D:\WORK\01338\PROJECT\GALIEN_EXHIBITS.APR\FIG 1 LOCATION DATE: 2/28/2003 USER: CDA

DATA SOURCES: MICHIGAN DEPARTMENT OF NATURAL RESOURCES MIRIS, 1978, SPCS NAD 27, US FEET

LOCATION MAP

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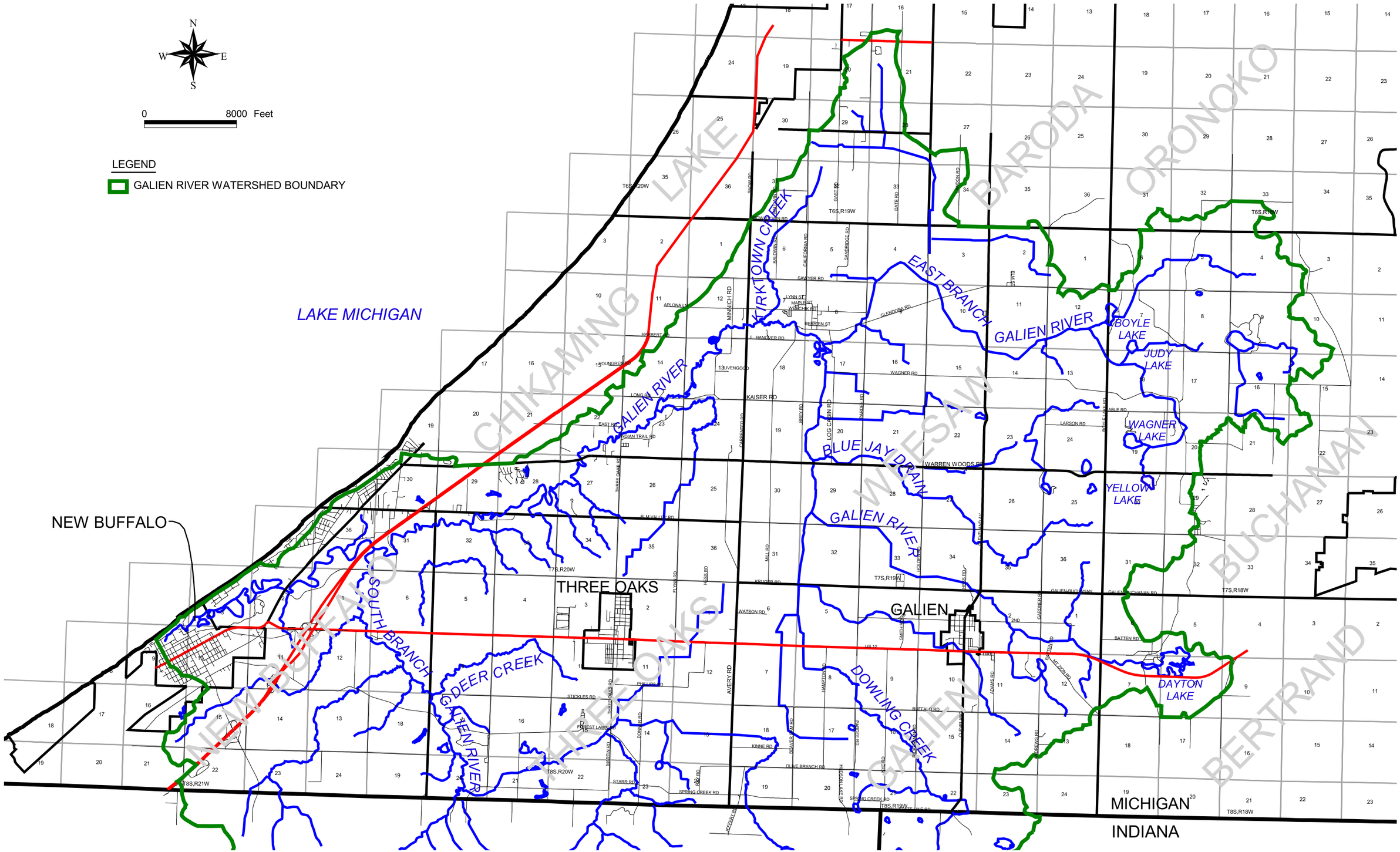
FIGURE NO.
1



DATA SOURCES: BASE MAP, BERRIEN LAND INFORMATION SYSTEM, 2001, SPCS NAD 83, INTERNATIONAL FEET. RIVERS, US EPA REACH FILES VERSION 3.0. WATERSHED DELINEATION, MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY GIS, DIGITAL SHEDS, 2001.

D:\WORK\01338\PROJECT\GALIEN_EXHIBITS.APR\FIG 2 BASE MAP DATE: 2/28/2003 USER: CDA

BASE MAP

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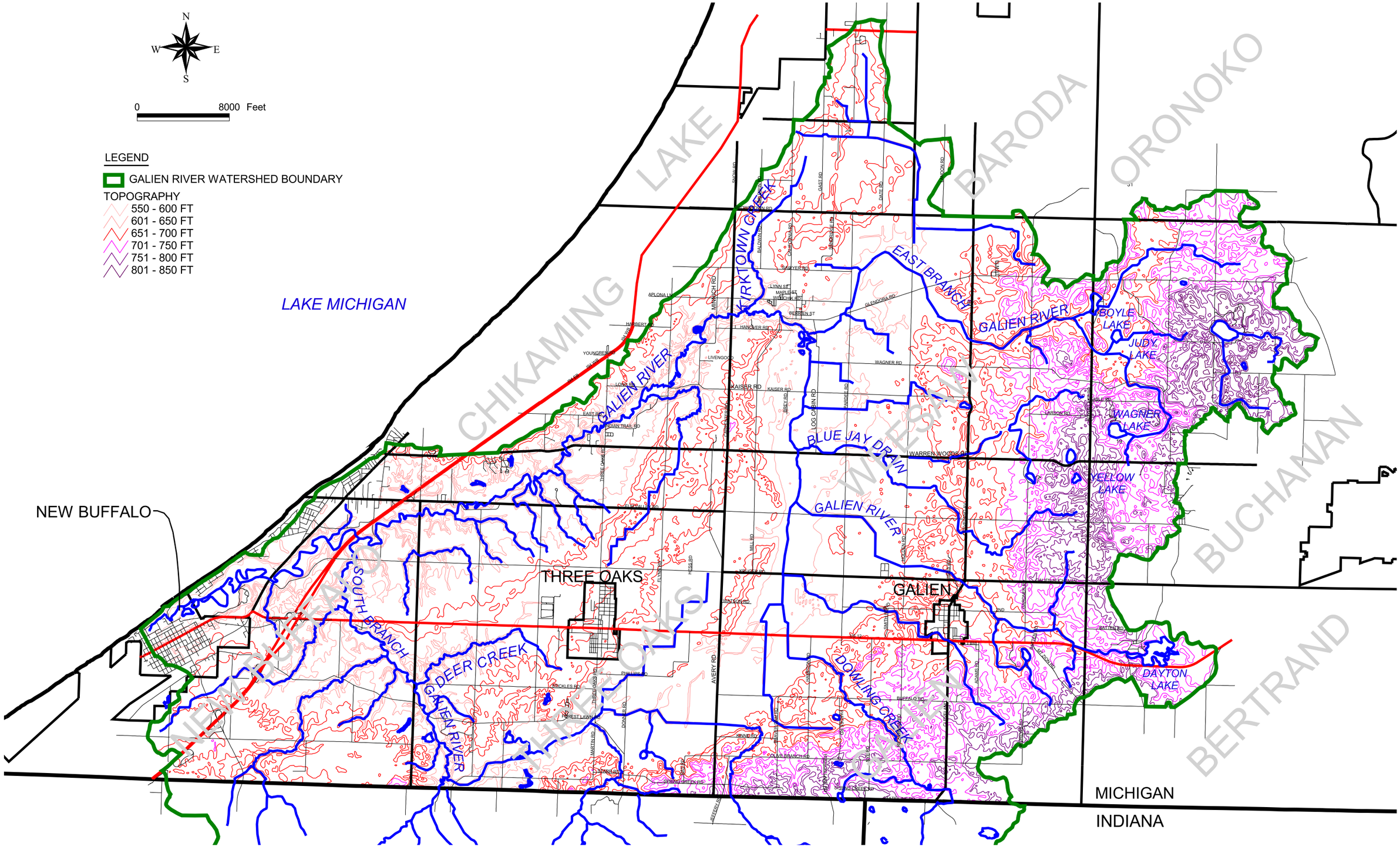
2



