NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) Report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS Report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study Report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study Report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study Report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 16. The **horizontal datum** was NAD 83, GRS 1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713- 3242**, or visit its website at http://www.ngs.noaa.gov.

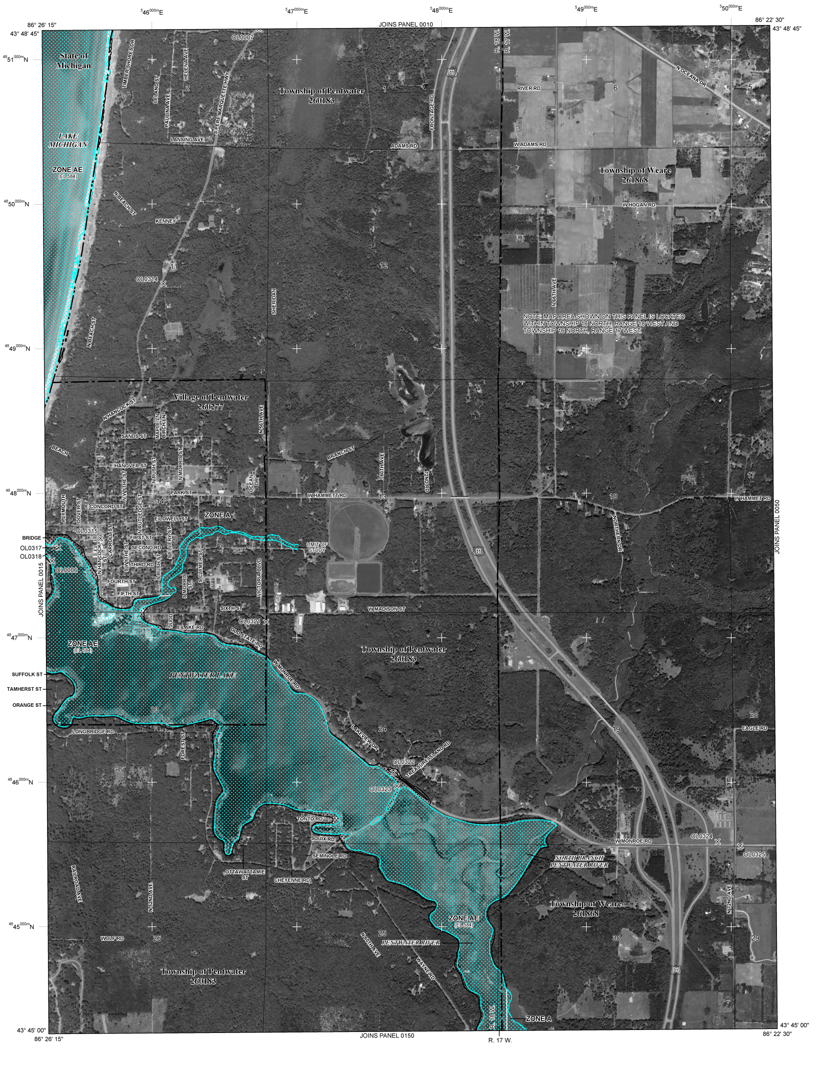
Base map information shown on this FIRM was provided in digital format by the Farm Services Administration (FSA), National Aerial Imagery Program (NAIP).
This information was photogrammetrically compiled at a scale of 1:40,000 from aerial photography dated 2005 or later.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

For information on available products associated with this FIRM visit the **Map Service Center (MSC)** website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the MSC website.

If you have **questions about this map,** how to order products, or the National Flood Insurance Program in general, please call the **FEMA Map Information eXchange (FMIX)** at **1-877-FEMA-MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/business/nfip.



