

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 to 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 **Roadways** 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 Michigan State Plane South zone 8401 (FIPSZONE 2113). The horizontal datum was NAD83. Differences in datum, spherical projection or state plane 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, NIMS12
 National Geodetic Survey
 SSMC-3, 90502
 1315 East-West Highway
 Silver Spring, Maryland 20910-3202
 (301) 713-3454

To obtain current elevation, description, and/or location information for **benchmarks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3442 or visit its website at <http://www.ngs.noaa.gov/>.

Base Map information shown on this FIRM was derived from the Ottawa County, Michigan GIS Office from hydrography dated 2004. This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

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.

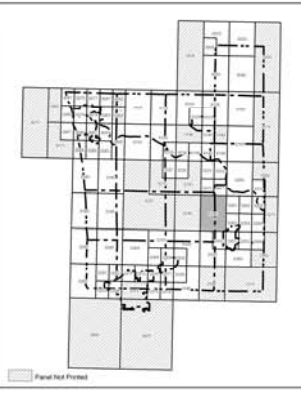
Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels, community map repository addresses, and a listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which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

For information on available products associated with this FIRM visit the **Map Service Center (MSC)** website at <http://www.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.

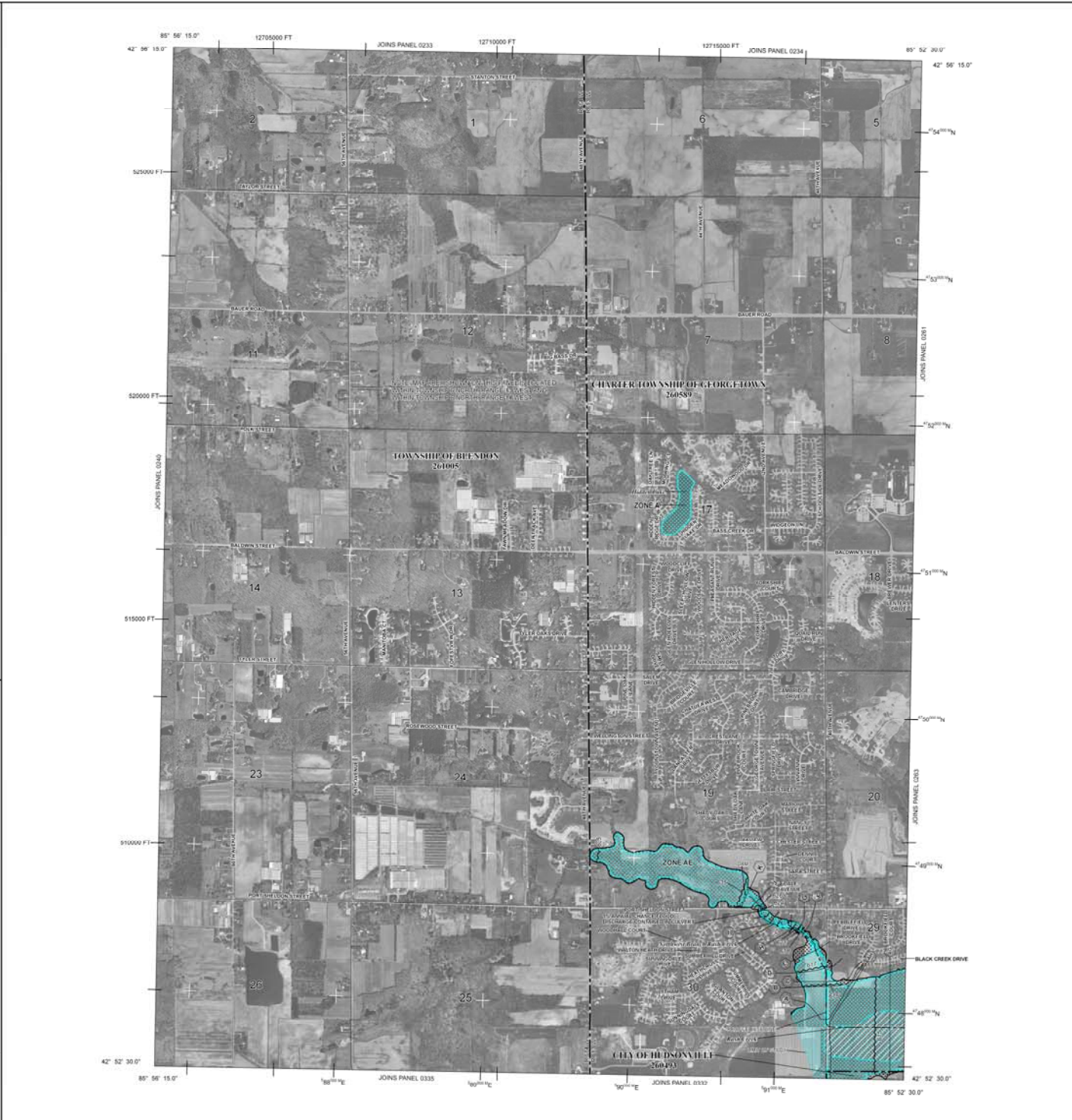
If you have questions about this map, how to order products, or the National Flood Insurance Program in general, please call the **FEMA Map Information Exchange (FMIX)** at 1-877-FEMA-MAP or visit the FEMA website at <http://www.fema.gov/business/info>.

The **profile base lines** depicted on this map represent the hydraulic modeling boundaries that match the flood profiles in the FIS report. As a result of improved topographic data, the **profile base line** in some cases, may deviate significantly from the channel centerline or appear outside the SFHA.

PANEL INDEX



Panel Not Printed



LEGEND

SPECIAL FLOOD HAZARD AREAS 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 are shown on this map as follows:

- 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 abutment flooding, velocities also determined.
- Zone AR:** Area of special flood hazard formerly protected from the 1% annual chance flood event by a flood control system that was subsequently decommissioned. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance of greater flood.
- Zone ARB:** Area to be protected from 1% annual chance flood event 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 area 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 average areas less than 1 square mile; and areas protected by levees from 1% annual chance of flood.
- Zone D:** Areas determined to be outside of the 0.2% annual chance floodplain.

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, including Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities
- Base Flood Elevation line and value elevation in feet
- Base Flood Elevation value where uniform within zone elevation in feet

Referenced to the North American Vertical Datum of 1988.

Cross section line

- Transect line
- Bridge
- Canal
- Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 100-foot contour interval; Traverse location grid values, zone 18
- 3000-foot grid; Michigan State Plane South Coordinate System, 8401 zone (FIPSZONE 2113), Lambert Conformal Conic projection
- Section marks (see explanation in Notes to Users section of this panel print)
- M1:5 River Mile

MAP REPOSITORY
 Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTRYWIDE FLOOD INSURANCE RATE MAP
 December 16, 2011

EFFECTIVE DATES OF REVISIONS 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 1-800-638-6023.

MAP SCALE 1" = 1000'
 500 FEET
 1000 FEET
 200 METERS
 300 METERS

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0245E

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

PANEL 245 OF 425
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

COMMUNITY	NUMBER	PANEL	SUFFIX
BLANCHARD TOWNSHIP OF	20000	0245	E
GEORGETOWN TOWNSHIP OF	20000	0245	E
HUDSONVILLE CITY OF	20000	0245	E

MAP NUMBER
26139C0245E

EFFECTIVE DATE
DECEMBER 16, 2011

Federal Emergency Management Agency