DATA SOURCES: BASE MAP, BERRIEN LAND INFORMATION SYSTEM, 2001, SPCS NAD 83, INTERNATIONAL FEET.
RIVERS, US EPA REACH FILES VERSION 3.0.
TOPOGRAPHY, MICHIGAN DEPARTMENT OF NATURAL RESOURCES SPATIAL DATA LIBRARY, USGS 1:100K 5-50 METER CONTOURS.
WATERSHED DELINEATION, MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY GIS, DIGITAL SHEDS, 2001.

D:\WORK\01338\PROJECT\GALIEN_EXHIBITS.APR\FIG 3 TOPOGRAPHY DATE: 2/28/2003 USER: CDA

TOPOGRAPHY

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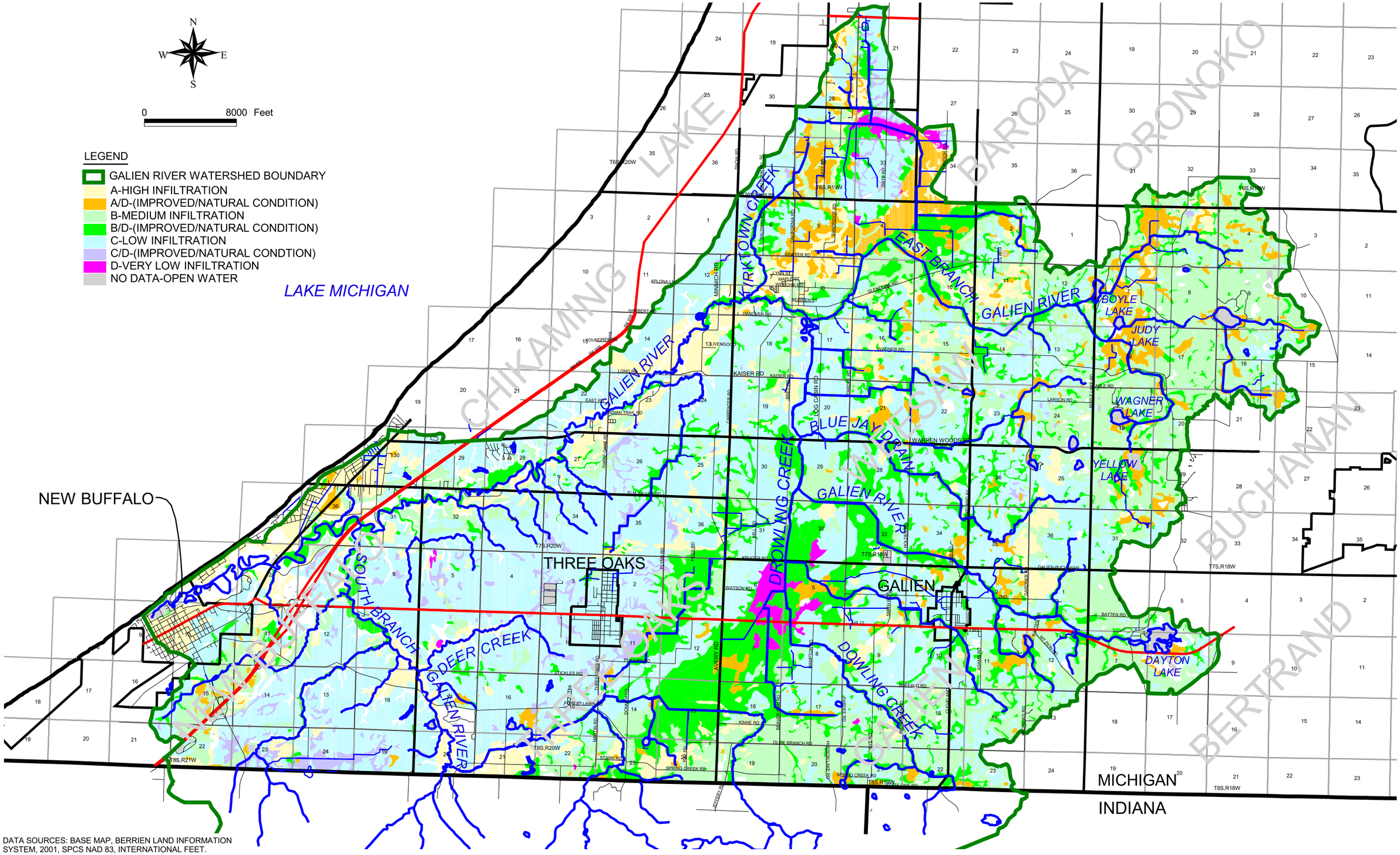
3



DATA SOURCES: BASE MAP, BERRIEN LAND INFORMATION SYSTEM, 2001, SPCS NAD 83, INTERNATIONAL FEET.
SOIL TYPES, MICHIGAN DEPARTMENT OF NATURAL RESOURCES MIRIS 1978, SPCS NAD83, CLASSIFIED FROM NRCS SOIL SURVEY FOR BERRIEN COUNTY 1980.
RIVERS, US EPA REACH FILES VERSION 3.0.
WATERSHED DELINEATION, MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY GIS, DIGITAL SHEDS, 2001.

