Attachment 8
NRC3-10-0048

Supplemental Response to RAI letter related to Fermi 3 ER

RAI Question CR4.1.3-8

NRC RAI CR4.1.3-8

Provide a copy of the Maritime Assessment report when available. Report should be in color, and include all figures, photos, and appendices.

Supporting Information

Information included in this report describes the results of archaeological studies in Lake Erie for the Fermi 3 project. The report is critical to ensuring a thorough and complete EIS review of project impacts. This information will be used to complete the NEPA analysis and to support compliance with the Section 106 process.

Supplemental Response

A letter from the Commonwealth Cultural Resource Group, Inc. to Doug Timpe (Black & Veatch) with the subject "Submerged Sites Sensitivity Study, Fermi 3 Project, Monroe County, Michigan" dated December 1, 2008, was provided to the NRC in Detroit Edison letter NRC3-09-0010 (ML091940218), dated June 19, 2009.

An error was identified on Figure 4 of the study, which depicts the location of several shipwrecks on Lake Erie in the vicinity of the Fermi site. The shipwrecks are in the correct location, however, the names were incorrect. Additionally, a clarifying statement was added to the final paragraph of the report stating that any potentially significant maritime resources that may be present within the project area may exhibit degraded integrity, due to the dynamic and turbulent nature of the shallow-water near-shore environment.

A letter from the Commonwealth Cultural Resource Group, Inc. to Doug Timpe (Black & Veatch) with the revised subject "Submerged Sites Sensitivity Study, Fermi 3 Project, Monroe County, Michigan" dated October 12, 2010, is attached.

Note that Figure 5 of the revised study contains information identifying the location of a historic resource and is enclosed separately in Attachment 9. As such, Detroit Edison requests that Figure 5 in Attachment 9 be withheld from public disclosure, in accordance with Section 304 of the National Historic and Preservation Act (NHPA).

Proposed COLA Revision

None

NRC3-10-0048
RAI Question CR4.1.3-8

Enclosure 1

Submerged Sites Sensitivity Study,
Fermi 3 Project, Monroe County, Michigan
(following 16 pages)

COMMONWEALTH
CCRG
CULTURAL RESOURCES
GROUP, INC.

October 12, 2010
J-0584/R-0767.08

Mr. Douglas Timpe
Black & Veatch Corporation
11401 Lamar Avenue
Overland Park, KS 66211

RE: Submerged Sites Sensitivity Study, Fermi 3 Project, Monroe County, Michigan

Dear Mr. Timpe:

Commonwealth Cultural Resource Group, Inc. (CCRG) was contracted by Black & Veatch Corp. to undertake a submerged sites sensitivity study of the proposed near-shore dredging/outfall activity area associated with the Fermi 3 Project. The project is located adjacent to the western shore of Lake Erie, Monroe County, Michigan (Figure 1). For this effort, CCRG identified previously reported submerged sites and maritime-related resources within the vicinity of the area of potential effect (APE) of the dredging/outfall activity area and developed a predictive model to determine the likelihood of the APE to contain cultural resources. Information was gathered at the Michigan State Historic Preservation Office (SHPO) and the Michigan Office of the State Archaeologist (OSA), and additional research was completed at the Michigan State Library. The purpose of the study is to assess the Project's potential to impact underwater resources in the APE. No survey has been conducted for the underwater resources assessment.

Project Overview

The Detroit Edison Company (DECo) proposes to construct and operate a new nuclear power plant at the existing Fermi site, to be designated as Fermi 3, for the purpose of generating electricity for sale. The Fermi 3 Project site is located in the northeastern corner of Monroe County in southern Michigan, near the northern border of Ohio and about 20 mi (32 km) north of the Michigan/Ohio border. The site is on the west bank of Lake Erie, approximately 24 mi (39 km) northeast of Toledo, Ohio, and 30 mi (48 km) southwest of Detroit, Michigan. The U.S./Canada international border runs through Lake Erie about 7 mi (11 km) east of the site, and the River Raisin is located about 6 mi (10 km) southwest of the site. The project site lies within Private Claim 528 and encompasses portions of Sections 16, 17, 20, and 21, T6S/R10E, Frenchtown Township, Monroe County, Michigan. The town of Stony Point, Michigan, is about 2 mi (3 km) south of the Fermi 3 site, and the town of Monroe, Michigan, is approximately 7 mi (11 km) southwest. The location of project site was historically known as Lagoona Beach.

