additions, or comments for improving this chart to the Chief, Marine Chart Division (N/CS2), National Ocean Service, NOAA, Silver Spring, Maryland 20910-3282.

chart is North  
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Joins page 9

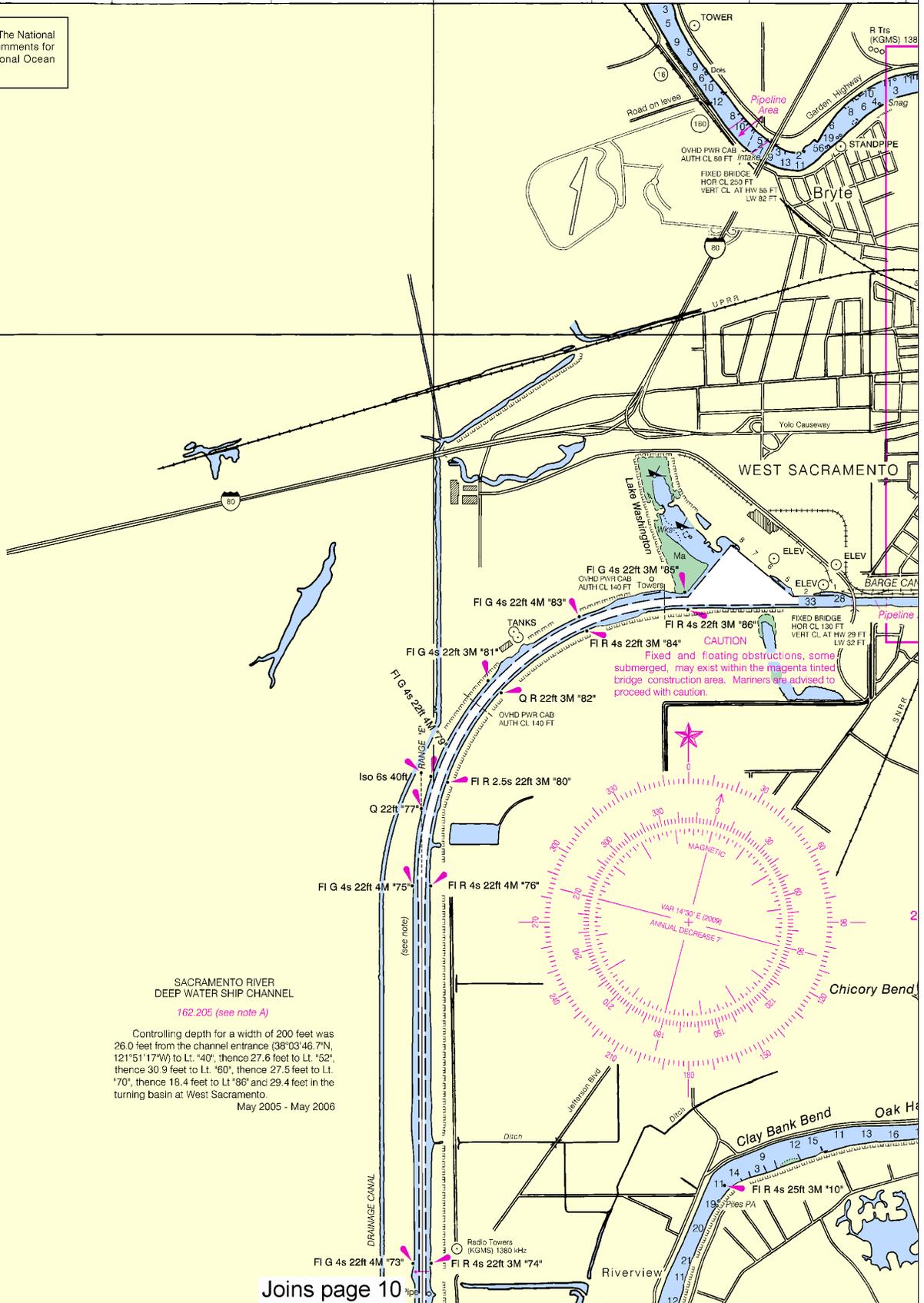
Joins page 6

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.



This chart has been designed to promote safe navigation. The National Oceanic and Atmospheric Administration encourages users to submit corrections, additions, or comments for this chart to the Chief, Marine Chart Division (N/C52), National Ocean Service, Silver Spring, Maryland 20910-3282.

Joins page 5



SACRAMENTO RIVER  
DEEP WATER SHIP CHANNEL  
162.205 (see note A)

Controlling depth for a width of 200 feet was 26.0 feet from the channel entrance (38°03'46.7"N, 121°51'17"W) to Lt. '40', thence 27.6 feet to Lt. '52', thence 30.9 feet to Lt. '60', thence 27.5 feet to Lt. '70', thence 18.4 feet to Lt. '86' and 29.4 feet in the turning basin at West Sacramento.  
May 2005 - May 2006

Joins page 10

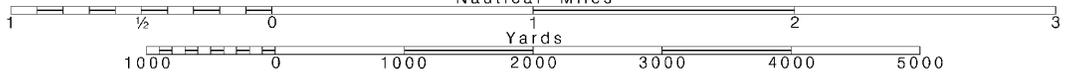


Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

SCALE 1:40,000  
Nautical Miles

See Note on page 5.





Bottom characteristics:

Blds boulders	C	<b>Joins page 4</b>	Oys oysters	so soft
bk broken	G gravel		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	

(1) 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.

safe and practicable. Mariners are urged to become familiar with the Rules of the Road in U.S. Coast Guard "Navigation Rules."

