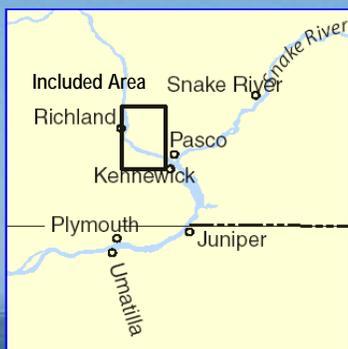


BookletChart™

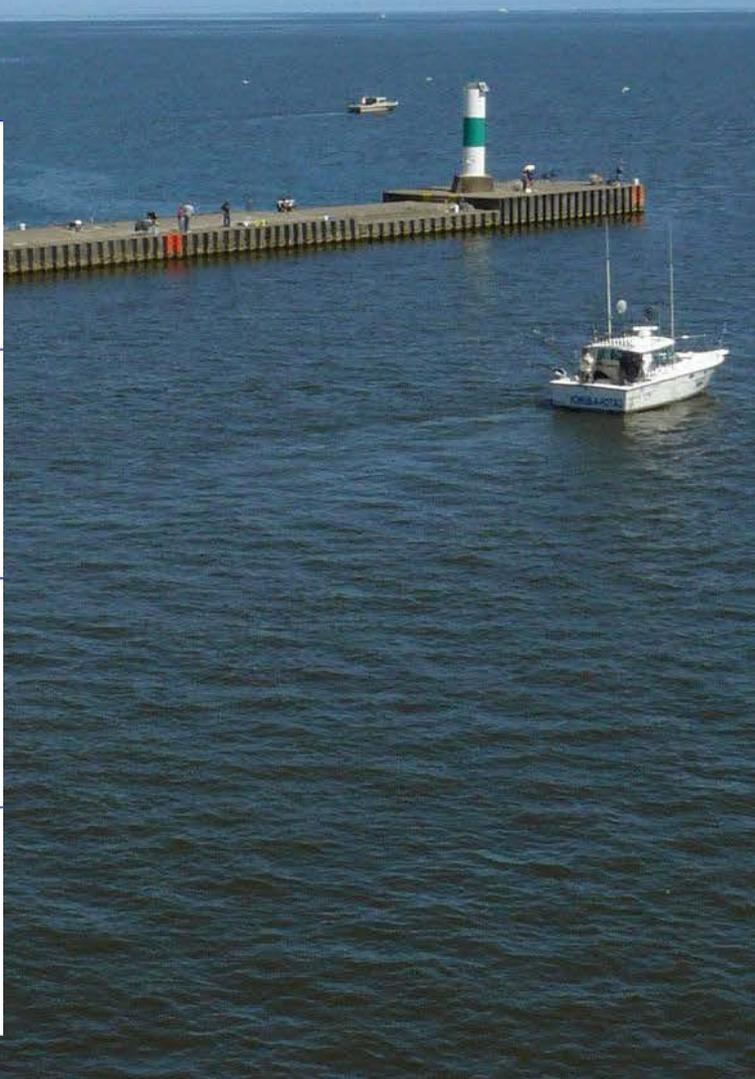
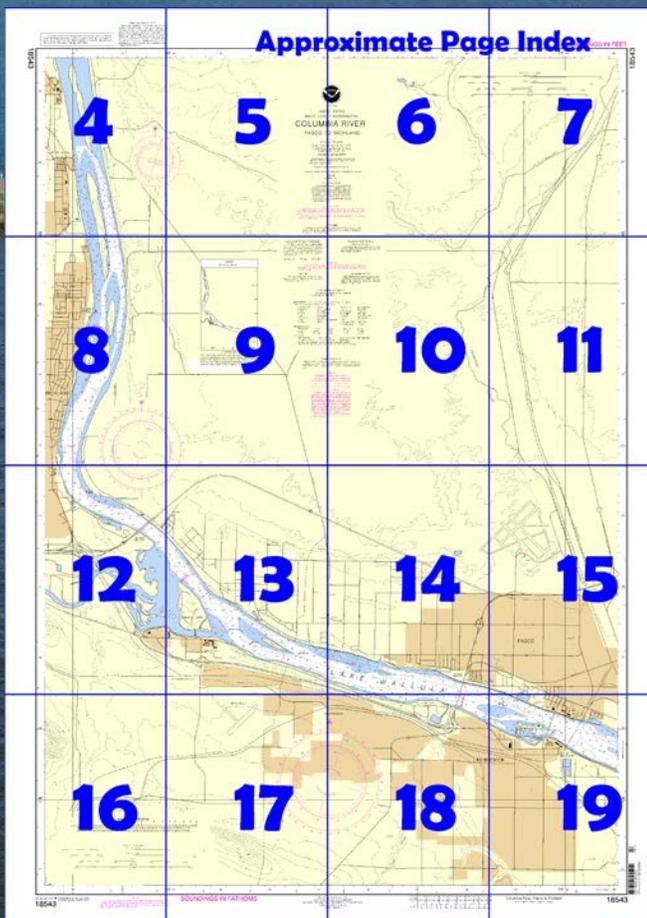
Columbia River – Pasco to Richland NOAA Chart 18543



*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
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.

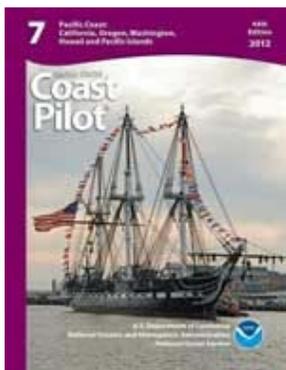
Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at <http://www.NauticalCharts.NOAA.gov>.

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=18543>.



**(Selected Excerpts from Coast Pilot)
McNary Lock and Dam**, 254.5 (292.9) miles above the mouth of the Columbia River and just above Umatilla, has a single lift lock with a vertical lift of about 75 feet. A **restricted area** is above the dam. (See **207.718**, chapter 2, for information concerning use, administration, and navigation of McNary Lock and Dam.) Depths and overhead clearances are at **normal pool level**.

Lake Wallula provides slack-water navigation from McNary Dam to the junction with the **Yakima River**, a distance of about 37(43) miles. Depths in the lake are generally deep,

however, there are several isolated shallow spots and rocky areas along the length of the lake. The channel through the lake is marked by aids to navigation from the Walla Walla River to Richland, 40 (46) miles above McNary Dam.

The **Port of Umatilla**, on the Oregon side, about 0.4 mile above the McNary Lock and Dam, owns a 230-foot port wharf with 800 feet of berthing space; reported depths of 20 feet are available alongside; a private company operates the wharf.

Hat Rock State Park, on the S side about 5.5 (6.3) miles above McNary Dam, has a public launching ramp and offers excellent protection for small craft. Gasoline is available here.

Port Kelley, on the E side of Columbia River, 16 (19.5) miles above McNary Dam, has a large grain elevator and facilities for handling bulk grain by rail, truck, or water. The elevator loading rate is 30,000 bushels per hour. Unlighted ranges lead clear of the rock and shoal area in the middle ground 0.4 mile W of the facility.

A small boat moorage is in the bight just NE of Port Kelley. Berths, electricity, gasoline, and water are available.

Walla Walla River enters Columbia River on the E side 18.4 (21.2) miles above McNary Dam. There is a public launching ramp on the S side of the river just E of the highway bridges at the entrance.

A grain wharf, at **Wallula Junction** just S of the Walla Walla River, has a grain elevator and barge loading spout with a loading rate of 20,000 bushels per hour; a reported depth of 20 feet is alongside the wharf. The wharf is owned and operated by Walla Walla Grain Growers, Inc. A barge wharf, at the **Port of Walla Walla** just S of **Attalia**, is owned and operated by Boise Cascade Corporation. The wharf ships wood pulp and receives caustic soda. A reported depth of 12 feet is alongside.

About 1.9 miles S of the Snake River mouth, on the W side of Lake Wallula, is the Unocal Corporation chemical plant; anhydrous ammonia and urea are received here by barge. The dock has 480 feet of berthing space and has a reported depth of 30 feet alongside. Two white ammonia storage tanks at this plant are prominent.

The Union Pacific Railroad bridge crossing Columbia River, 27 (31) miles above McNary Dam, has a vertical lift span with a clearance of 11 feet down and 72 feet up. The bridgetender monitors VHF-FM channel 16 and works on channel 13; call sign KTD-561. (See **117.1 through 117.59 and 117.1035**, chapter 2, for drawbridge regulations.)

Kennewick, on the S side of Columbia River opposite Pasco, has a grain elevator dock with 500 feet of berthing space and a reported depth of 14 feet alongside. At **Clover Island**, there is a large small-craft harbor. About 80 berths with electricity, gasoline, diesel fuel, water, and marine supplies are available. Hull, engine, and electronic repairs can be made. A 12-ton crane is at a marina occupying the center section of the island. A private yacht club is on the S side of the island.

Columbia Park Recreation Area, just above the upper fixed highway bridge at Pasco, has a small-craft marina at which berths, electricity, gasoline, water, a launching ramp, and marine supplies are available. Engine repairs can be made. Diesel fuel is available in the town of **Richland**, just above the recreation area.

Priest Rapids Dam, 68 (78.3) miles above McNary Dam and 353 (407) miles above the mouth of Columbia River, completed and dedicated in 1962, is the head of navigation, although in its construction provision was made for later building of a navigational lock if needed. However, Richland is the present practical head of navigation.