Main Office: 2530 Spring Arbor Road Jackson, Michigan 49203 • (517) 788-3550/Fax (517) 788-6594
New York Office: 2495 Main Street Room 448 Buffalo, New York 14214 • (716) 831-9003/Fax (716) 831-9003
Wisconsin Office: P.O. Box 1061 Minocqua, Wisconsin 54548 • (715) 358-5686/Fax (715) 358-6656
www.ccrginc.com

Previous Cultural Resources Investigations

In support of the Fermi 3 Project, CCRG has conducted surveys of cultural resources (above-ground and archaeological) to identify historic resources in and near the project site area and to assess possible impacts to these resources (see Demeter et al. 2008). All cultural resources investigations conducted by CCRG have been carried out pursuant to Section 106 of the National Historic Preservation Act (NHPA) (P.L. 89-665, October 15, 1966; 16 U.S.C. 470) and its implementing regulations (36 CFR 800), which require federal agencies to take into account their activities on historic resources that may be impacted as a result of project activities. The work reported herein conforms to the requirements of the NHPA, as well as the regulations contained in the Nuclear Regulatory Commission Office of Nuclear Reactor Regulation Environmental Standard Review Plan (NUREG-1555), and the requirements of the Michigan SHPO.

The cultural resources investigations of archaeological and above-ground resources for the Fermi 3 Project began November 2007 and continued into April 2008. An additional archaeological survey was conducted on one small parcel on July 15, 2008. The archaeological survey resulted in the identification of six previously unrecorded archaeological sites. Four sites (20MR819, 20MR820, 20MR821, 20MR822) were prehistoric isolated findspots, one (20MR818) was a multicomponent (prehistoric and historic) site consisting of a single prehistoric chert flake and a surface scatter of historic artifacts, and one (20MR823) was composed of the remnants of five structures and associated historic artifacts. None of the archaeological sites were considered archaeologically significant and none were recommended eligible for listing in the National Register of Historic Places (NRHP). CCRG's above-ground resources survey recorded 83 properties, of which one four-building district and 19 individual properties were recommended eligible for listing in the NRHP.

Historic Context

The Fermi 3 Project area has been intimately tied to its marine resources from the time of its earliest settlements. Early Euro-American pioneers in the area were dominated by the French who arrived during the eighteenth century, and beginning in 1786, French settlers and speculators routinely acquired large tracts of land extending from Sandy Creek to Swan Creek (Lowrie and Clarke 1832:190). Eventually, a 4 ac (2 ha) mill (the Meldrum and Park Mill) and still house lot on Stony Creek was constructed, allowing the project area settlement (known as Frenchtown) to produce grains to be processed as either flour or distilled spirits for the upper Great Lakes trade (Michigan Pioneer and Historical Society [MPHS] 1886:524; Wing 1890:124). The Stony Creek mill complex proved to be short lived, however, as the mill was destroyed by fire during the War of 1812 (Wing 1890:124, 127).

In 1816, a number of French-Canadian families obtained land grants from the government, which led to the settlement and eventual formal organization of Monroe County (Menard 1995:32). The settlers were reminded of the coast of their native France and named their settlement and the bay after the French seaport of Brest (*Observer* 1944; *Monroe Commercial* 1876:1). A decade later, the 1827 opening of the Federal Land Office in the community commenced a period of slow but steady growth during which time newcomers sought rich land to develop towns and shipping on the lake (*Observer* 1944; Wing 1890:124, 137).