D:\WORK\01338\PROJECT\GALIEN_EXHIBITS.APR\FIG 4 HYDRIC DATE: 2/28/2003 USER: CDA

HYDROLOGIC SOIL GROUPS

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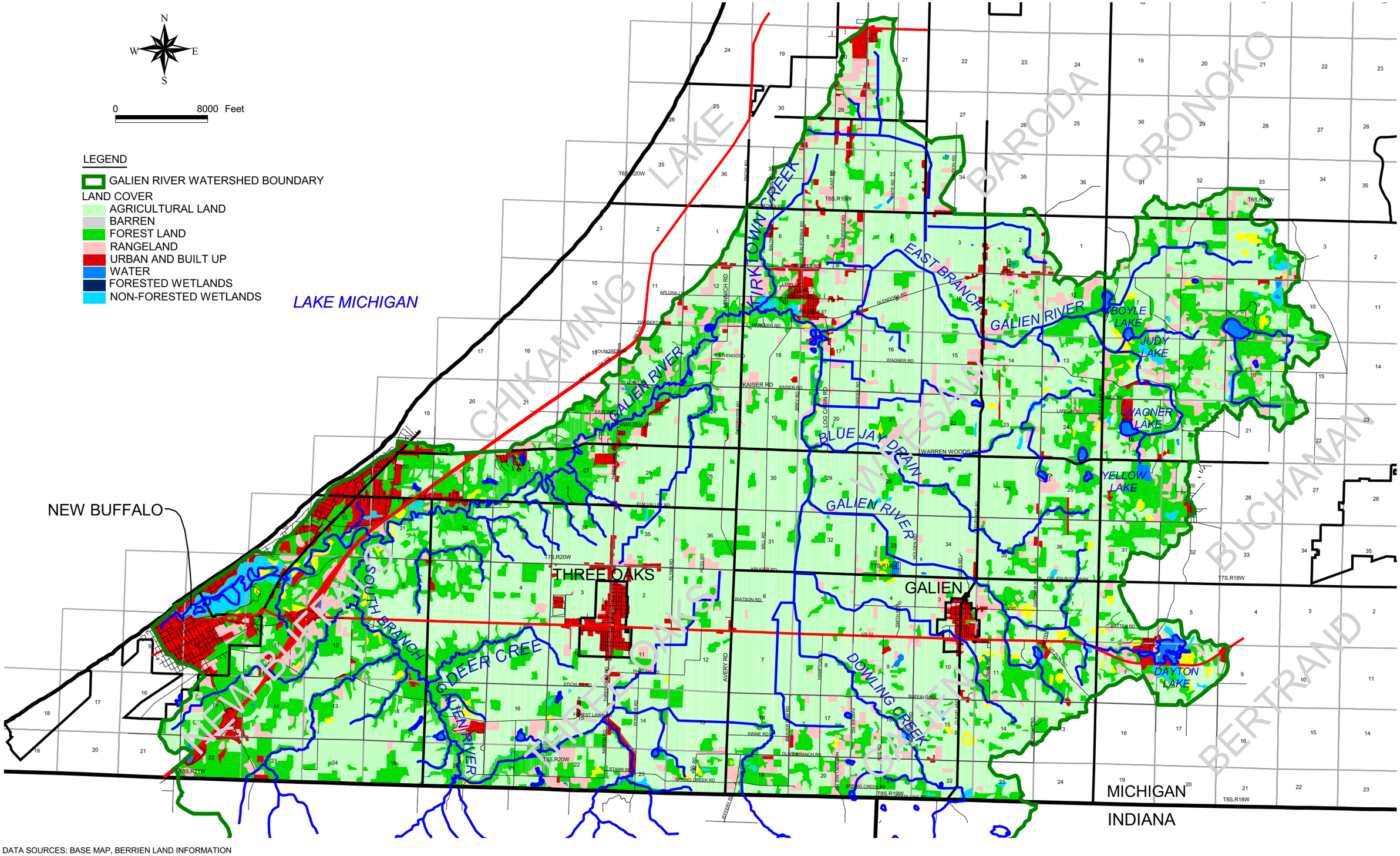

D:\WORK\01338\PROJECT\GALIEN_EXHIBITS.APR\FIG 5 LAND COVER DATE: 2/28/2003 USER: CDA

DATA SOURCES: BASE MAP, BERRIEN LAND INFORMATION SYSTEM, 2001, SPCS NAD 83, INTERNATIONAL FEET.
RIVERS, US EPA REACH FILES VERSION 3.0.
LAND COVER, MICHIGAN DEPARTMENT OF NATURAL RESOURCES SPATIAL DATA LIBRARY, LAND USE/COVER MIRIS 1978.
WATERSHED DELINEATION, MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY GIS, DIGITAL SHEDS, 2001.

LAND COVER

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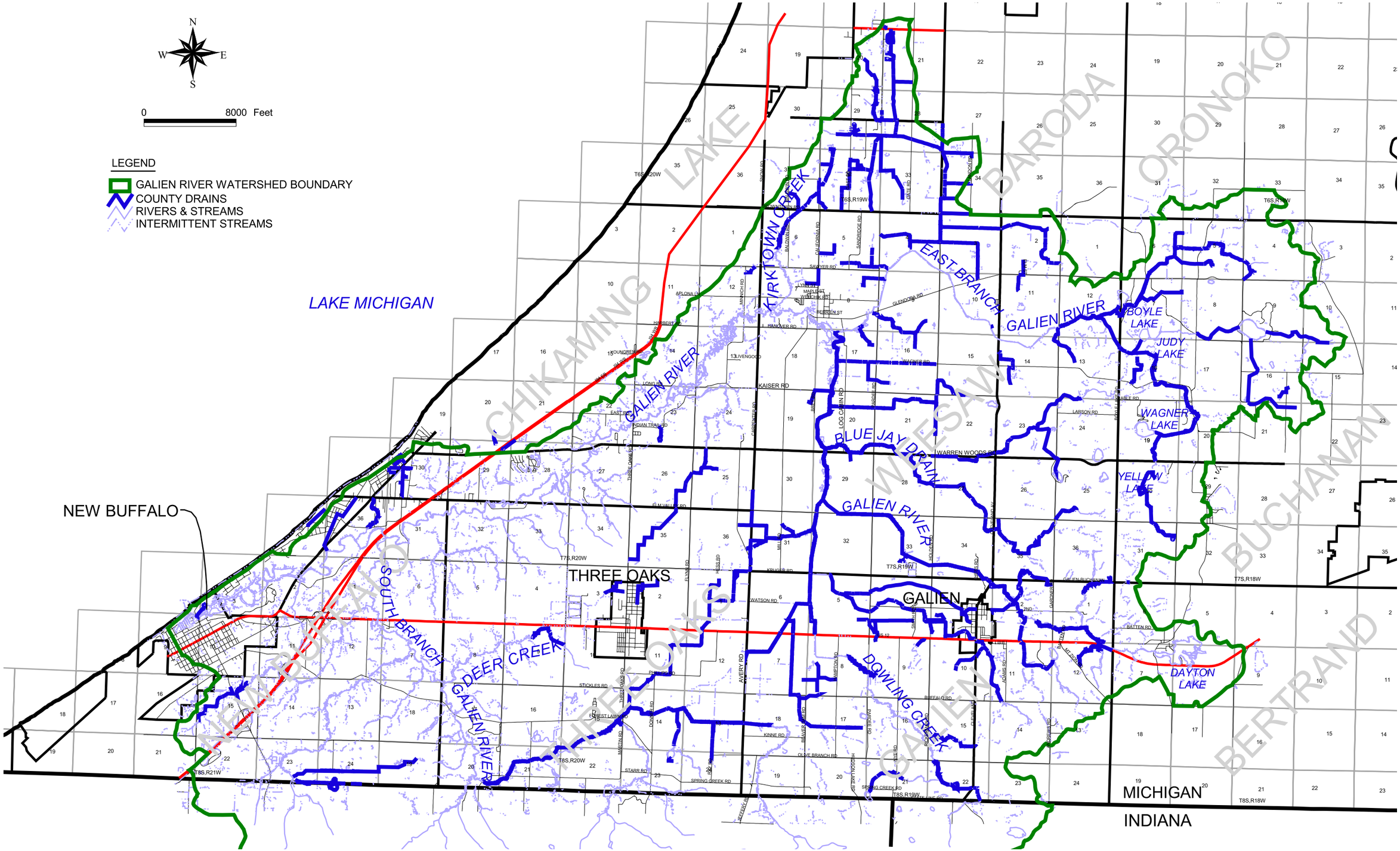

D:\WORK\01338\PROJECT\GALIEN_EXHIBITS.APR\FIG 6 COUNTY DRAINS DATE: 2/28/2003 USER: CDA

DATA SOURCES: BASE MAP, BERRIEN LAND INFORMATION SYSTEM, 2001, SPCS NAD 83, INTERNATIONAL FEET. RIVERS, US EPA REACH FILES VERSION 3.0. WATERSHED DELINEATION, MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY GIS, DIGITAL SHEDS, 2001.