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

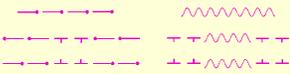
RCC Seattle Commander
13th CG District (206) 220-7001
Seattle, WA

Table of Selected Chart Notes

HEIGHTS
Heights in feet

For Symbols and Abbreviations see Chart No. 1

CAUTION
SUBMARINE PIPELINES AND CABLES
Charted submarine pipelines and submarine cables and submarine pipeline and cable areas



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.

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 0.513" southward and 4.048" westward to agree with this chart.

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

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.

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.

Pendleton, OR WXL-95 162.55 MHz

Mercator Projection
Scale 1:20,000 at Lat. 46°16'30"
North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FEET

Soundings and clearances of bridges and overhead cables are referred to normal pool level, which is 340 feet above mean sea level.

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).

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.

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.

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.

COLUMBIA RIVER
Mileage distances along the Columbia River are Statute Miles. Distances along the Columbia River are eastward from the mouth and are indicated thus: . Tables for converting Statute Miles to International Nautical Miles are given in the U.S. Coast Pilot 7.

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	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	

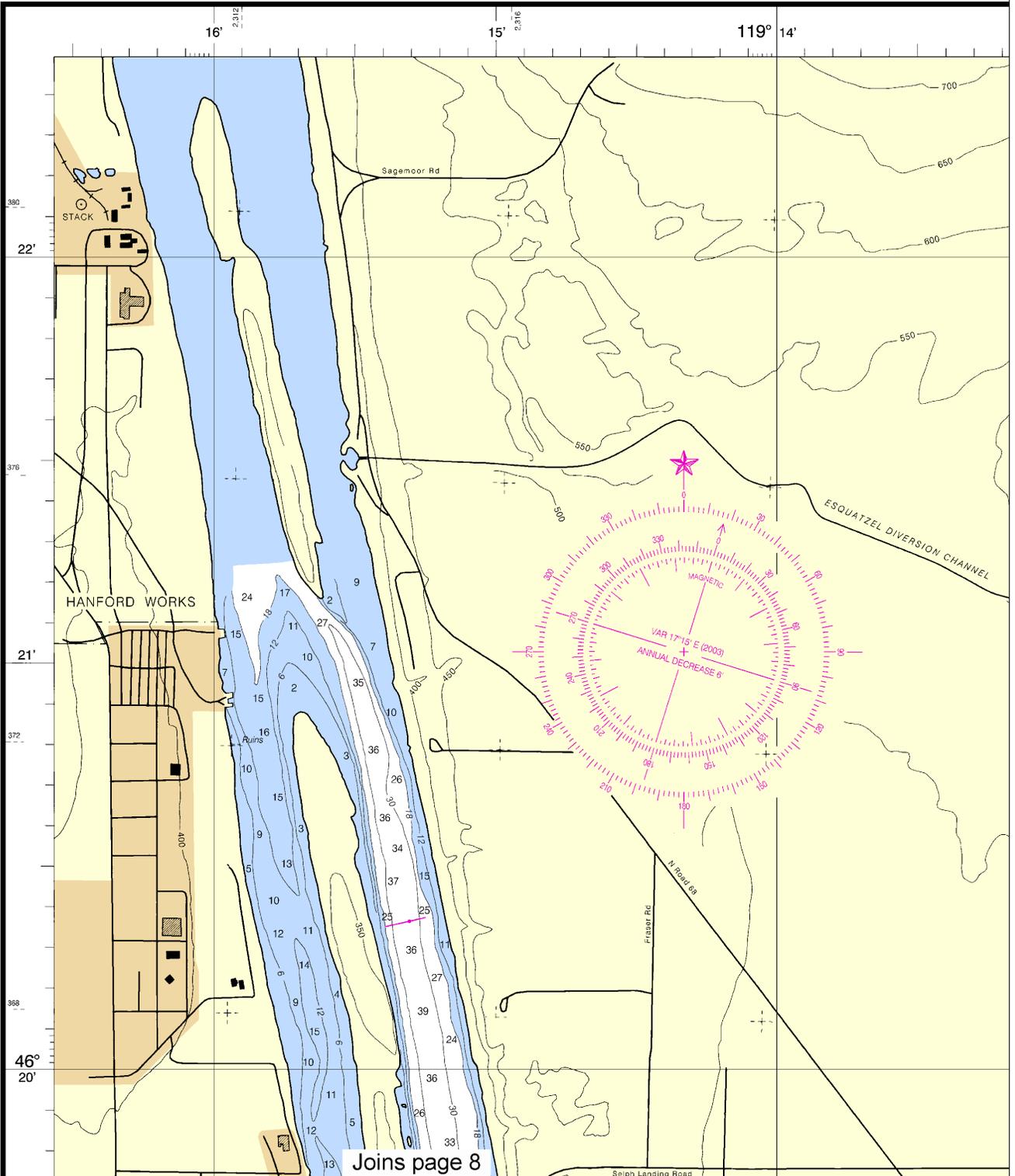
2L Wreck, rock, obstruction, or shoal swept clear to the depth indicated.
(2) Rocks that cover and uncover, with heights in feet above datum of soundings.

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, or OceanGrafix at 1-877-56CHART, <http://OceanGrafix.com>, or help@OceanGrafix.com.

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.

18543



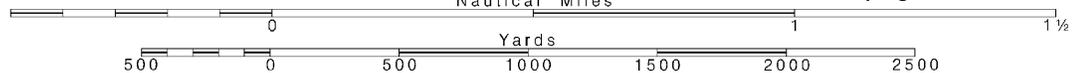
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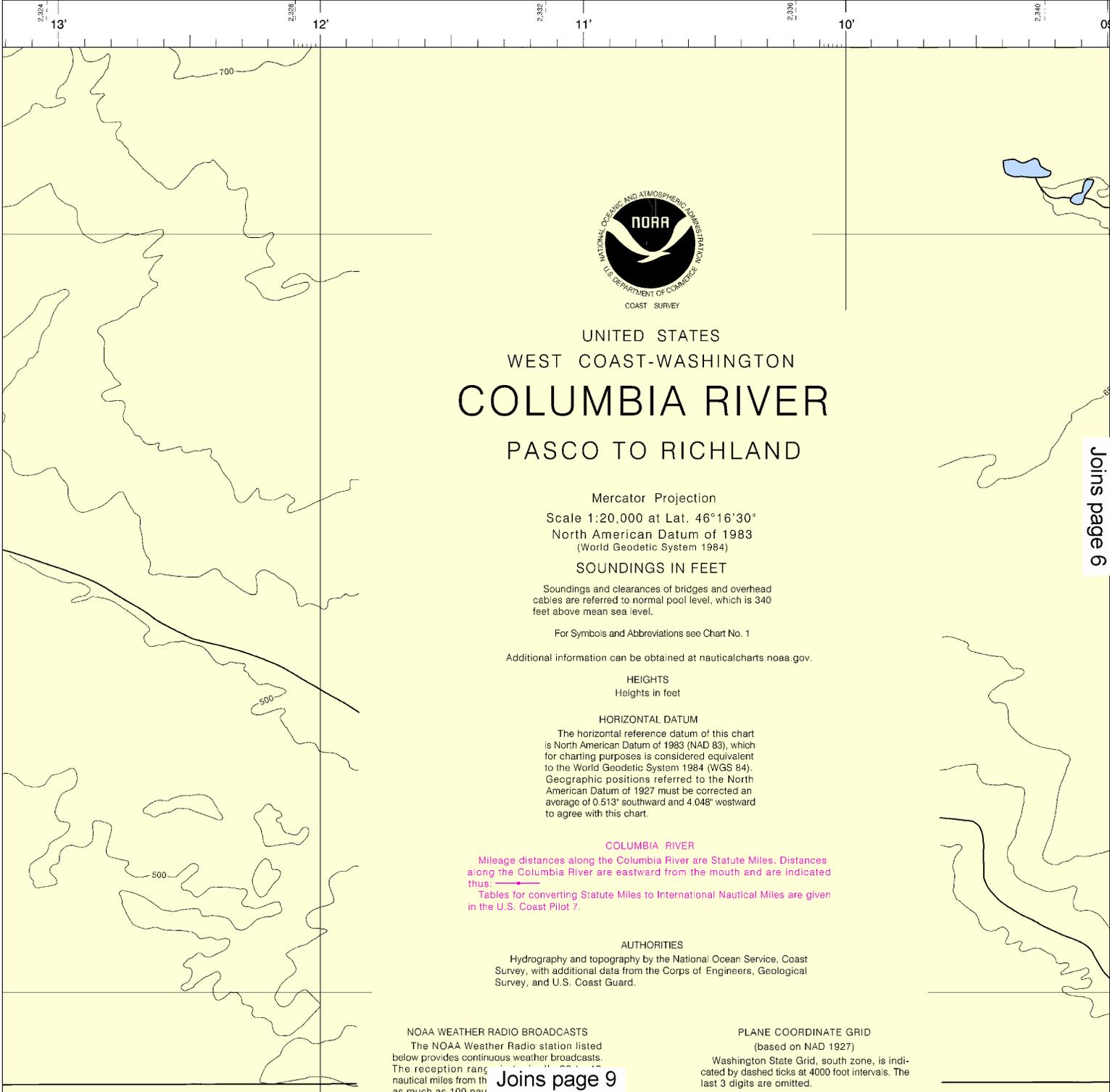
Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

SCALE 1:20,000
Nautical Miles

See Note on page 5.