The settlements of Brest (on Stony Creek) and Newport (on Swan Creek) both were navigable by light draught boats; however, Brest was to become a significant regional fishing center. Commercial fishing operations were begun at Brest Bay (southwest of the Fermi 3 Project area) in 1857 by the firm of Chittenden and Company, which soon sold out to the Detroit-based shipbuilder and fishing fleet owner John P. Clark (Wing 1890:466). Clark's interest in the area continued through 1887. Two of his employees, Joseph B. Dewey and Jessee N. Dewey, began their own independent operations at the location in 1860. The Dewey brothers' business holdings included several fishing sailboats, a 100-ton passenger steamer the *L. Brickhead,* and 10 to 12 large buildings, including a refrigerator house. At the height of the industry, the brothers employed a large number of men whose catch was three to four tons a day, mostly herring and a few sturgeon. In the winter months, whitefish were harvested (Menard 1995:18-19, 21, 24; *The Observer* 1944). The Dewey brothers eventually expanded their business interests into Lakes Huron and Michigan; however, Brest remained their center of operations. With the construction of the freezer and packing plant at this location, their trade was eventually extended westward as far as Denver. By the 1890s, much of their harvest of sturgeon caviar was reportedly shipped to Europe (Dewey 1885:548; Wing 1890:467).

The commercial outlets that became available to the local fishing industry during the closing decades of the nineteenth century were primarily the direct result of ongoing railroad development initiated with the 1856 completion of the Detroit, Toledo & Monroe Railroad (DTM). Steamers that transported goods also contributed to the area's transportation advantages (Clark 1863:418). Steamers most often docked at the Stage House and Steamboat Hotel in Newport (Oldport).[1] With a population ranging from 500 to 550 inhabitants, Newport figured as an important forwarding center for grain, produce, and lumber well into the 1890s (Polk 1875:584, 1895:1301).

By the opening of the twentieth century, harvesting excesses and pollution had taken a toll on the local fishing industry. Species replacement in the reeded shallows along the shorefront was

[1]At that time, Swan Creek was much deeper and wider than it is presently (Childs and DeVries 1956-2002).

common after the introduction of the German Carp during the 1880s (Bulkley 1913:393), and by the opening of the century, enterprising investors had begun to develop dredged carp ponds along the margins of the Huron and Raisin rivers and Swan Creek. Catering to consumers in urban centers, stocks of carp sold at a rate of 1.5¢ to 2.5¢ per pound. As of 1926, the local commercial fishery was described as, "now confined to carp which are shipped alive to eastern markets" (Hanley 1926:n.p.). The network of multiple canals appearing on U.S. Geological Survey topographic maps is likely associated with one such enterprise (Figures 2 and 3).

Tourism and resorting soon replaced commercial fishing as a significant industry. The new wealth of Detroit's growing working classes that emerged out of the region's industrial expansion during World War I created a new potential in real estate marketing. The premium placed on rural lakefront properties in Monroe County during the 1920s drew heavily on the new transportation technologies of the automobile and the removable "Rowboat Engine" or outboard motor (Mirken 1970:1045). The boom era in vacation property investments was short-lived, however, and was obliterated by the financial collapse of the Great Depression. During the 1930s, only two new subdivisions were recorded, with a similar number recorded in the 1940s. Other properties north and south of the project vicinity were acquired as state-owned parklands during this period, including the Pointe Mouilee State Game Area and Wildlife Refuge at the mouth of the Huron River and Sterling State Park at the mouth of Sandy Creek.

Previous Investigations of Underwater Resources

Lake Erie, the twelfth largest freshwater lake in the world, is the shallowest and warmest of the five Great Lakes. Consequently, it has gained the reputation as being the most treacherous. Over 1,700 shipwrecks are known to be submerged there; the locations of only 277 are known (Ohio State University Extension 2008). Despite this number of known wrecks, few systematic surveys of submerged sites have been conducted in the area. A 2003 pilot study conducted by the Ohio Department of Natural Resources and the U.S. Geological Survey documented seven shipwrecks off the coast of Ohio using GPS technology and side-scan sonar (Liebenthal et al. 2007). That same year, Pennsylvania-based archaeologists and recreational divers began a program of identifying and mapping shipwreck sites in Lake Erie (Spice 2003). No formal investigations of underwater resources have been conducted within the Fermi 3 Project dredging/outfall area or the near vicinity.