31'  
45'  
30'  
15'  
38°  
30'  
50'  
25'

**SUPPLEMENTAL INFORMATION**  
Consult U.S. Coast Pilot for important supplemental information.

**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.

**FACILITIES**  
Locations of public marine facilities are shown by large magenta numbers with leaders and refer to the facility tabulation.

**NOTE A**  
Navigation regulations are published in Chapter 2, U.S. Coast Pilot 7. Additions or revisions to Chapter 2 are published 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 Sacramento, California.  
Refer to charted regulation section numbers.

**POLLUTION REPORTS**  
Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

**NOTE B**  
**CAUTION**  
Mariners are warned that numerous uncharted piles, snags, pumps, pipes, and wrecks, some submerged, may exist along the edges of the waterway.  
Numerous buoys and signs mark the wing dams along the Sacramento River. Mariners should never attempt to pass between the warning buoys and the shores.  
The depths shown in backwaters, sloughs and cuts are from surveys of 1934. Channels are not maintained by the Corps of Engineers and numerous uncharted shoals and obstructions have been reported.

**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.

**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.

**CAUTION**  
**POTABLE WATER INTAKE**  
Vessels operating in fresh water lakes or rivers shall not discharge sewage, or ballast, or bilge water within such areas adjacent to domestic water intakes as are designated by the Commissioner of Food and Drugs (21 CFR 1250.93). Consult U.S. Coast Pilot 7 for important supplemental information.

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

**CAUTION**  
Improved channels shown by broken lines are shown on **Joins page 12** of the edges.

**CAUTION**  
Limitations on the use of radio signals to marine navigation can be found in U.S. Coast Guard Light Lists and Notices to Mariners. 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)

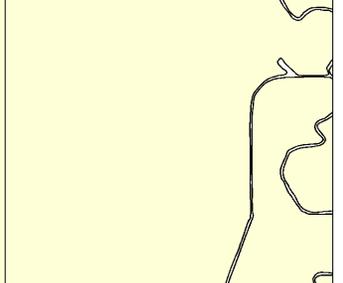
**WARNING**  
The prudent mariner will not rely solely on any single aid to navigation, particularly floating aids. See U.S. Coast Pilot 7 and U.S. Coast Pilot for details.

**SAFETY HINT**  
1. Keep your chart up to date by applying to Mariners corrections when you receive them.  
2. Read carefully all notes printed on your chart.  
3. Learn the meaning of each symbol and its use on your chart from Chart No. 1.  
4. The compass on your chart shows the variation from true north, however you must also correct your compass for the deviation of your boat.  
5. Constantly use your chart from the beginning to the end of each trip. Keep in mind the orientation of the boat with respect to the chart.  
6. Maintain your position on the chart by relating features with those you can identify in your surroundings.

**CAUTION**  
Small craft should stay clear of large commercial and government vessels even if they have the right-of-way.  
All craft should avoid areas where the diver's flag, a red square with a diagonal white stripe, is displayed.

**SOURCE DIAGRAM**  
The outlined areas represent the limits of the most recent survey information that has been evaluated for charting, banded in this diagram by date and type of survey. Corrections by the U.S. Army Corps of Engineers are periodically shown on this diagram. Refer to Chapter 1, United States Coast Pilot 7.

SOURCE			
B1	1990-1992	NCS Surveys	partial b
B4	1900-1939	NCS Surveys	partial b



Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

SCALE 1:40,000  
Nautical Miles

See Note on page 5.