UNITED STATES
 WEST COAST-WASHINGTON
COLUMBIA RIVER
 PASCO TO RICHLAND



Mercator Projection
 Scale 1:20,000 at Lat. 46°16'30"
 North American Datum of 1983
 (World Geodetic System 1984)

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For Symbols and Abbreviations see Chart No. 1
 Additional information can be obtained at nauticalcharts.noaa.gov.

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 The NOAA Weather Radio station listed below provides continuous weather broadcasts. The reception range is in nautical miles from the station, as much as 100 nautical miles.

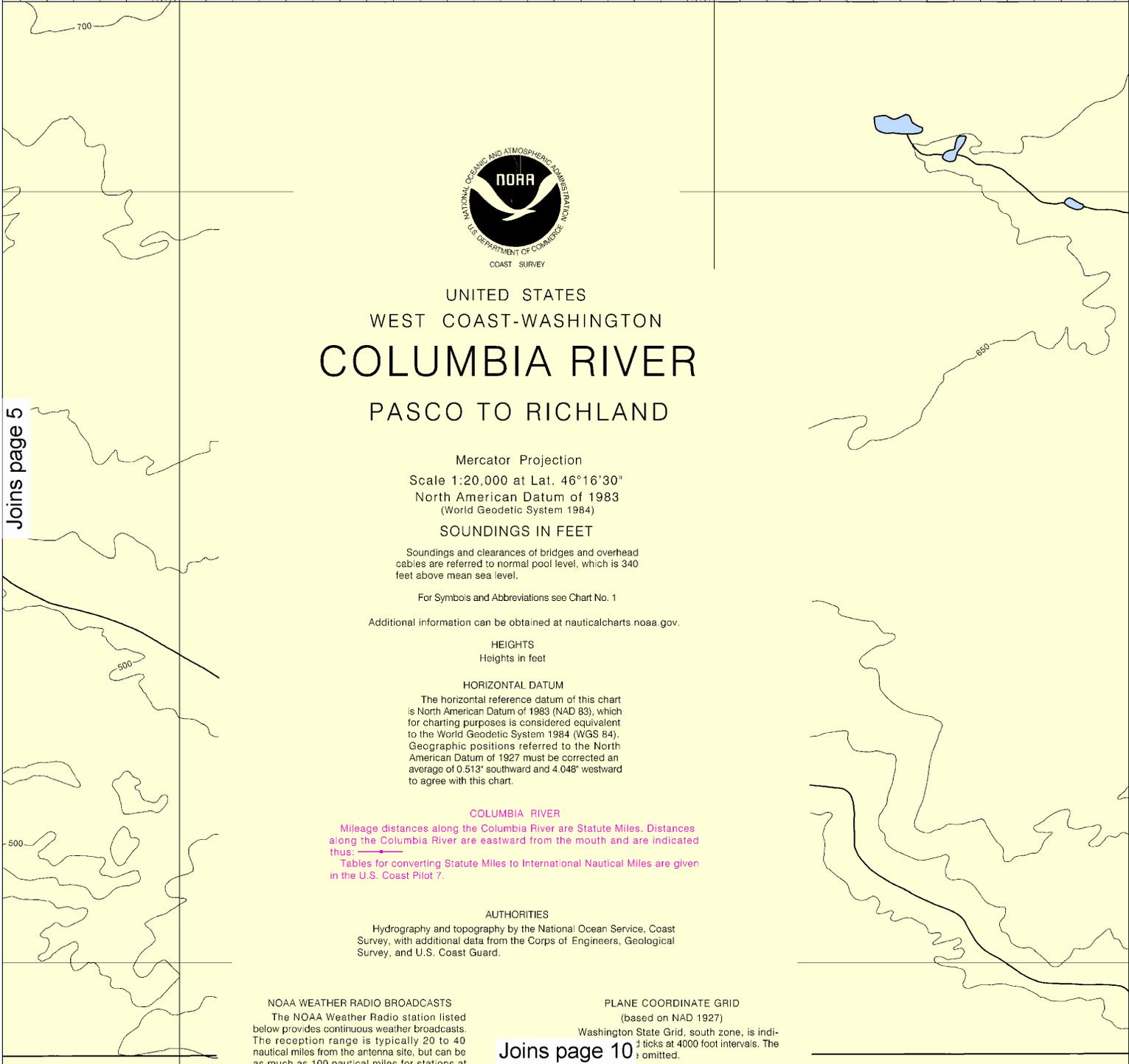
PLANE COORDINATE GRID
 (based on NAD 1927)
 Washington State Grid, south zone, is indicated by dashed ticks at 4000 foot intervals. The last 3 digits are omitted.

Joins page 9

Joins page 6

This BookletChart was reduced to 75% of the original chart scale. The new scale is 1:26667. Barscales have also been reduced and are accurate when used to measure distances in this BookletChart.

12' 11' 10' 09'



UNITED STATES WEST COAST-WASHINGTON COLUMBIA RIVER PASCO TO RICHLAND

Mercator Projection
Scale 1:20,000 at Lat. 46°16'30"
North American Datum of 1983
(World Geodetic System 1984)

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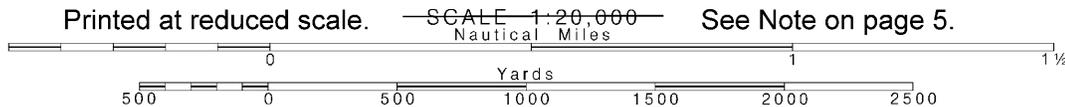
PLANE COORDINATE GRID
(based on NAD 1927)
Washington State Grid, south zone, is indicated by ticks at 4000 foot intervals. The omitted.

Joins page 5

Joins page 10

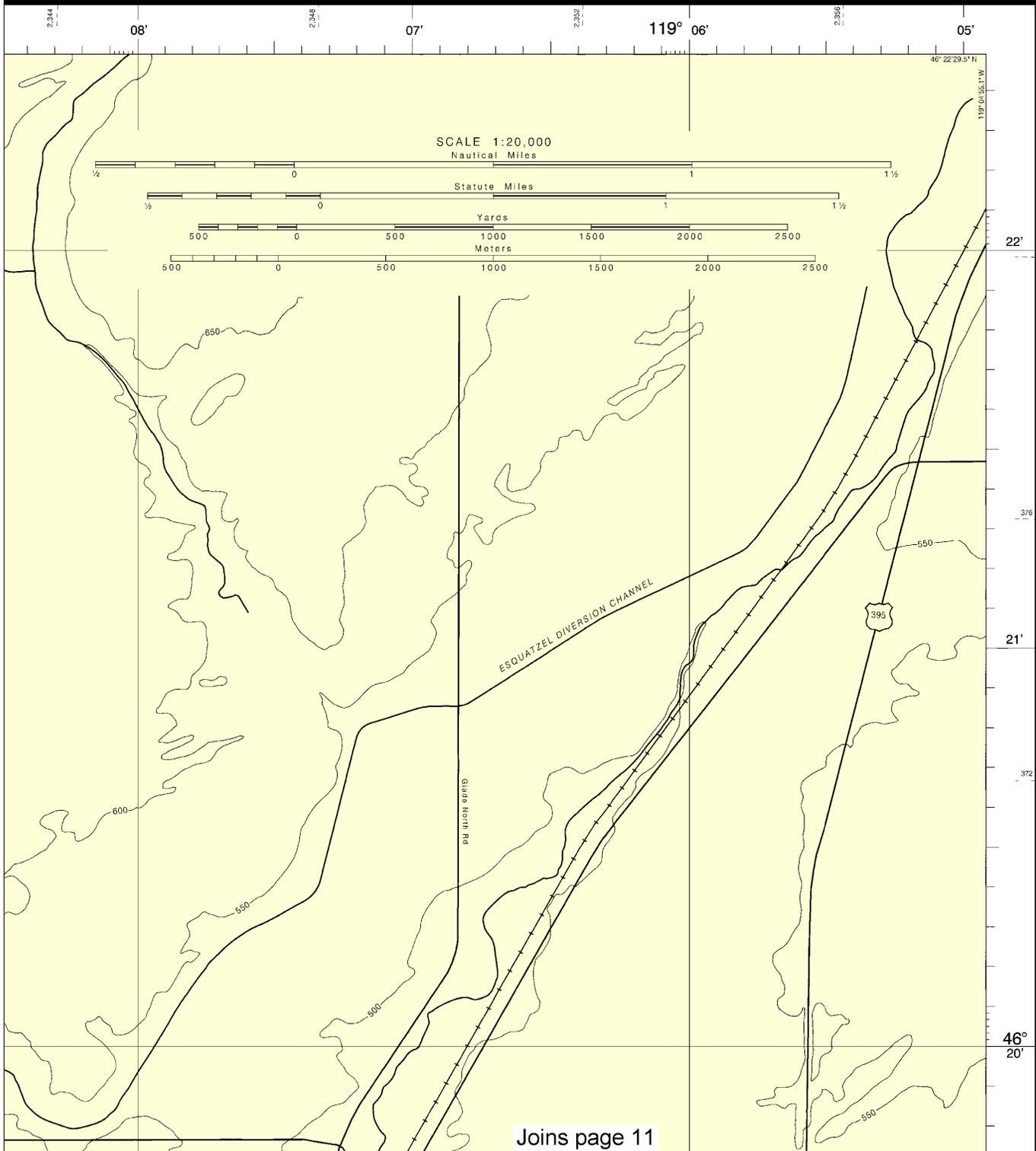


Note: Chart grid lines are aligned with true north.