Project Area Submerged Sites

Due to the dynamic nature of submerged sites and the absence of precise location information, all recorded resources within 3 mi (4.8 km) of the Fermi 3 Project area were included within this study. Four previously identified shipwrecks are located within this 3 mi (4.8 km) area (Figure

4), as recorded either on the 1978 map of Lake Erie shipwrecks (Midwest Explorer's League 1978) or the 1998 Lake Erie dive chart (Ackerman 1998). The *Adieu* is listed as a steamer yacht that foundered on September 16, 1906. The *Fame* is listed as schooner loaded with general cargo that capsized and foundered off of the Monroe Piers on August 31, 1858. The *Roy* is listed as a tug that struck ice and sank southeast of Stony Point in August 1895. The *General Franz Speigel,* which is plotted at the same location as the *Roy,* is listed as a schooner that sank off of River Raisin in July 1903.

A search of the files maintained by the Michigan OSA indicated one previously recorded archaeological site (20MR702) on the Lake Erie shoreline of the existing Fermi property (Figure 5). This site is listed as a prehistoric site of unknown cultural period, and it has not been evaluated for possible listing in the NRHP. During CCRG's archaeological survey of the existing Fermi property, no evidence of the site was found (Demeter et al. 2008).

Project Area Submerged Sites Sensitivity Evaluation

Submerged Prehistoric Archaeological Sites

One prehistoric archaeological site of unknown age/cultural affiliation (20MR702) is recorded on the Lake Erie shoreline within the Fermi 3 Project site. CCRG archaeologists investigated the shoreline in the area of 20MR702 during the spring of 2008 and found the entirety of the beach along the south half of the Fermi tract as either rip rap boulder fill or as a naturally occurring cobble beach (Figures 6 and 7). Freshly exposed cobbles farther to the north, towards Swan Creek, appeared where the soils had been heavily eroded (Figures 8 and 9). No evidence of 20MR702 was encountered, nor was there evidence of archaeological remains in any other area along the beach.

With regard to shoreline prehistoric habitation or use sites, it is assumed that lakeshores were densely occupied during the Archaic period; however, many occupation sites are currently underwater as a result of water level fluctuations in the Huron-Michigan-Erie basins beginning eight millennia ago (Shott 1999:73). The Fermi 3 Project area has been extensively modified by landfilling and dredging operations that have likely destroyed any evidence of prehistoric occupation that may be submerged. Fermi 3 Project activities are unlikely to impact submerged prehistoric archaeological sites.

Submerged Historic Maritime Sites

The bathymetric data show that the depth of the project area ranges from 2 ft (0.6 m) to 16 ft (5.1 m) (National Geophysical Data Center 1998). This shallow-water environment indicates that

submerged resources within the APE would be easily locatable. The imprecise location data for the four previously identified submerged resources in the vicinity of project area, combined with dynamic nature of submerged sites, indicates a distinct possibility that these sites may reside in whole or in part within the APE. The lack of recorded submerged cultural resources directly within the APE is likely the result of limited research in the area rather than an absence of submerged sites.

Furthermore, the historic record documents a number of commercial and recreational activities along the Lake Erie shoreline in the vicinity of the project area. The shallow depth of the lake further enhances the possible existence and preservation of near-shore maritime resources such as historic docks, rock and fish cribs, or other maritime-related structures.

Based on proximity to known submerged resources in the vicinity of the project area, the lack of research on submerged sites within the area, and the shallow-water environment of the project area, the entire APE must be considered as having a moderate to high sensitivity for containing previously unidentified maritime resources. Despite the proposed project area's previous disturbance from construction and dredging activities for Fermi I, the dynamic nature of the near-shore environment supports this high sensitivity assessment. However, due to the dynamic and turbulent nature of the shallow-water near shore environment typical of the Great Lakes and present within the project area, any potentially significant maritime resources that may be present within project area may exhibit degraded integrity.