COUNTY DRAINS

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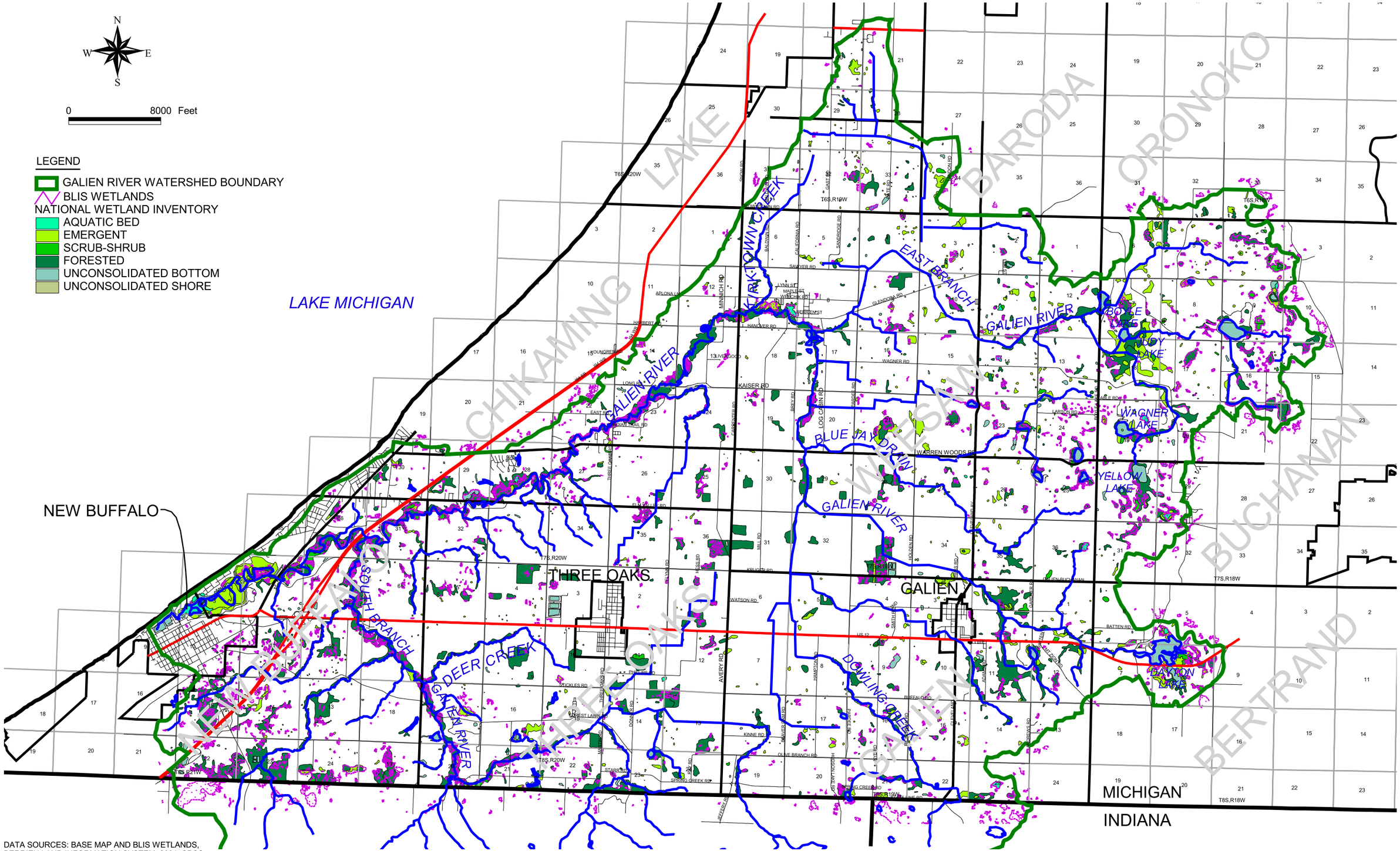

D:\WORK\01338\PROJECT\GALIEN_EXHIBITS.APR\FIG 7 WETLANDS DATE: 2/28/2003 USER: CDA

DATA SOURCES: BASE MAP AND BLIS WETLANDS,
BERRIEN LAND INFORMATION SYSTEM, 2001, SPCS
NAD 83, INTERNATIONAL FEET.
RIVERS, US EPA REACH FILES VERSION 3.0.
WETLANDS, MICHIGAN DEPARTMENT OF
NATURAL RESOURCES, NATIONAL WETLANDS INVENTORY (NWI).
WATERSHED DELINEATION, MICHIGAN DEPARTMENT
OF ENVIRONMENTAL QUALITY GIS, DIGITAL SHEDS, 2001.

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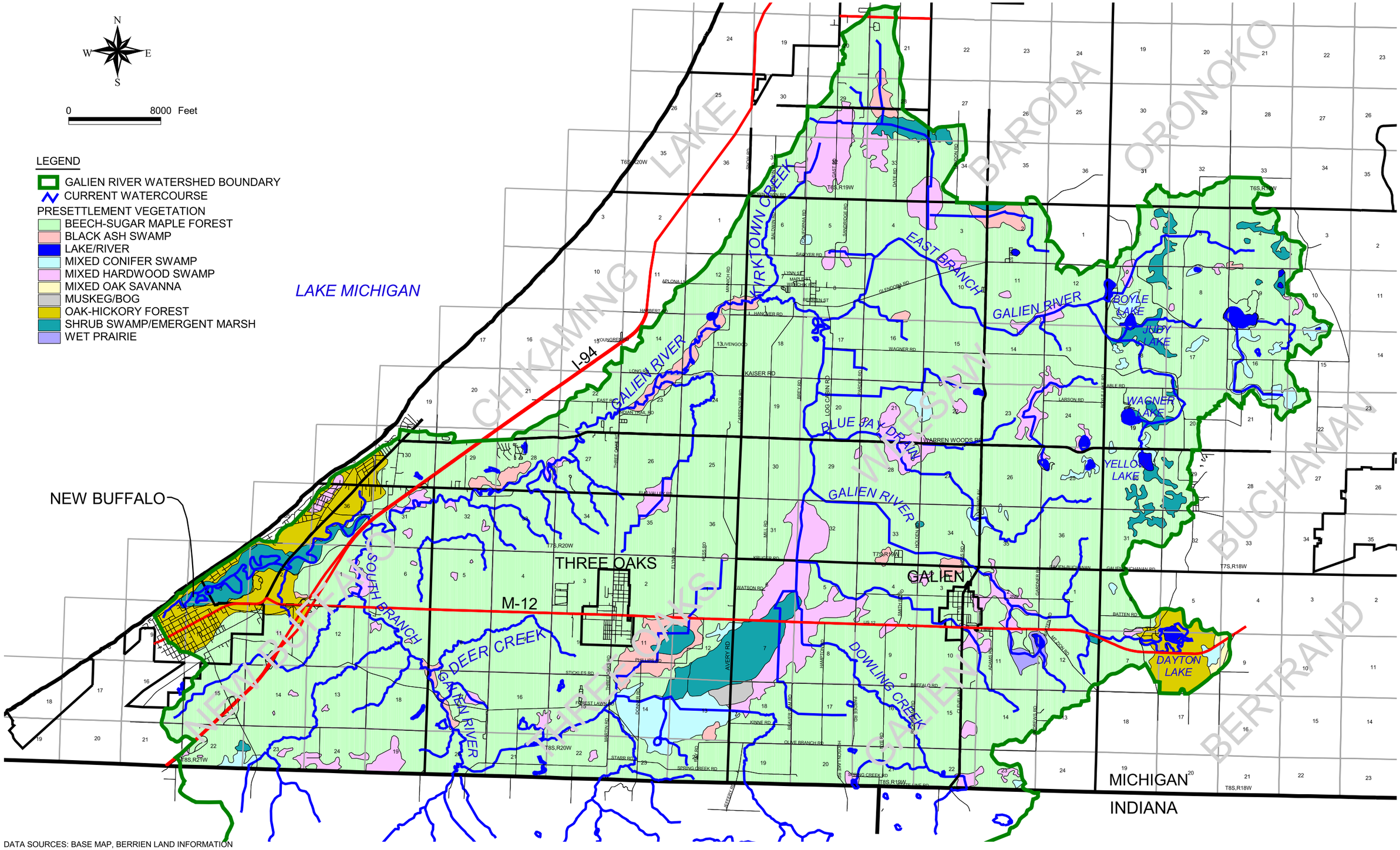

D:\WORK\01338\PROJECT\GALIEN_EXHIBITS.APR\FIG 8 PRESET VEG DATE: 2/28/2003 USER: CDA

DATA SOURCES: BASE MAP, BERRIEN LAND INFORMATION SYSTEM, 2001, SPCS NAD 83, INTERNATIONAL FEET.
RIVERS, US EPA REACH FILES VERSION 3.0.
PRESETTLEMENT VEGETATION, MICHIGAN DEPARTMENT OF NATURAL RESOURCES
SPATIAL DATA LIBRARY, LAND COVER CIRCA 1800, MIRIS 1978.
WATERSHED DELINEATION, MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY GIS, DIGITAL SHEDS, 2001.