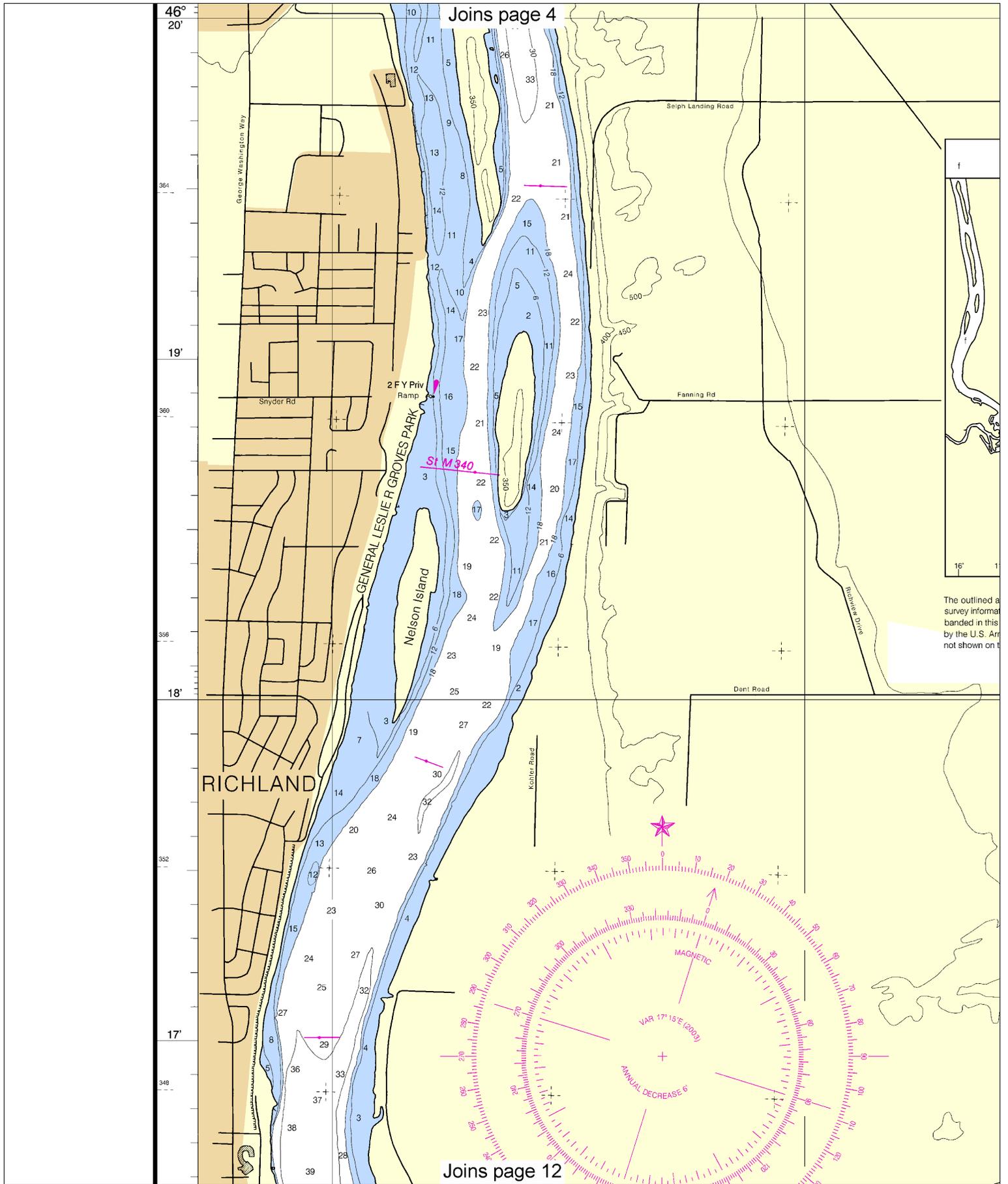
SOUNDINGS IN FEET

18543

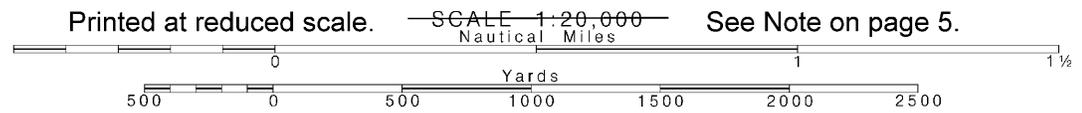


This BookletChart has been updated through: Coast Guard Local Notice To Mariners: 4812 11/27/2012,
NGA Weekly Notice to Mariners: 4812 12/1/2012,
Canadian Coast Guard Notice to Mariners: 0912 9/28/2012.





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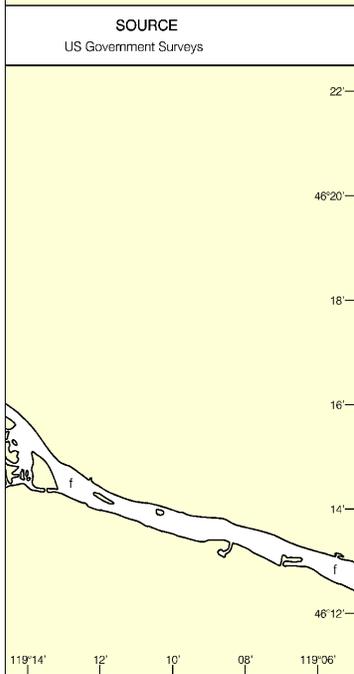
Bottom characteristics:

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	

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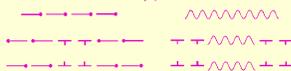
Taylor Falls Reach

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).

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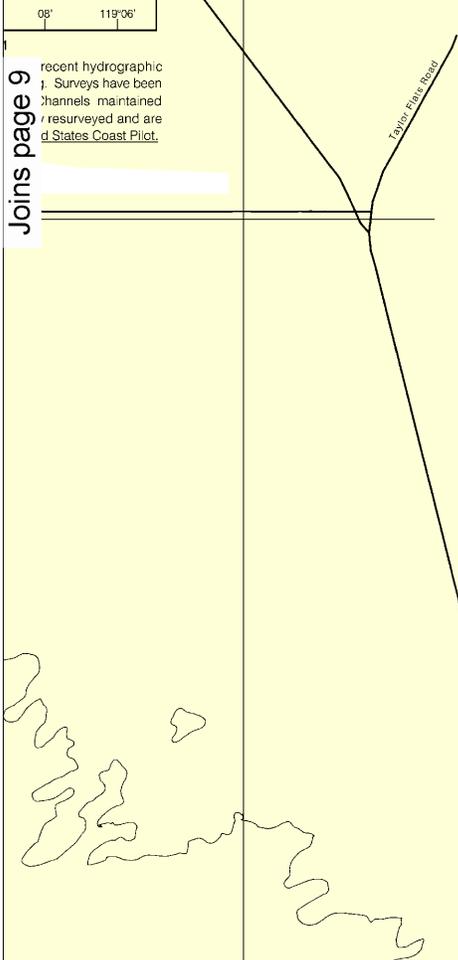
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Joins page 9

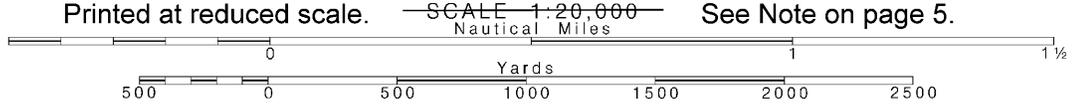
recent hydrographic surveys have been conducted. Channels maintained and resurveyed and are shown in States Coast Pilot.