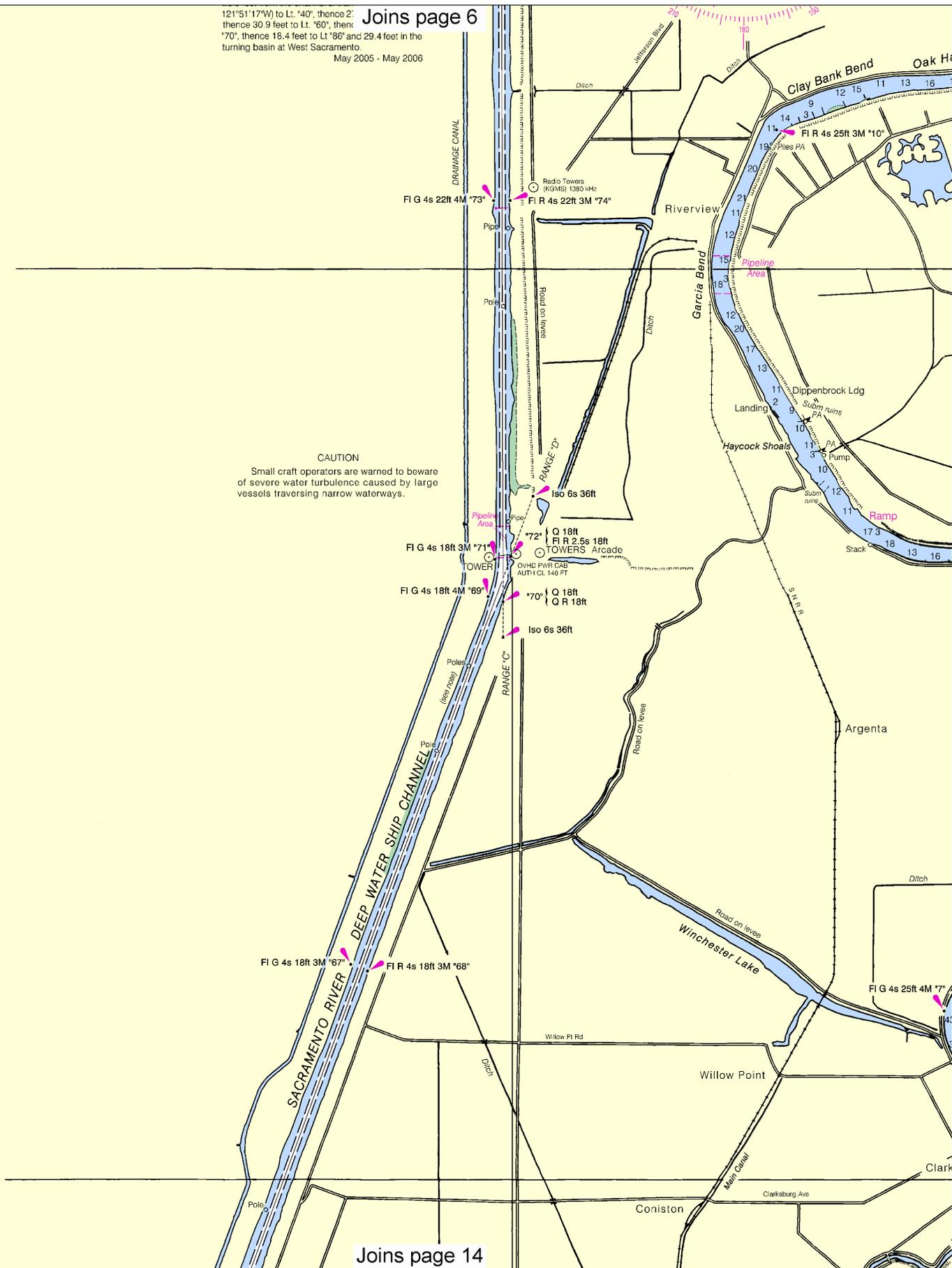


121°51'17"W) to Lt. "40", thence 2' thence 30.9 feet to Lt. "60", then "70", thence 18.4 feet to Lt "86" and 29.4 feet in the turning basin at West Sacramento.  
 May 2005 - May 2006

Joins page 6

Joins page 9

CAUTION  
 Small craft operators are warned to beware of severe water turbulence caused by large vessels traversing narrow waterways.