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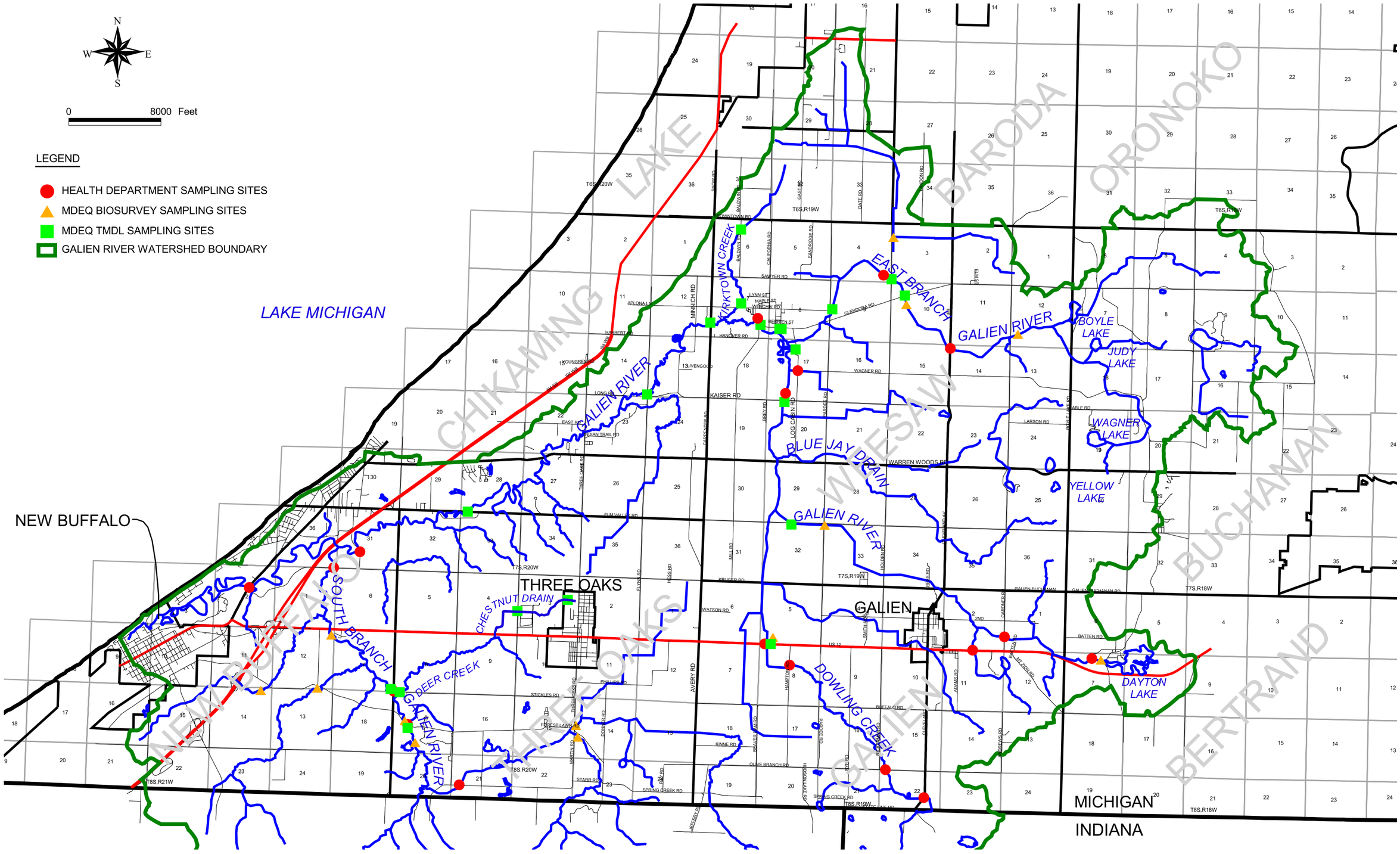

DATA SOURCES: BASE MAP, BERRIEN LAND INFORMATION SYSTEM, 2001, SPCS NAD 83, INTERNATIONAL FEET. WATERSHED DELINEATION, MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY GIS, DIGITAL SHEDS, 2001.

D:\WORK\01338\PROJECT\GALIEN_EXHIBITS.APR\FIG 9 WATER QUALITY DATE: 2/28/2003 USER: CDA

WATER QUALITY SAMPLING

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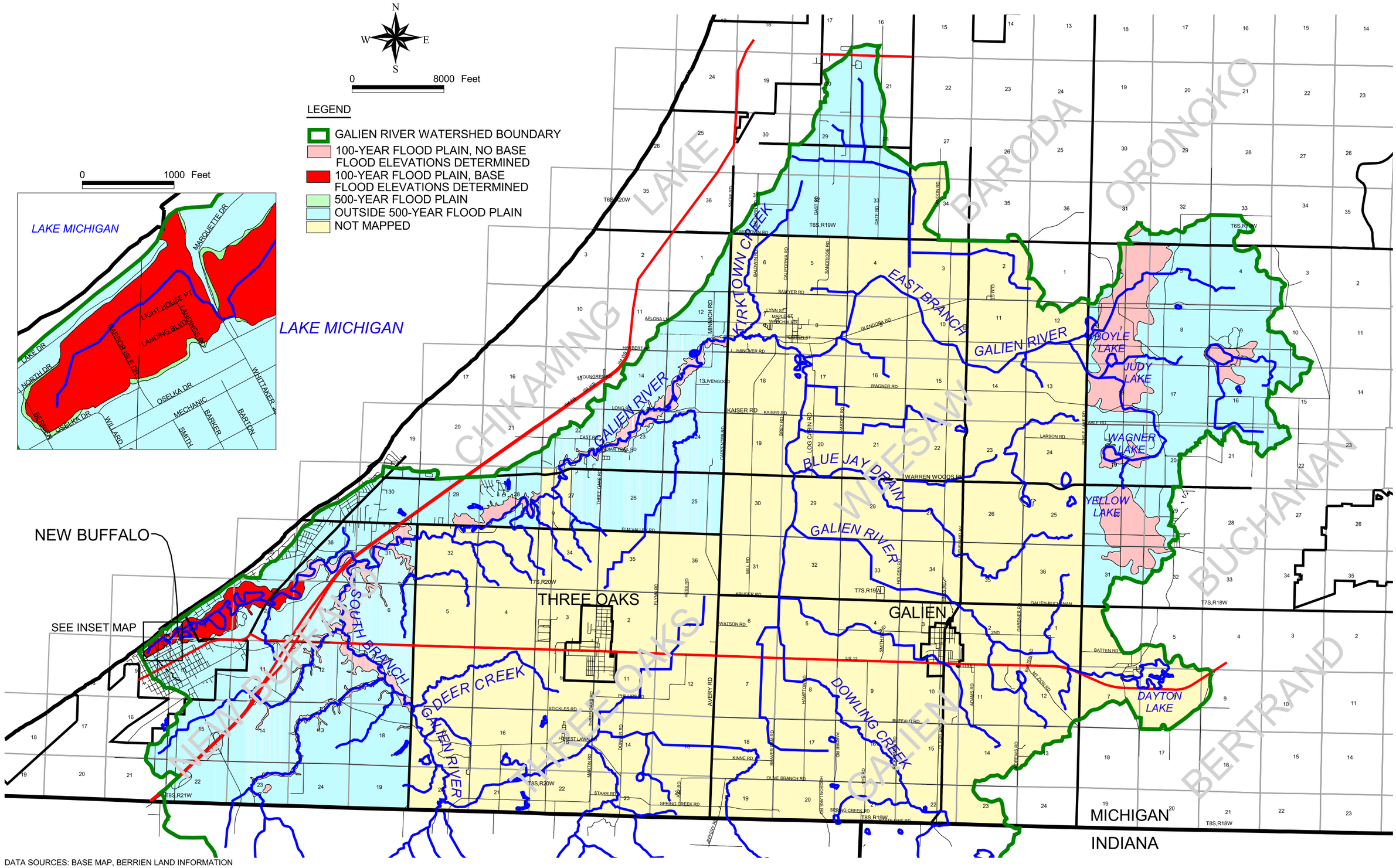