5 46 000m E
5 47 000m E
5 48 000m E
5 49 000m E
5 50 000m E
86° 26' 15"
43° 48' 45"
JOINS PANEL 0010
86° 22' 30"
43° 48' 45"
48 51 000m N
48 50 000m N
48 49 000m N
48 48 000m N
48 47 000m N
48 46 000m N
48 45 000m N
State of Michigan
LAKE MICHIGAN
ZONE AE
(EL 584)
TIMBER SHORES DR
LELAND ST
PAULINA AVE
HELENA AVE
S PERE MARQUETTE HWY
OL0007
LANSING AVE
Township of Pentwater
260183
FRONTAGE RD
ADAMS RD
R. 18 W.
R. 17 W.
31
RIVER RD
W ADAMS RD
N OCEANA DR
Township of Weare
261868
W HOGAN RD
N BEACH ST
KENNEY
OL0314
SHERIDAN
N 66TH AVE
NOTE: MAP AREA SHOWN ON THIS PANEL IS LOCATED WITHIN TOWNSHIP 16 NORTH, RANGE 18 WEST AND TOWNSHIP 16 NORTH, RANGE 17 WEST.
Village of Pentwater
260277
N HANCOCK ST
SANDS ST
MAPLE LN
BIRCH LN
N 56TH AVE
BEACH
E HANOVER ST
N RUSH ST
N MORRIS ST
BRANCH ST
60TH AVE
72ND RD
OCEANA DR
PARK ST
W HAMMETT RD
W HAMMET RD
NORTHERN DR
PLYMOUTH
DOVER ST
E CONCORD ST
N WYTHE ST
N RUTLEDGE ST
E LOWELL ST
ZONE A
OL0315
CARROLL ST
FIRST ST
SECOND RD
THIRD RD
FOURTH ST
FIFTH ST
S ELLERY ST
S CLYMER ST
S MORRIS ST
VICTORIA BLVD
LIMIT OF STUDY
BRIDGE
OL0317
OL0318
OL0006
JOINS PANEL 0015
SIXTH ST
W MADISON ST
OL0321
JUDD
E LAKE RD
OLD STATE RD
W MONROE RD
ZONE AE
(EL 584)
SUFFOLK ST
TAMHERST ST
ORANGE ST
PENTWATER LAKE
LONGBRIDGE RD
FOREST ST
LAKEVIEW DR
TREASURE ISLAND RD
OL0322
OL0323
TONTO RD
SOUIX RD
SEMINOLE RD
OTTAWATTAMIE ST
CHEYENNE RD
EAGLE RD
OL0324
OL0325
NORTH BRANCH PENTWATER RIVER
N 72ND AVE
JOINS PANEL 0050
RAILROAD AVE
N 52ND AVE
WOLF RD
N 60TH AVE
PENTWATER RIVER
WAYNE RD
ZONE AE
(EL 584)
ZONE A
1
2
5
6
7
8
11
12
13
14
17
18
19
20
23
24
25
26
29
30
43° 45' 00"
86° 26' 15"
JOINS PANEL 0150
R. 17 W.
43° 45' 00"
86° 22' 30"

LEGEND

▨	SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

▨	FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

▒	OTHER FLOOD AREAS
ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
☐	OTHER AREAS
ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.
▧	COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS
▧	OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

━━━	1% Annual Chance Floodplain Boundary
━━━	0.2% Annual Chance Floodplain Boundary
━ ━	Floodway boundary
— — —	Zone D boundary
• • • • • • •	CBRS and OPA boundary
▨	Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities.
~~ 513 ~~~	Base Flood Elevation line and value; elevation in feet*
(EL 987)	Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

Ⓐ———Ⓐ	Cross section line
㉓- - - - -㉓	Transect line
45° 02' 08", 93° 02' 12"	Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere
$^{48}89^{000m}$ N	1000-meter Universal Transverse Mercator grid values, zone 16
DX5510 ×	Bench mark (see explanation in Notes to Users section of this FIRM panel)
• M1.5	River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE
FLOOD INSURANCE RATE MAP
August 4, 2014

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'

500 0 1000 2000 FEET
300 0 300 600 METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0020C

FIRM
FLOOD INSURANCE RATE MAP
OCEANA COUNTY, MICHIGAN
(ALL JURISDICTIONS)

PANEL 20 OF 450
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
PENTWATER, TOWNSHIP OF	260183	0020	C
PENTWATER, VILLAGE OF	260277	0020	C
WEARE, TOWNSHIP OF	261868	0020	C

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
26127C0020C

EFFECTIVE DATE
AUGUST 4, 2014

Federal Emergency Management Agency