Joins page 14

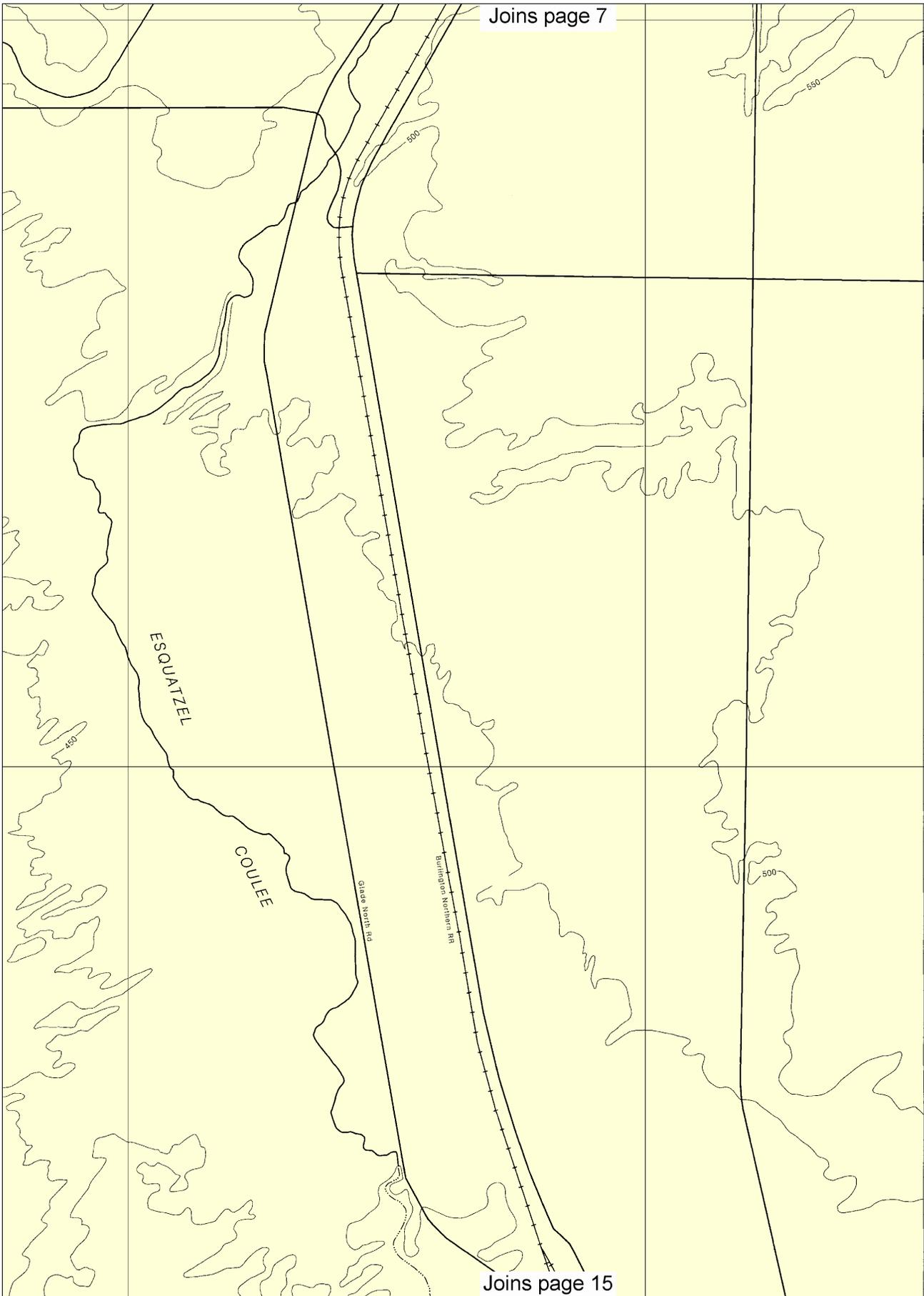


Note: Chart grid lines are aligned with true north.



Joins page 7

46°
20'



364

19'

360

356

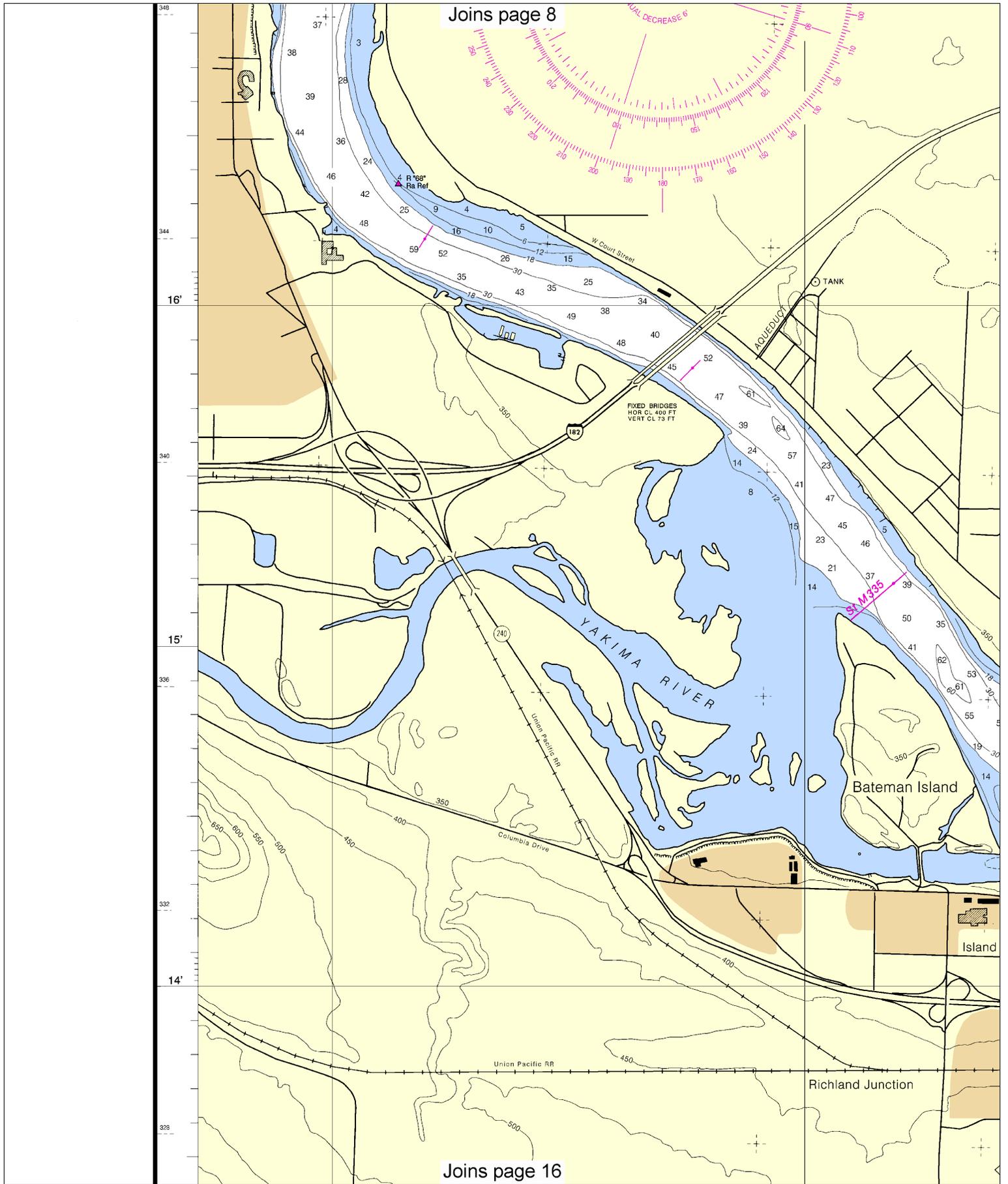
18'

352

17'