Joins page 14

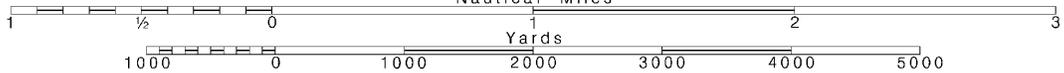
10

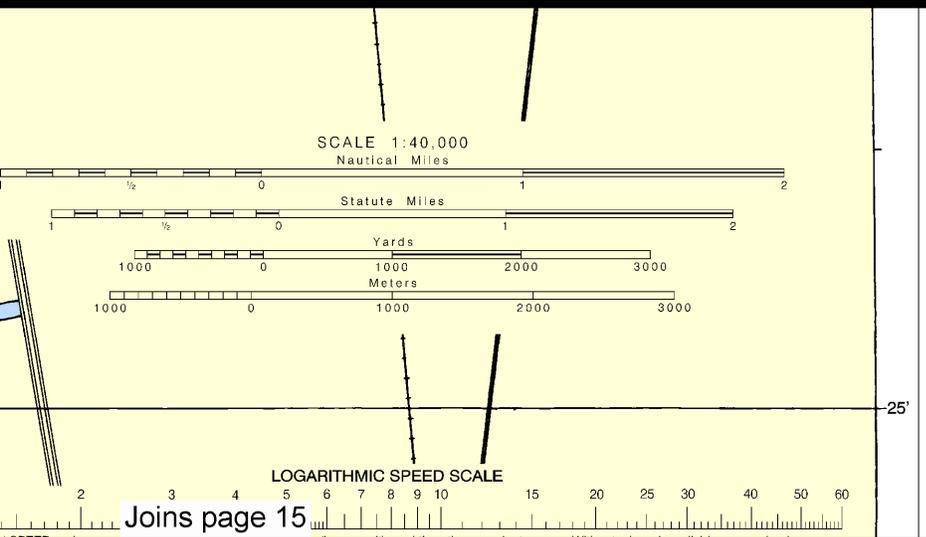
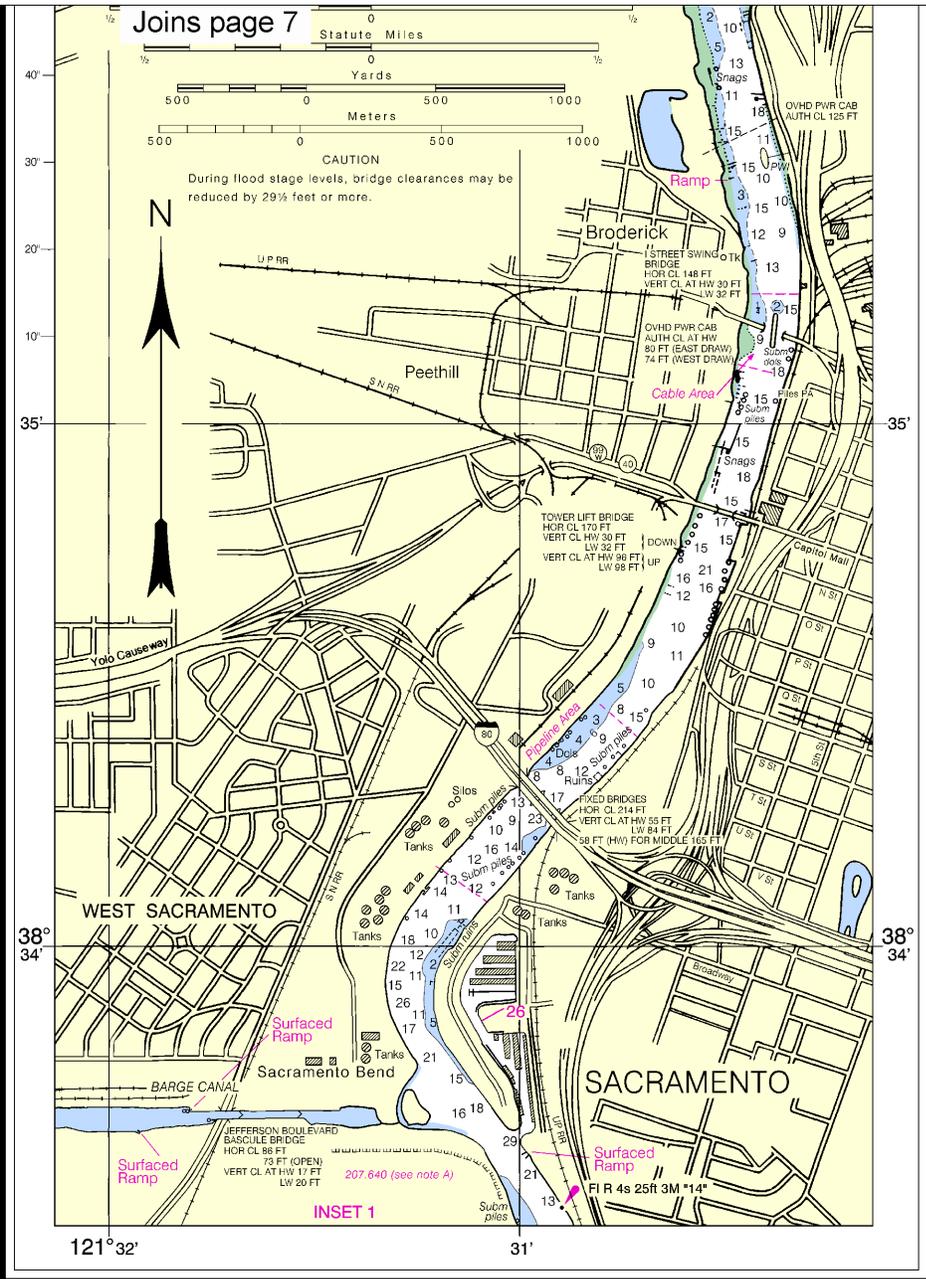
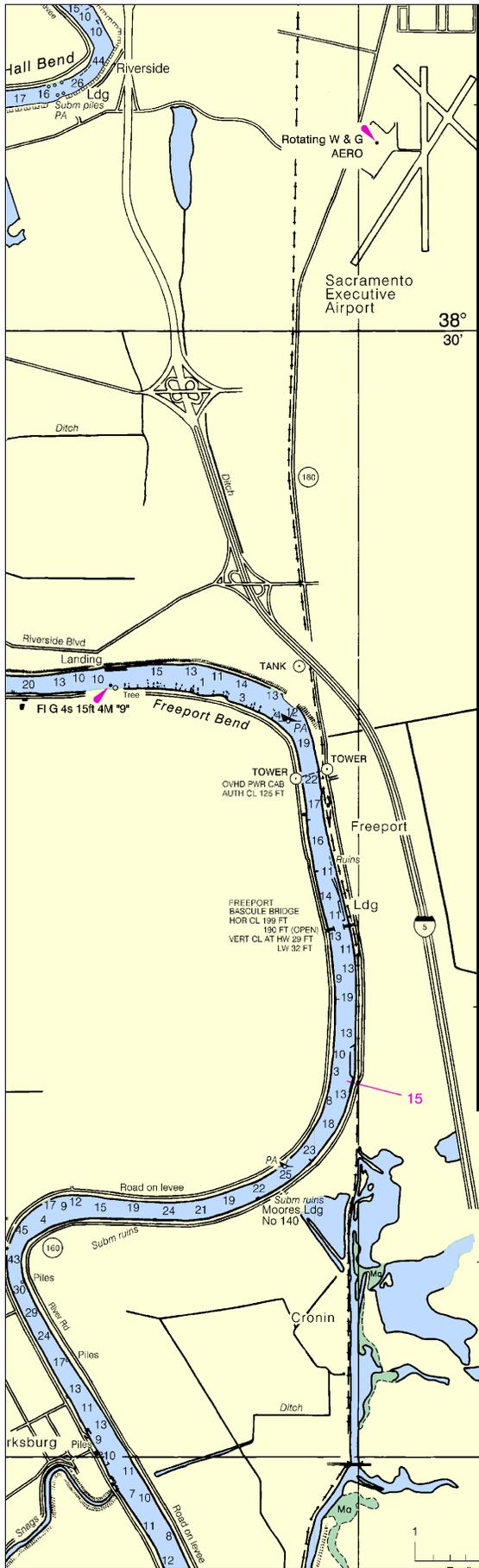
Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

SCALE 1:40,000  
 Nautical Miles

See Note on page 5.





# Joins page 8

B1	1990-1992	NOS Surveys	partial b
B4	1900-1939	NOS Surveys	partial b

## POTABLE WATER INTAKE

Vessels operating in fresh water lakes or rivers shall not discharge sewage, or ballast, or bilge water within such areas adjacent to domestic water intakes as are designated by the Commissioner of Food and Drugs (21 CFR 1250.93). Consult U.S. Coast Pilot 7 for important supplemental information.