DATA SOURCES: BASE MAP, BERRIEN LAND INFORMATION SYSTEM, 2001, SPCS NAD 83, INTERNATIONAL FEET.
RIVERS, US EPA REACH FILES VERSION 3.0.
FEMA FLOOD ZONES, FEDERAL EMERGENCY MANAGEMENT AGENCY, 1996.
WATERSHED DELINEATION, MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY GIS, DIGITAL SHEDS, 2001.

D:\WORK\01338\PROJECT\GALIEN_EXHIBITS.APR\FIG 10 FLOODPLAIN DATE: 2/28/2003 USER: CDA

FLOODPLAIN

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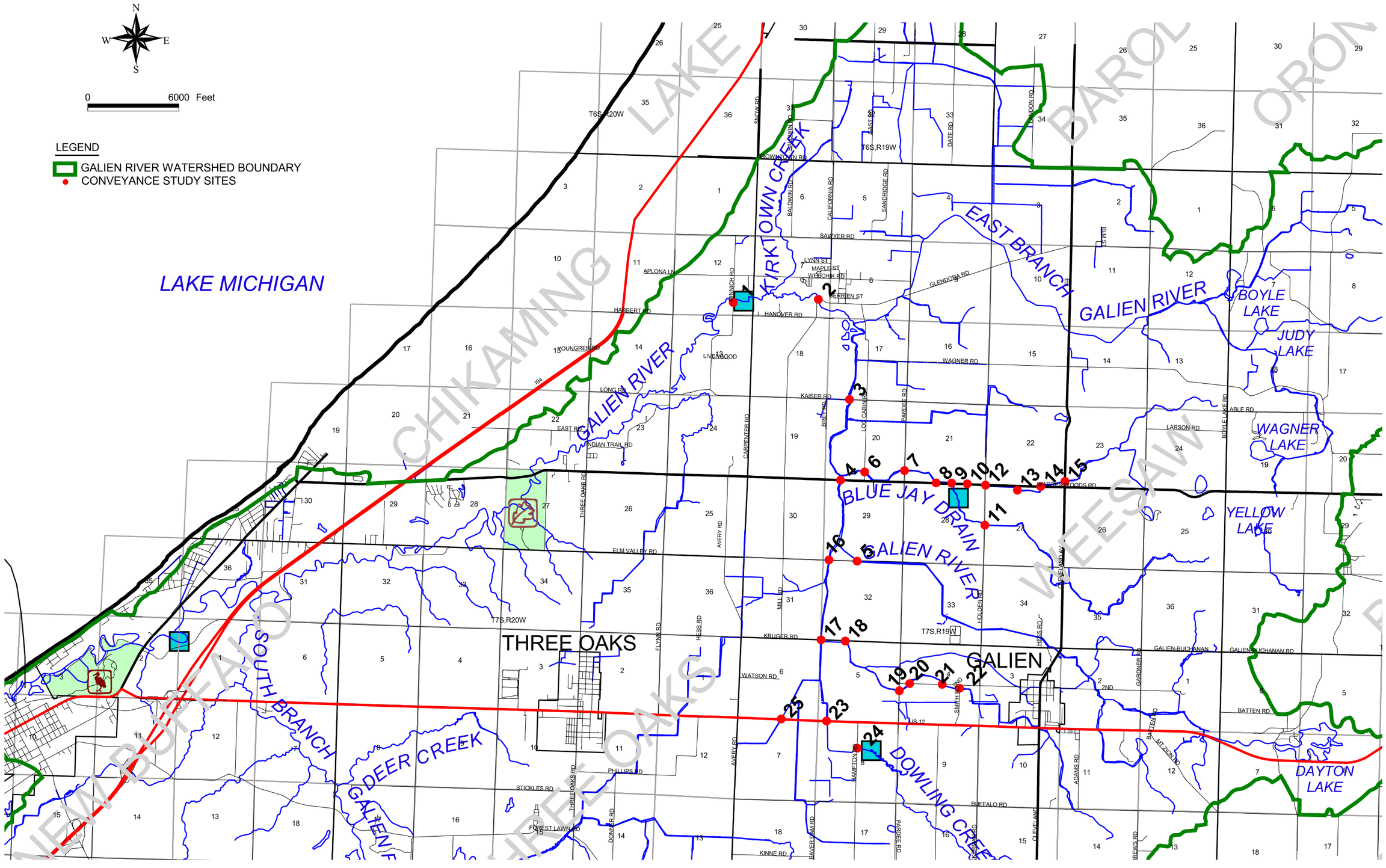

DATA SOURCES: BASE MAP, BERRIEN LAND INFORMATION SYSTEM, 2001, SPCS NAD 83, INTERNATIONAL FEET. RIVERS, US EPA REACH FILES VERSION 3.0. WATERSHED DELINEATION, MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY GIS, DIGITAL SHEDS, 2001.