Sincerely,

Andrew J. Weir,
President and Project Underwater Archaeologist

References

Ackerman, Paul W. (editor)
1998 *Lake Erie Dive Chart with Detroit River, St. Clair River & Lake St. Clair.* Midwest Explorer's League, Chicago.

Childs, Marian and James DeVries (compilers)
1956-2002 Monroe County Oral History: Oral History Transcripts for Monroe County Interview. 4 vols. Looseleaf collection maintained at Monroe County Library System, Ellis Local History Collection, Monroe, Michgian.

Clark, C. F.
1863 *Michigan State Gazetteer and Business Directory for 1863-4*. Charles F. Clark, Detroit.

Demeter, C. Stephan, Kent C. Taylor, Elaine H. Robinson, and Cheryl Chidester
2008 *Phase I Cultural Resources Evaluation of the Fermi Atomic Power Plant Unit 3 (Fermi 3) Project, Frenchtown and Berlin Townships, Monroe County, Michigan.* Commonwealth Cultural Resources Group, Inc., Jackson, Michigan.

Dewey, F. A.
1885 The Fishing Ground at Brest. *Michigan Pioneer and Historical Collections*, 7:546-548. Michigan Pioneer and Historical Society, Lansing.

Hanley, E. H.
1926 *Pageant of Historic Monroe, June 23-24, 1926*. Lamour Printing, Monroe, Michigan.

Liebenthal, Dale L., J. A. Fuller, and Constance J. Livchak
2007 *Archeological Search for Shipwrecks in the Vicinity of Kelleys Island, Lake Erie: A Pilot Study, August 2003*. Report of Investigations 148. Ohio Department of Natural Resources, Division of Geological Survey, Columbus.

Lowrie, W. and M. St. Clair Clarke
1832 Land Titles in Michigan Territory. In *American State Papers: Public Lands*, vol. 1, pp. 305-557. Gales and Seaton, Washington, D.C.

Menard, T.V.
1995 *R.F.D. Newport: A History of Newport and Berlin Township, Michigan*. Monroe County Library System, Monroe County.

Michigan Pioneer and Historical Society (MPHS)
1886 Miscellaneous Documents. *Michigan Pioneer and Historical Collections* 8:449-669.

Midwest Explorer's League
1978 *Lake Erie Dive Chart: Shipwrecks Located and Identified.* Midwest Explorer's League, Chicago.

Mirken, A.
1970 *1927 Edition of the Sears, Roebuck Catalogue.* Crown Publishers, Inc. New York.

Monroe Commercial
1876 Bygones of Monroe: Stoney Creek Settlement. 27 April. Monroe, Michigan.

National Geophysical Data Center
1998 *Bathymetry of Lake Erie and Lake Saint Clair.* National Geophysical Data Center, Boulder.

The Observer
1944 The History of Brest. 11 March. Monroe, Michigan

Ohio State University Extension
2008 Shipwrecks of Lake Erie. Electronic document, http://lucas.osu.edu/community/seagrant-program/shipwrecks-of-lake-erie.