## CAUTION

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

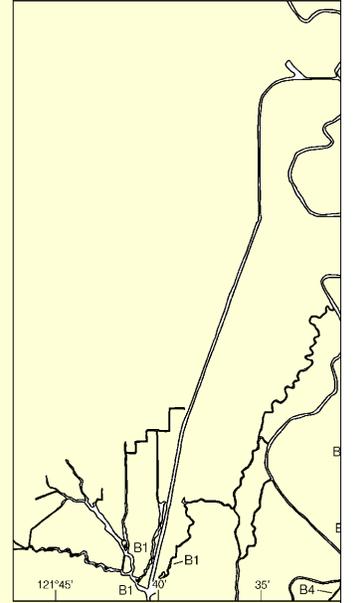
## CAUTION

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

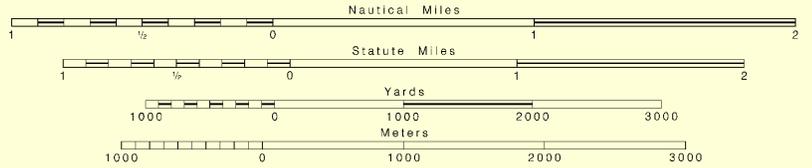
## NOAA WEATHER RADIO BROADCASTS

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.

Sacramento, CA KEC-57 162.550 MHz WX1



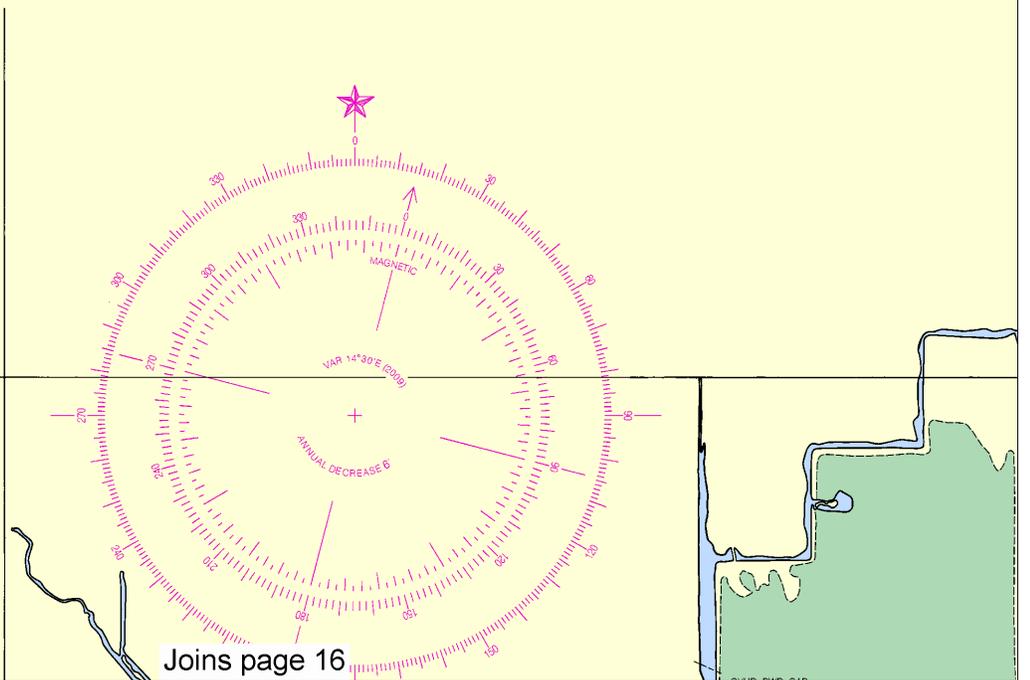
SCALE 1:40,000



LOGARITHMIC SPEED SCALE



To find SPEED, place one point of dividers on distance run (in any unit) and the other on minutes run. Without changing divider spread, place right point on 60 and left point will then indicate speed in units per hour. Example: with 4.0 nautical miles run in 15 minutes, the spread is 16.0 knots



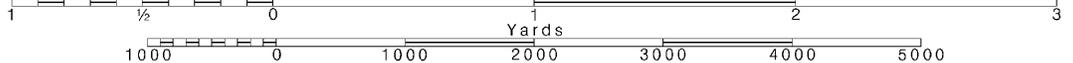
# 12

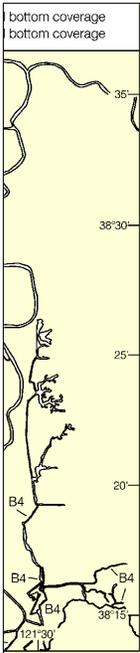
Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