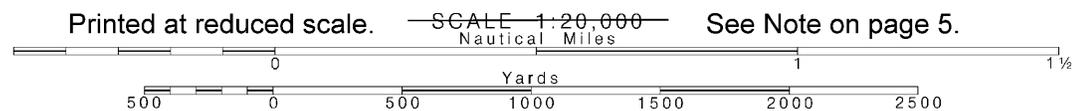
348

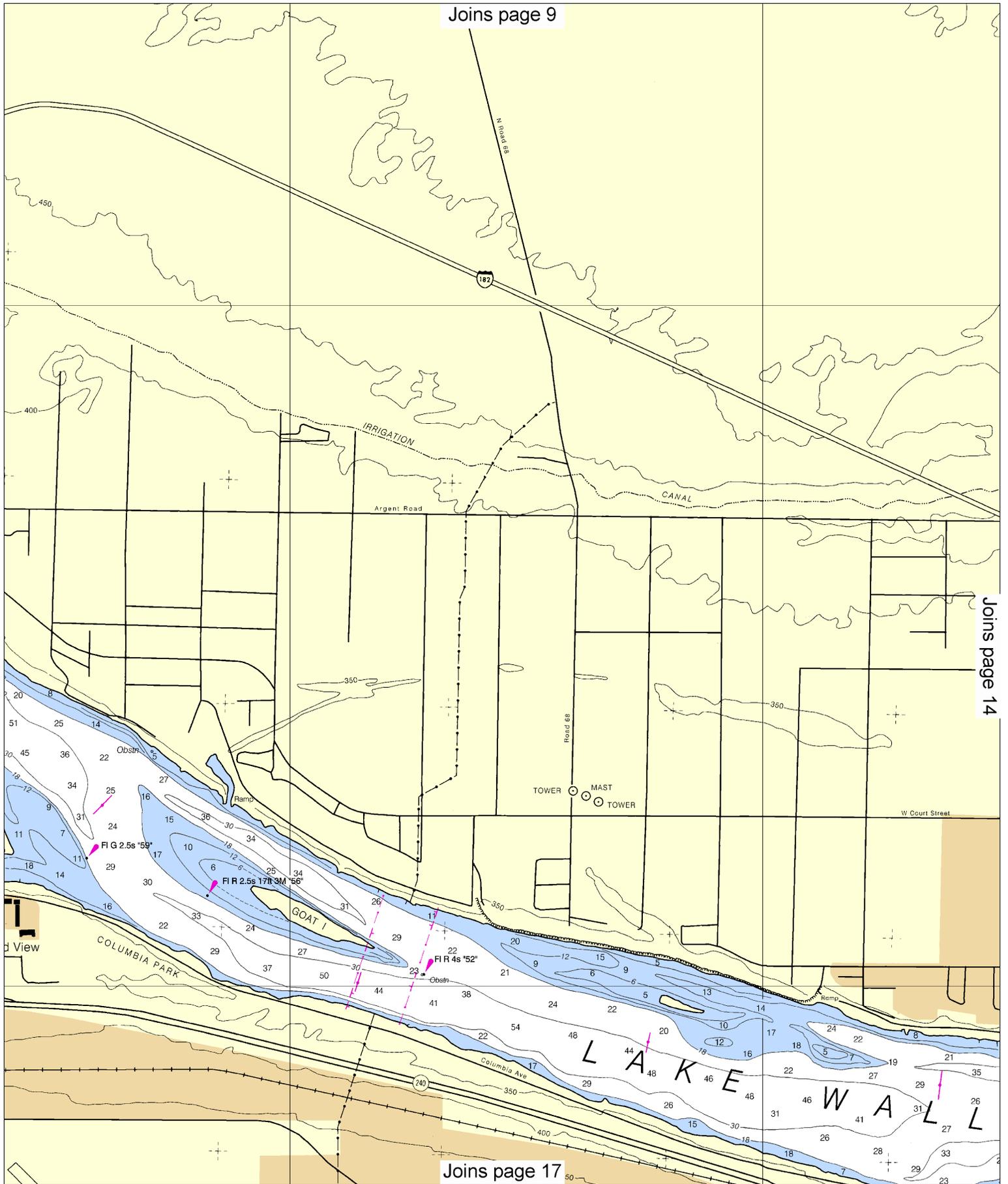
Joins page 15



12

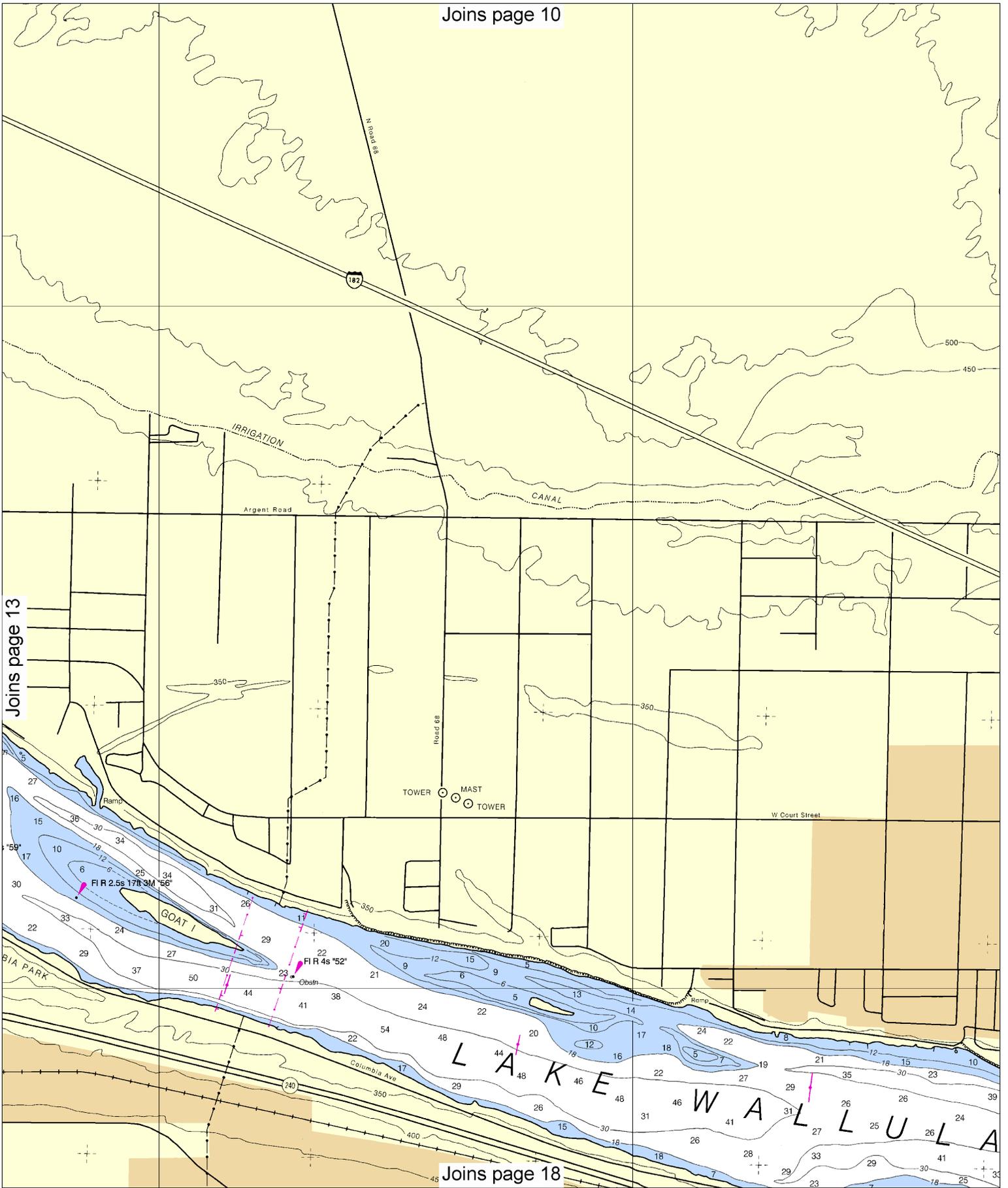
Note: Chart grid lines are aligned with true north.





Joins page 10

Joins page 13



Joins page 18

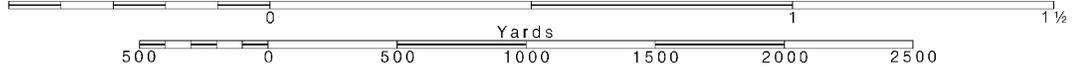
14

Note: Chart grid lines are aligned with true north.

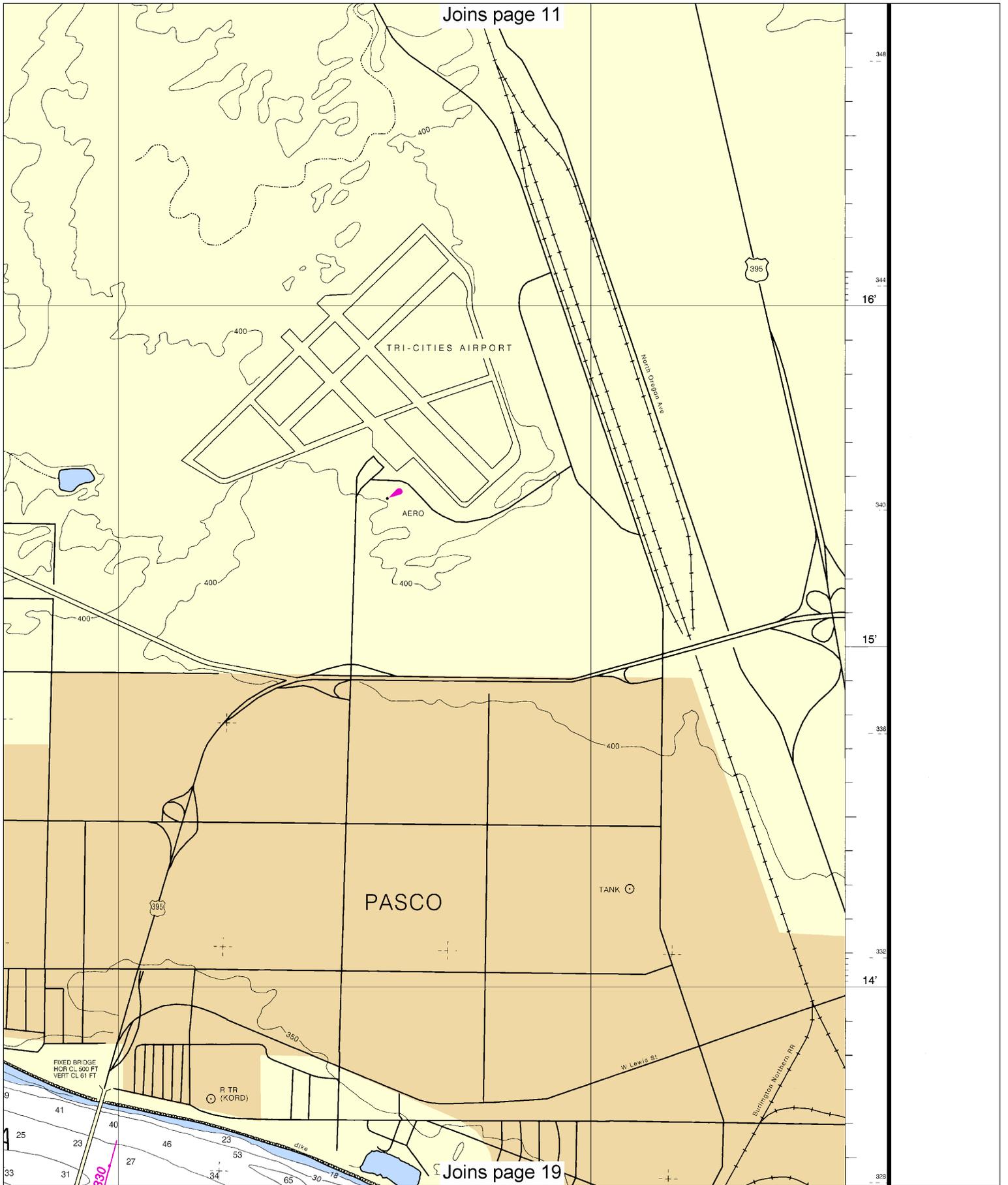
Printed at reduced scale.