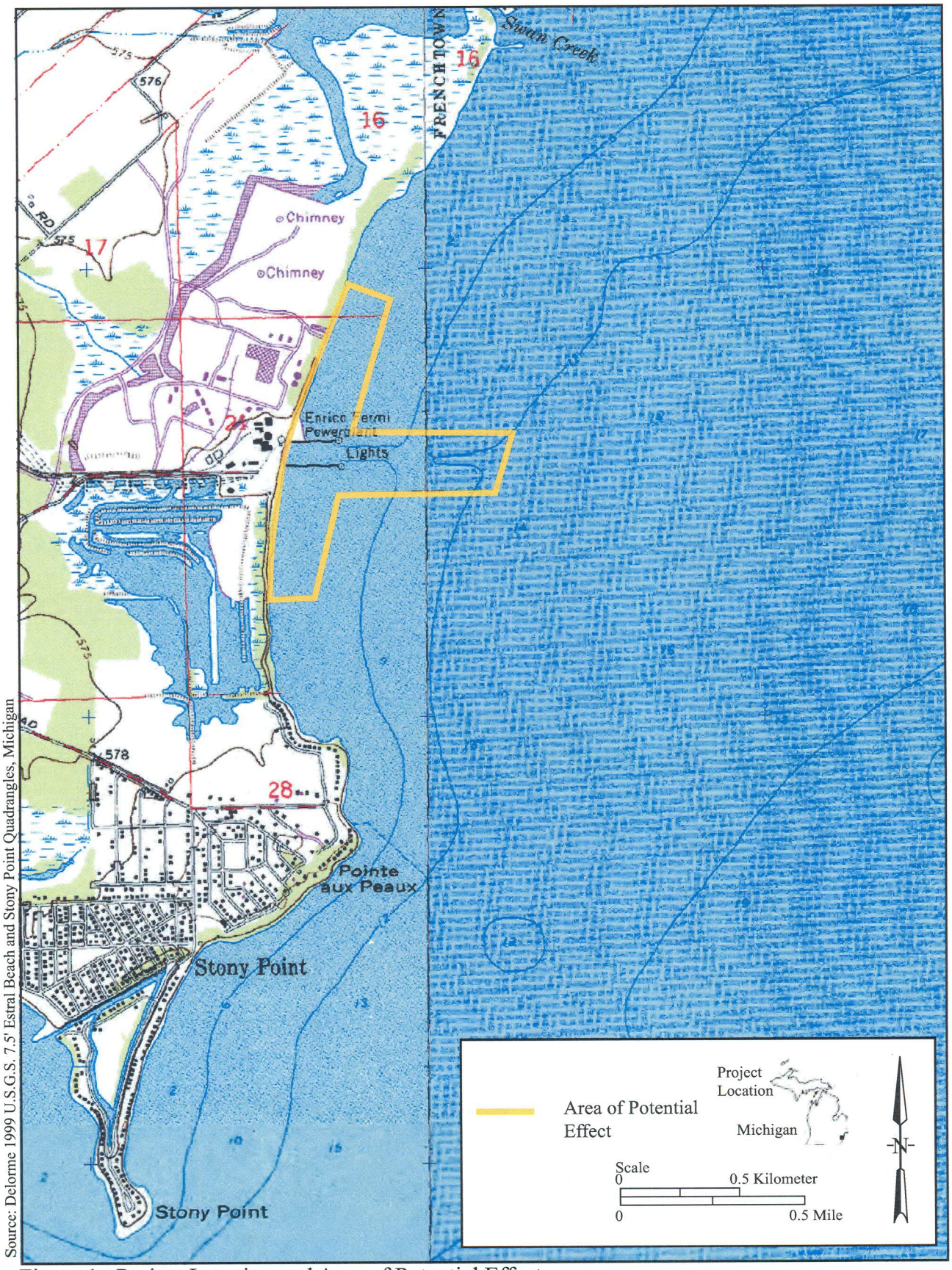
Polk, R. L.
1875 *Michigan State Gazetteer and Business Directory, 1875.* R. L. Polk and Company, Detroit.

1895 *Michigan State Gazetteer and Business Directory, 1895-96.* R. L. Polk and Company, Detroit.

Shott, Michael J.
1999 The Early Archaic: Life after the Glaciers. In *Retrieving Michigan's Buried Past: The Archaeology of the Great Lakes State*, edited by John R. Halsey and Michael D. Stafford. Cranbrook Institute of Science. Bloomfield Hills, Michigan.