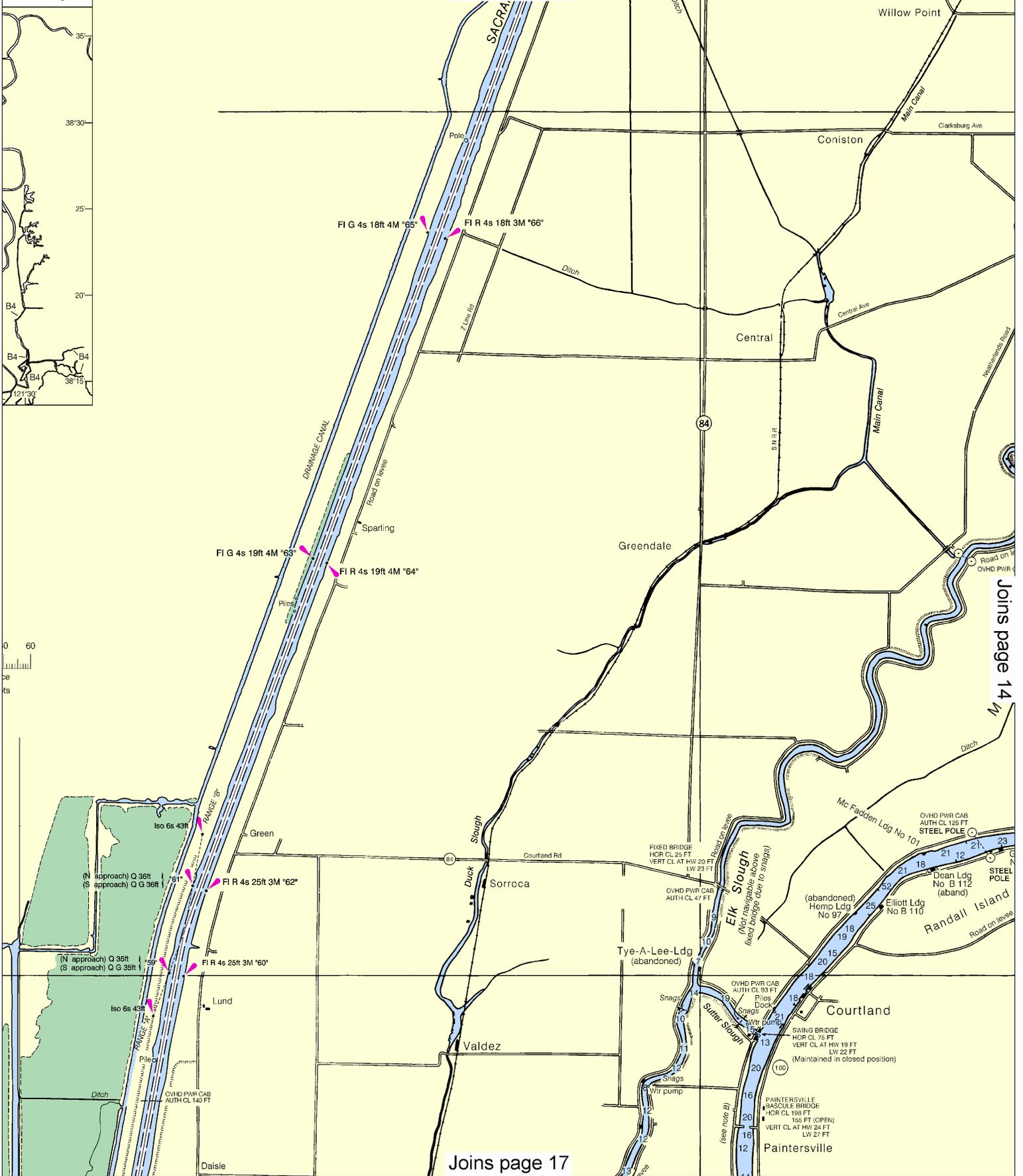
SCALE 1:40,000  
Nautical Miles

See Note on page 5.