SCALE 1:20,000

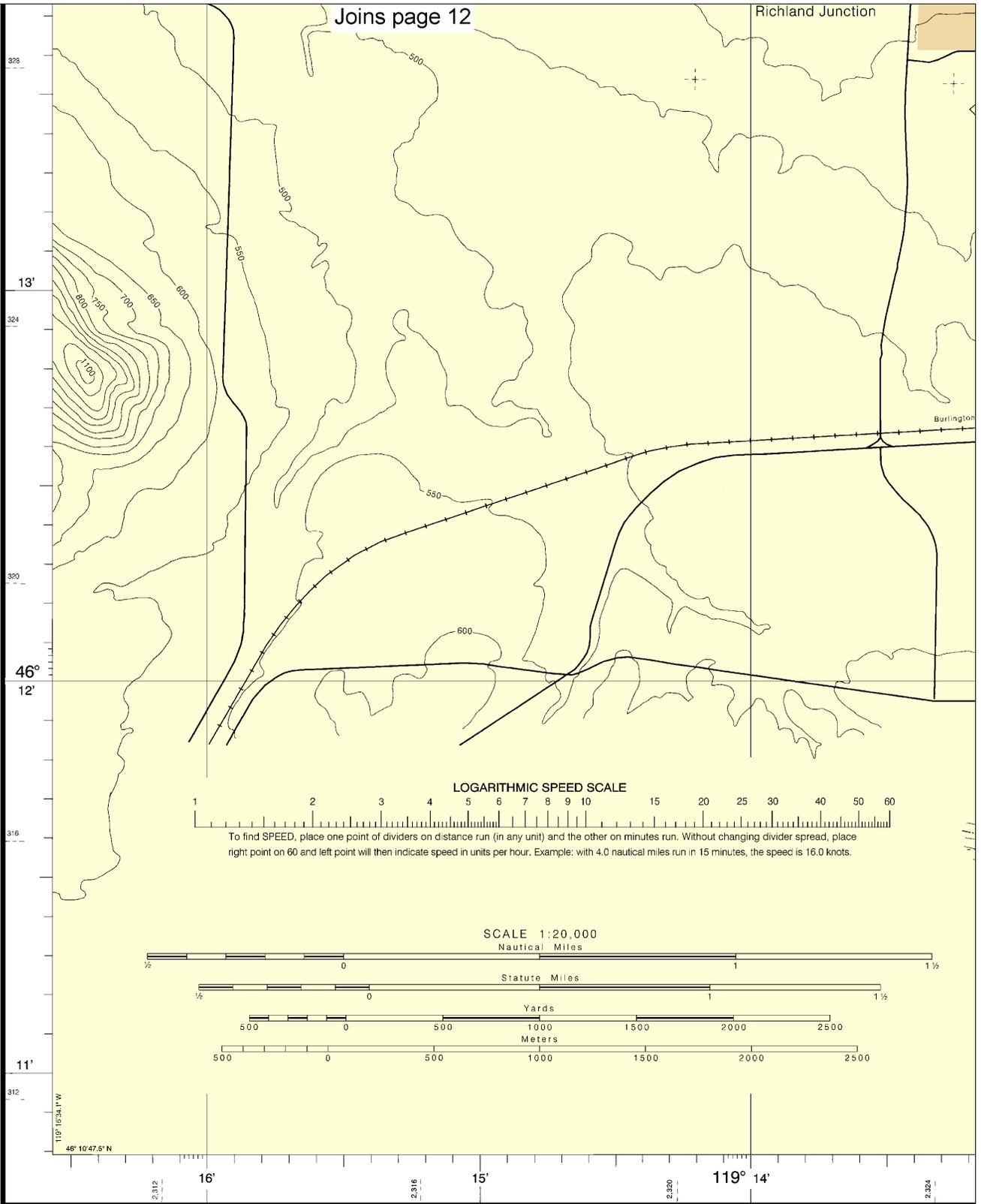
See Note on page 5.



Joins page 11



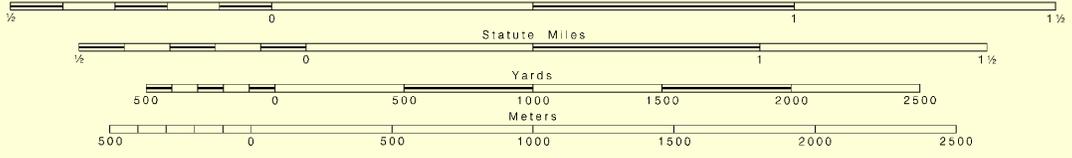
Joins page 19



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 speed is 16.0 knots.

SCALE 1:20,000
Nautical Miles



2nd Ed., Dec. /03 ■ Corrected through NM Dec. 20/03
Corrected through LNM Dec. 02/03

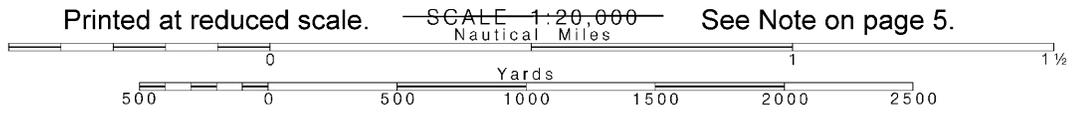
18543

CAUTION

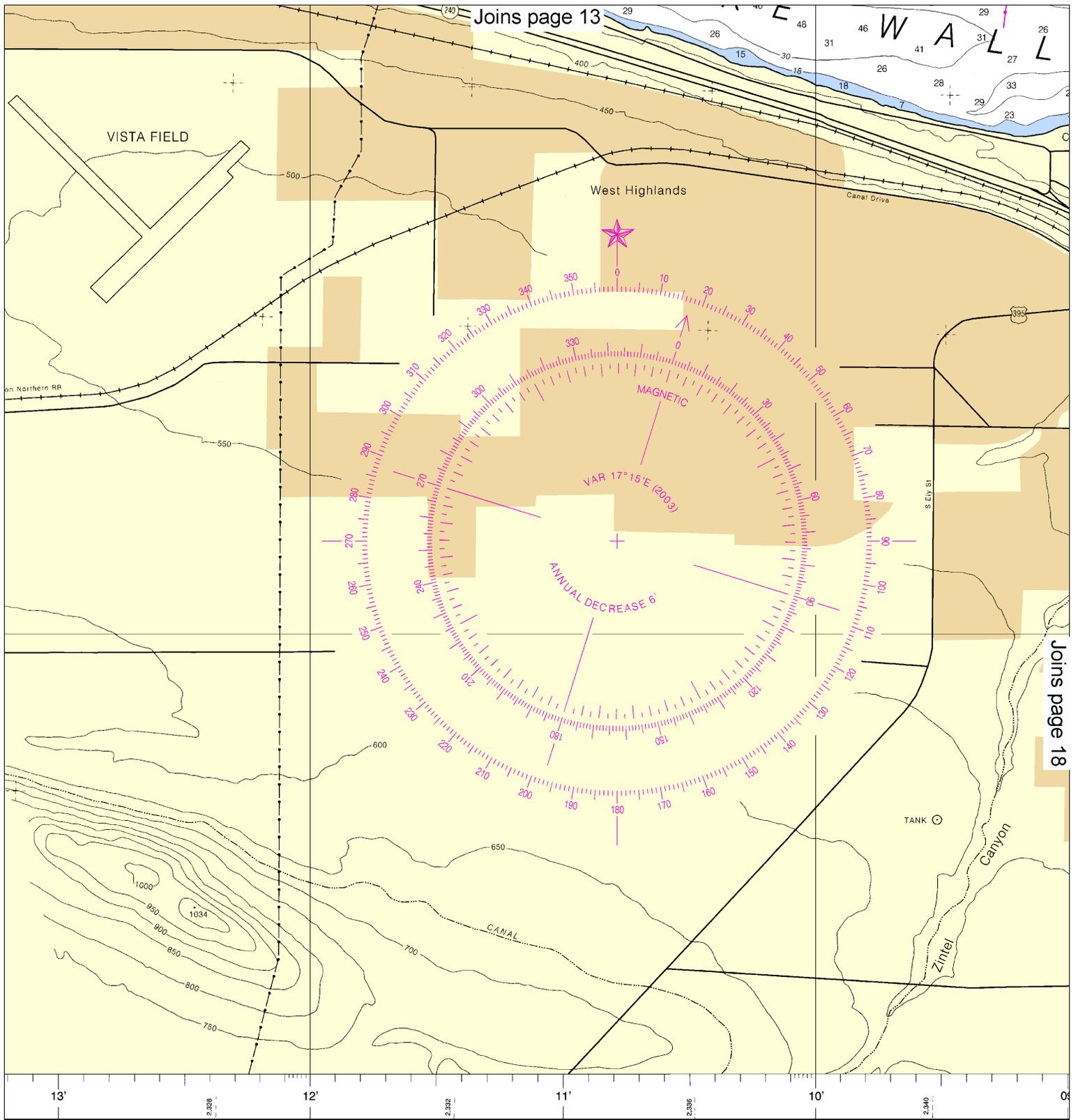
This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Imagery and Mapping Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner.