D:\WORK\01338\PROJECT\GALIEN_EXHIBITS.APR\FIG 11 CONVEYANCE DATE: 2/28/2003 USER: CDA

CONVEYANCE STUDY SITES

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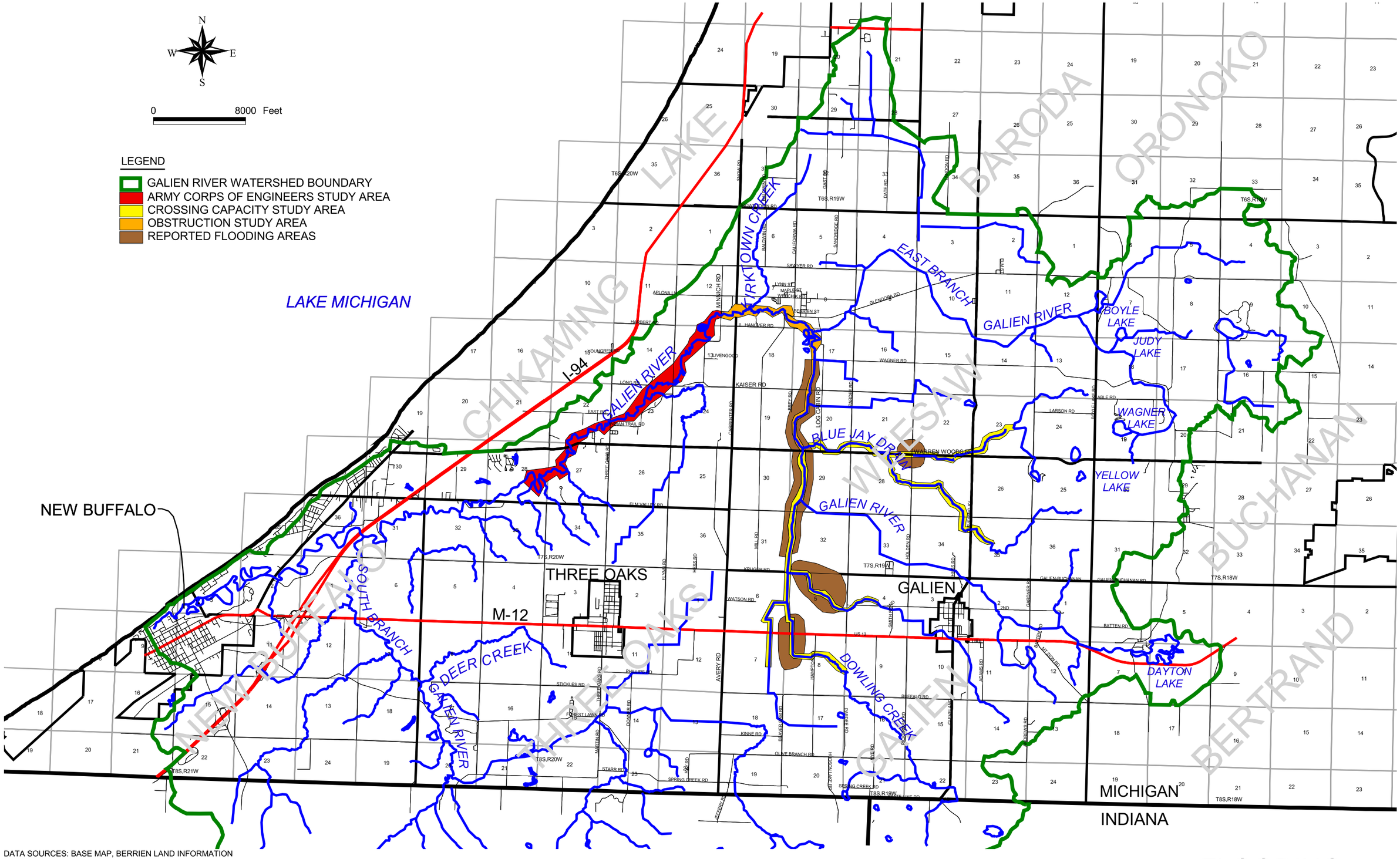

DATA SOURCES: BASE MAP, BERRIEN LAND INFORMATION SYSTEM, 2001, SPCS NAD 83, INTERNATIONAL FEET.
FLOOD AREAS, USDA NRCS AND THE BERRIEN COUNTY DRAIN COMMISSIONER.
RIVERS, US EPA REACH FILES VERSION 3.0.
WATERSHED DELINEATION, MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY GIS, DIGITAL SHEDS, 2001.

D:\WORK\01338\PROJECT\GALIEN_EXHIBITS.APR\FIG 12 FLOOD AREAS DATE: 2/28/2003 USER: CDA

FLOODING STUDY SITES

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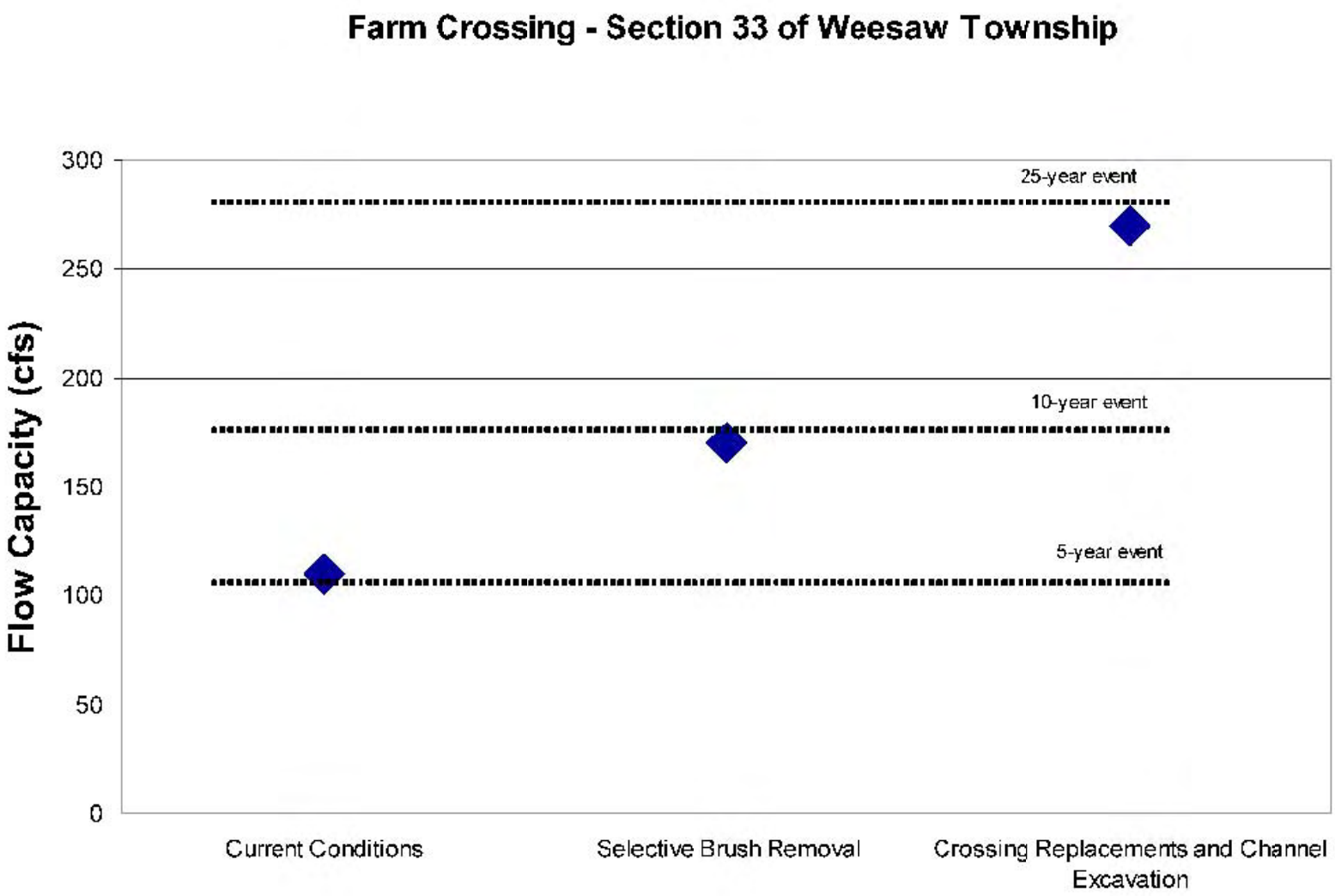

CROSSING IMPROVEMENTS

13

PROJECT NO. G01338
FIGURE NO.