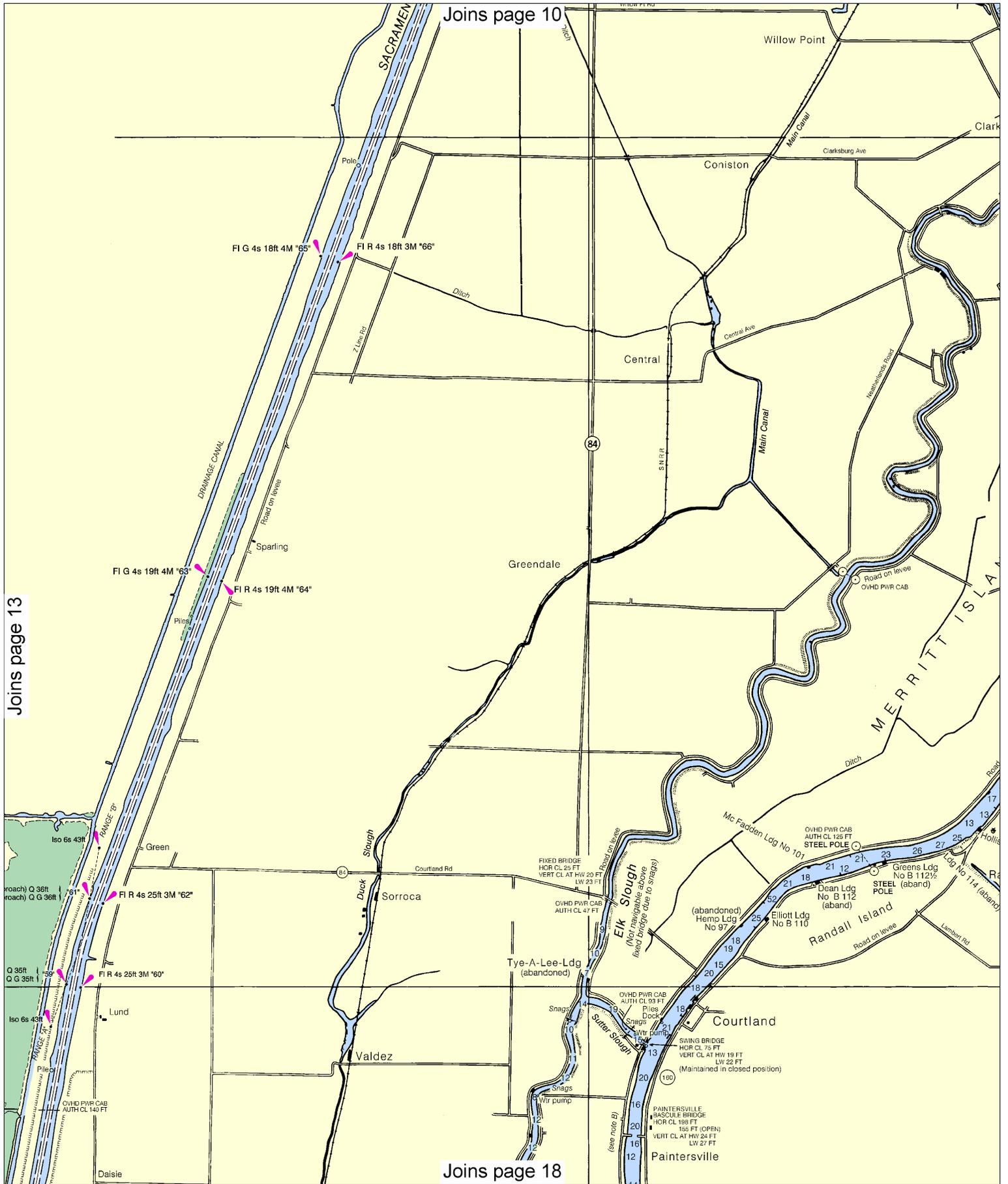


Joins page 9



Joins page 14

Joins page 17



Joins page 13

Joins page 10

Joins page 18

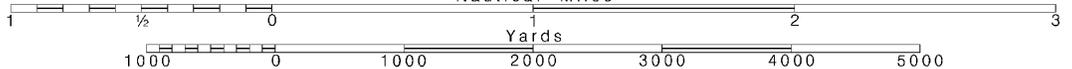
14

Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

SCALE 1:40,000  
Nautical Miles

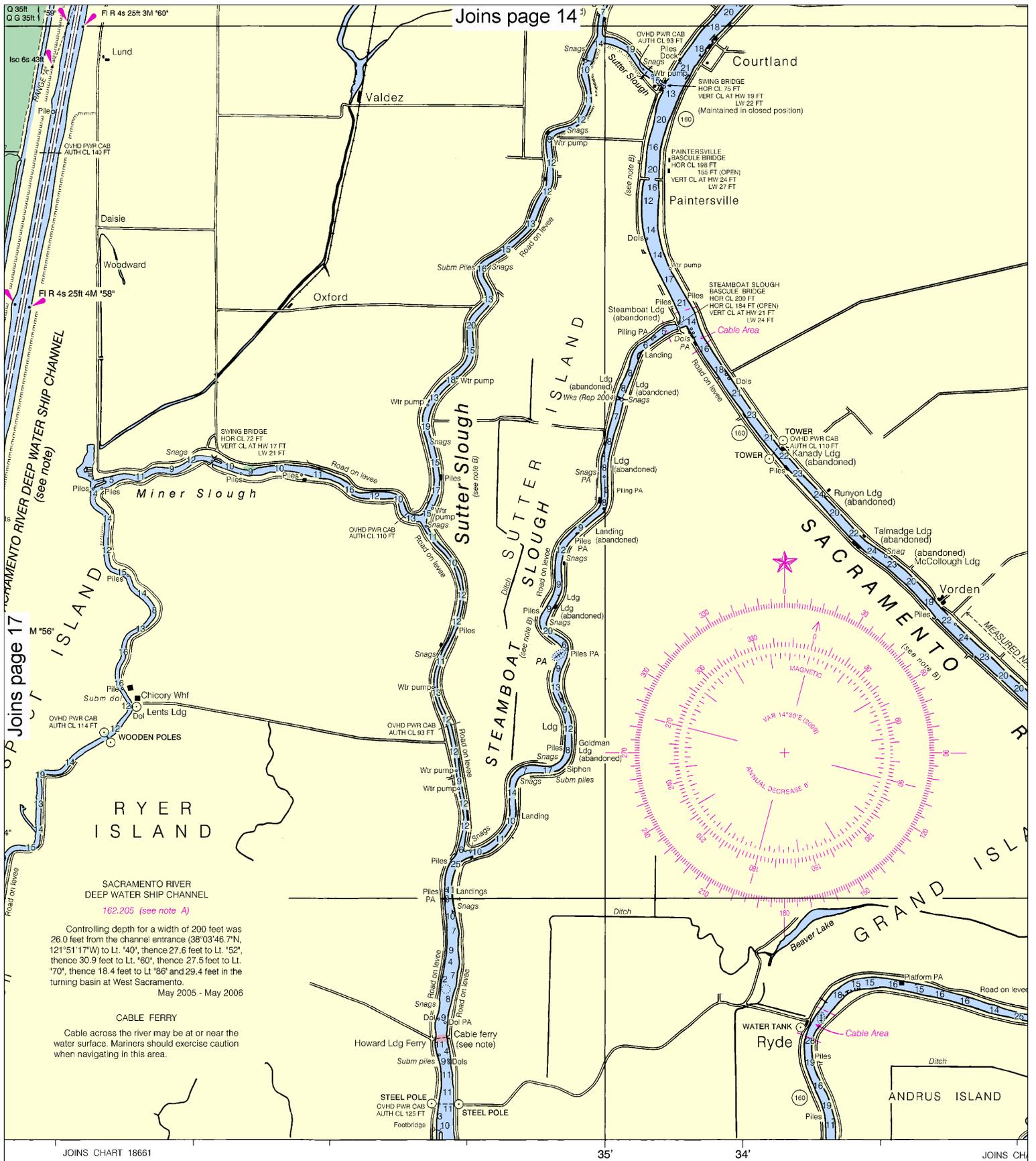
See Note on page 5.