SOUNDING

Note: Chart grid lines are aligned with true north.



See Note on page 5.



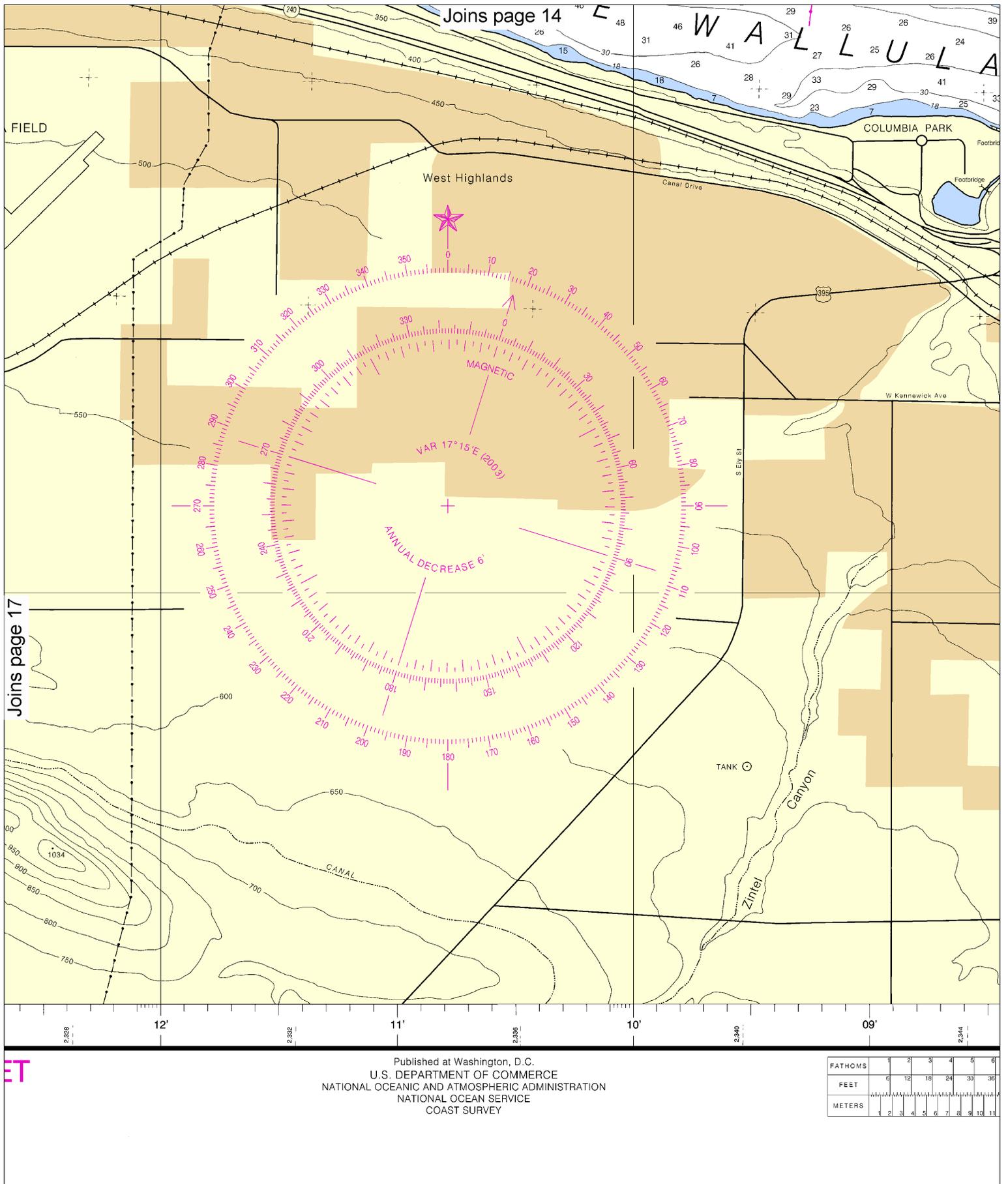
Joins page 13

Joins page 18

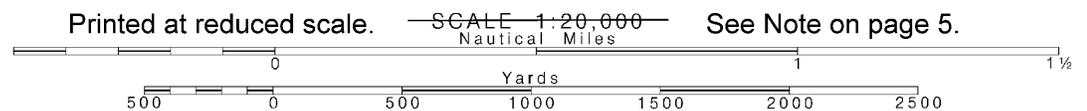
GS IN FEET

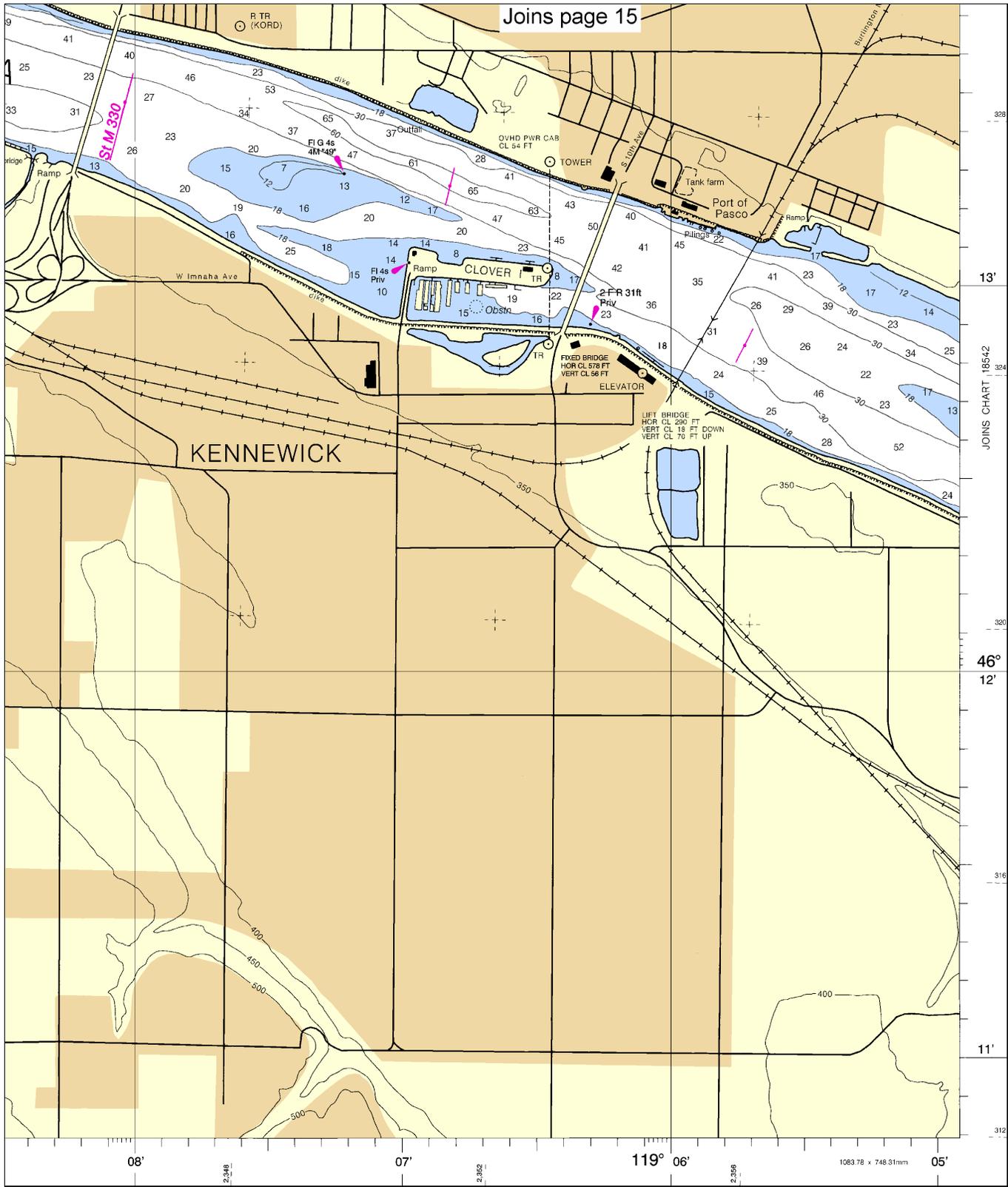
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 NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
 NATIONAL OCEAN SERVICE
 COAST SURVEY

FATHOMS
FEET
METERS



Note: Chart grid lines are aligned with true north.

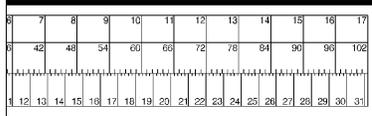




13'
 JOINS CHART 18542
 324
 320
 46°
 12'
 316
 11'
 312

ED. NO. 2

NSN 7642014015228
 NIMA REFERENCE NO. 18XHA18543



Columbia River, Pasco to Portland
 SOUNDINGS IN FEET - SCALE 1:20,000

18543

18543



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
- 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>



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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.