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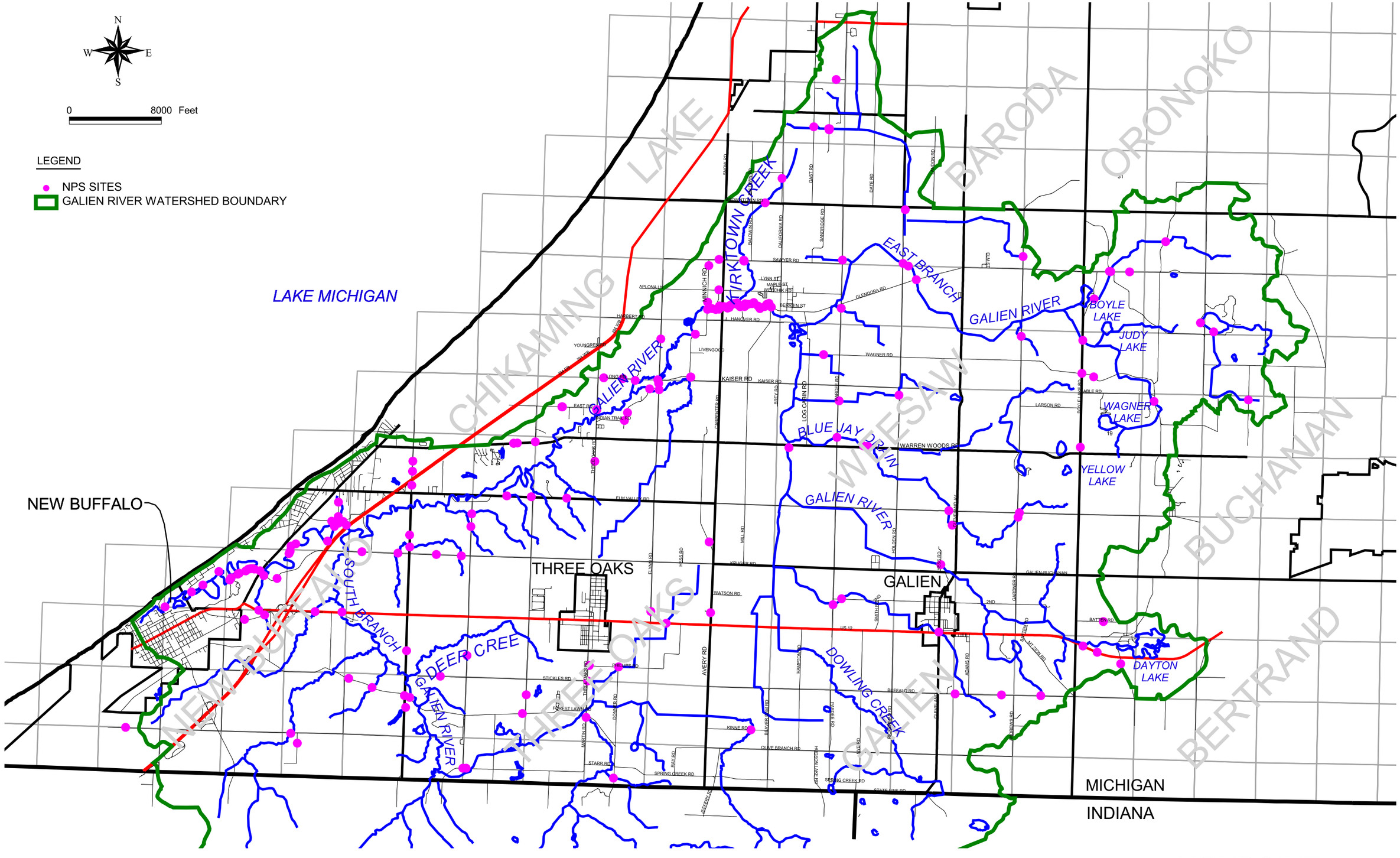

DATA SOURCES: BASE MAP, BERRIEN LAND INFORMATION SYSTEM, 2001, SPCS NAD 83, INTERNATIONAL FEET. WATERSHED DELINEATION, MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY GIS, DIGITAL SHEDS, 2001.

D:\WORK\01338\PROJECT\GALIEN_EXHIBITS.APR\FIG 14 NPS DATE: 2/28/2003 USER: CDA

NONPOINT SOURCE SITES

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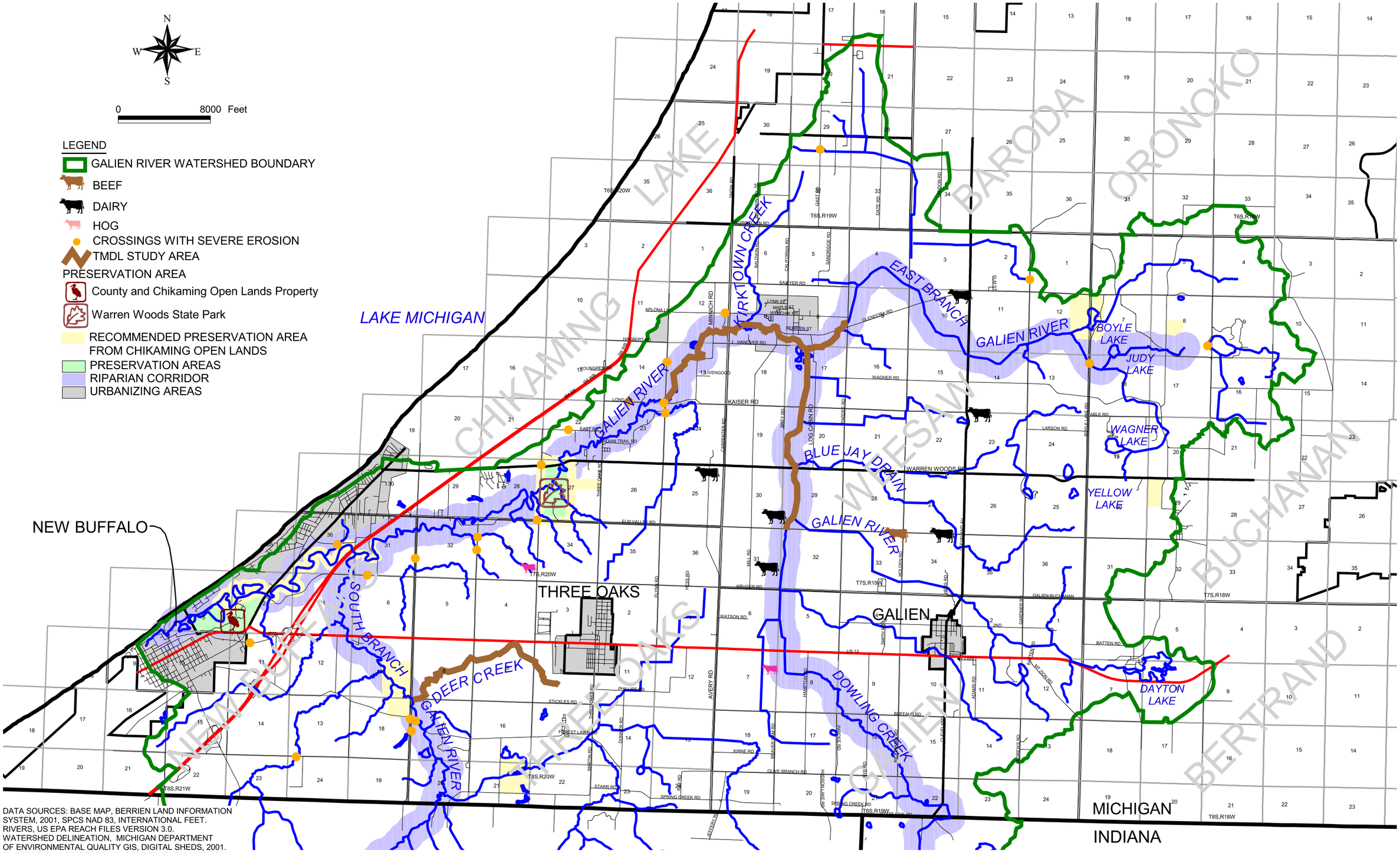

DATA SOURCES: BASE MAP, BERRIEN LAND INFORMATION SYSTEM, 2001, SPCS NAD 83, INTERNATIONAL FEET.
RIVERS, US EPA REACH FILES VERSION 3.0.
WATERSHED DELINEATION, MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY GIS, DIGITAL SHEDS, 2001.
LIVESTOCK, NRCS, PERSONAL COMMUNICATION MAY 2002.
PRESERVATION AREAS, MIDLAND COUNTY PLAT BOOK, 1991.
URBANIZING AREAS, MICHIGAN DEPARTMENT OF NATURAL RESOURCES & EDITED FROM STEERING COMMITTEE RECOMMENDATIONS.
TMDL, MADE FROM MDEQ DESCRIPTION.
RIPARIAN CORRIDOR, STEERING COMMITTEE RECOMMENDATIONS.

D:\WORK\01338\PROJECT\GALIEN_EXHIBITS.APR\FIG 15 CRITICAL AREAS DATE: 5/13/2003 USER: CDA

CRITICAL AREAS

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