# DEPTH SOUNDINGS IN FEET

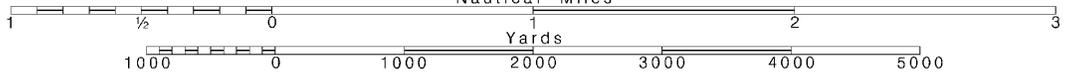
# 18

Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

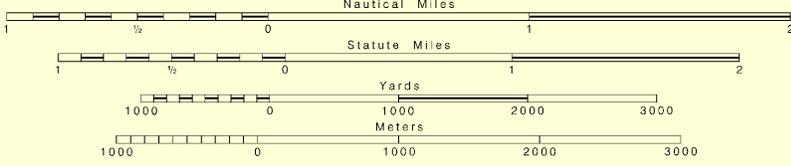
SCALE 1:40,000  
Nautical Miles

See Note on page 5.



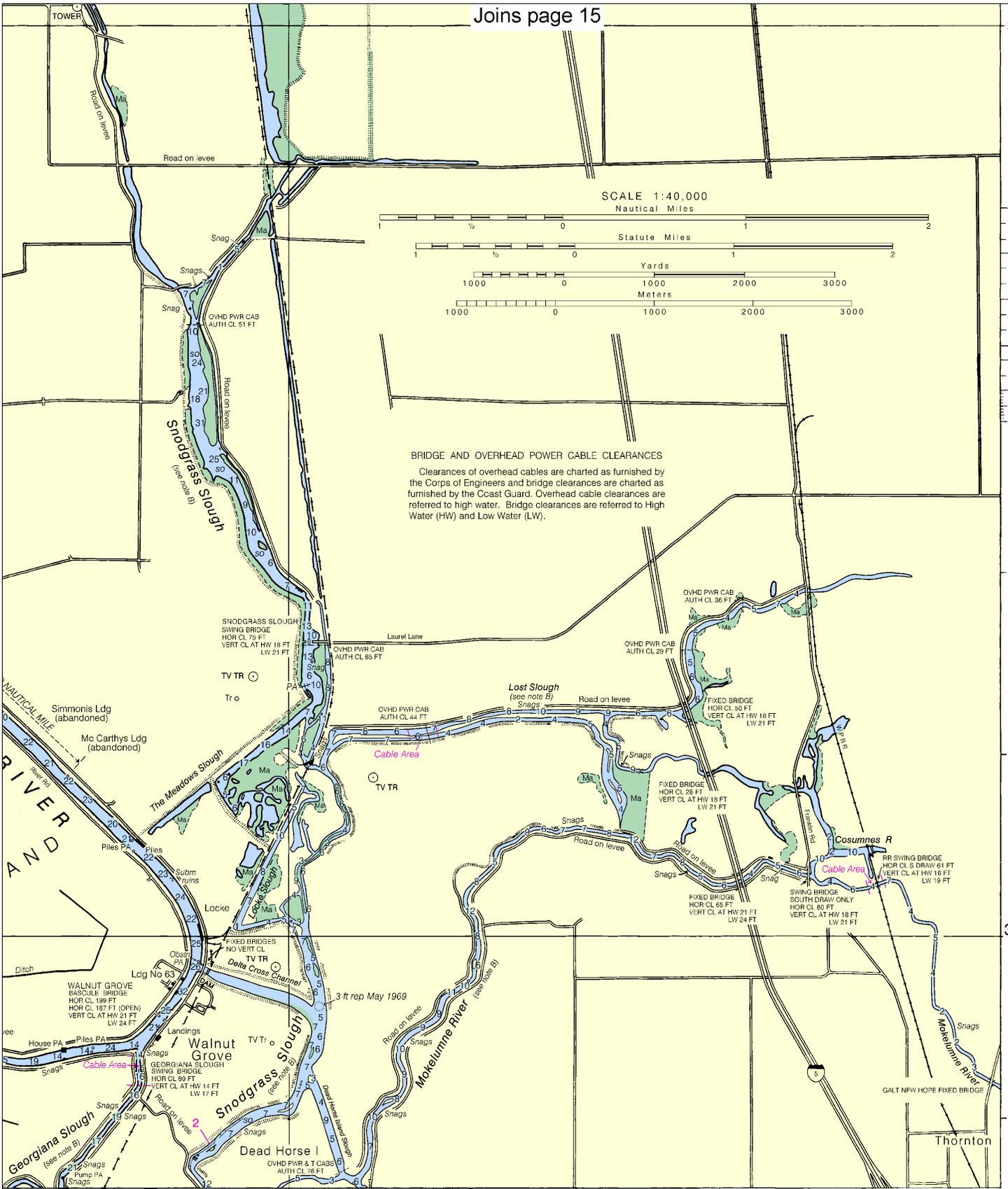
20'  
19'  
18'  
15'  
10'

SCALE 1:40,000



BRIDGE AND OVERHEAD POWER CABLE CLEARANCES

Clearances of overhead cables are charted as furnished by the Corps of Engineers and bridge clearances are charted as furnished by the Coast Guard. Overhead cable clearances are referred to high water. Bridge clearances are referred to High Water (HW) and Low Water (LW).



38'  
15'

HART 18661 121° 30' 45' 30' 15' 29' 50'

SIDE B

SOUNDINGS IN FEET

18662



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



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NOAA's Office of Coast Survey



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