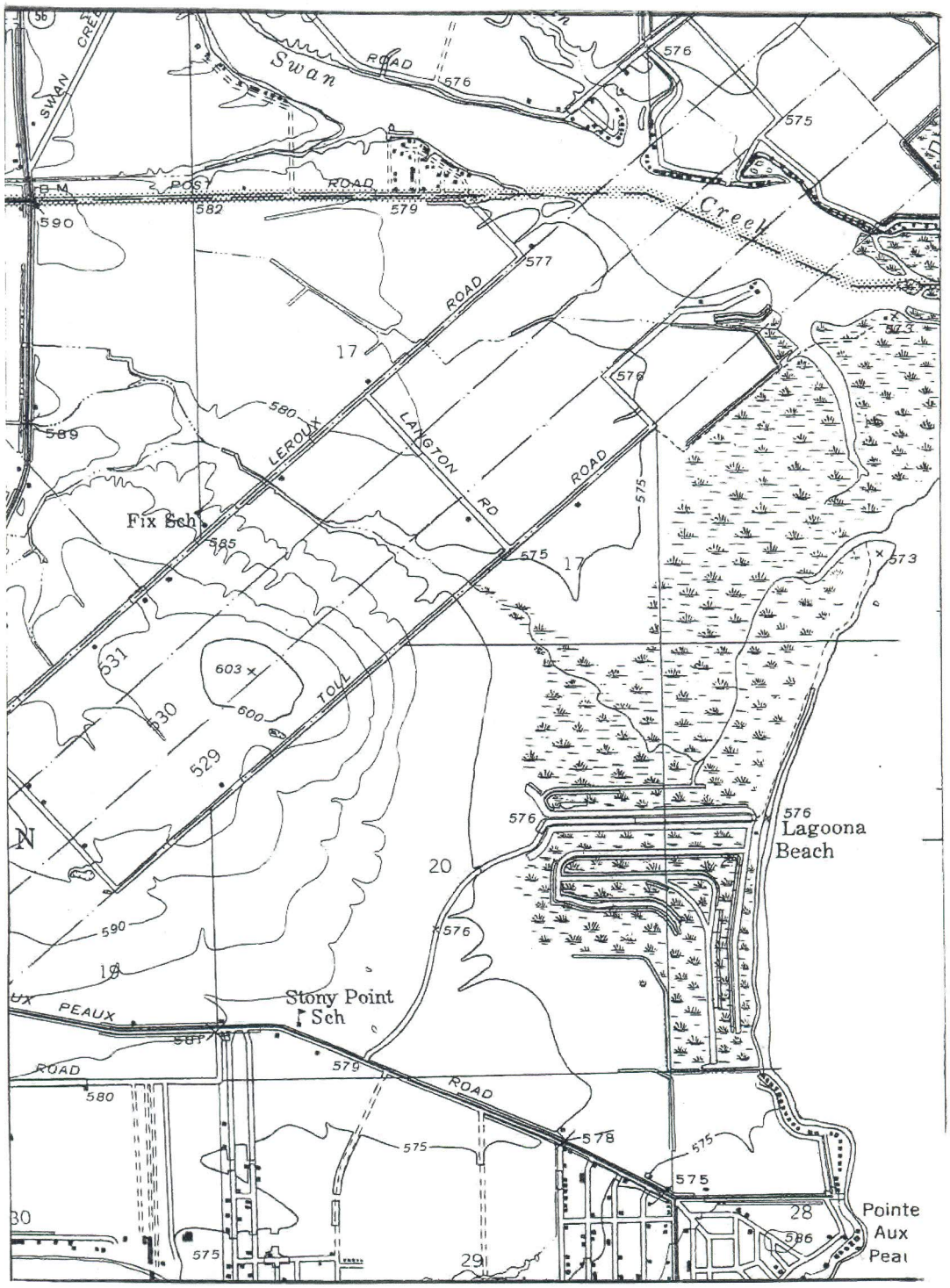
Spice, Byron
2003 Archaeologists Surveying Lake Erie Floor for Shipwrecks. *Post-Gazette.* Electronic document, http://www.post-gazette.com/healthscience/20030616underwater0616p2.asp.

Wing, T. E.
1890 *History of Monroe County, Michigan*. Munsell and Company, New York.



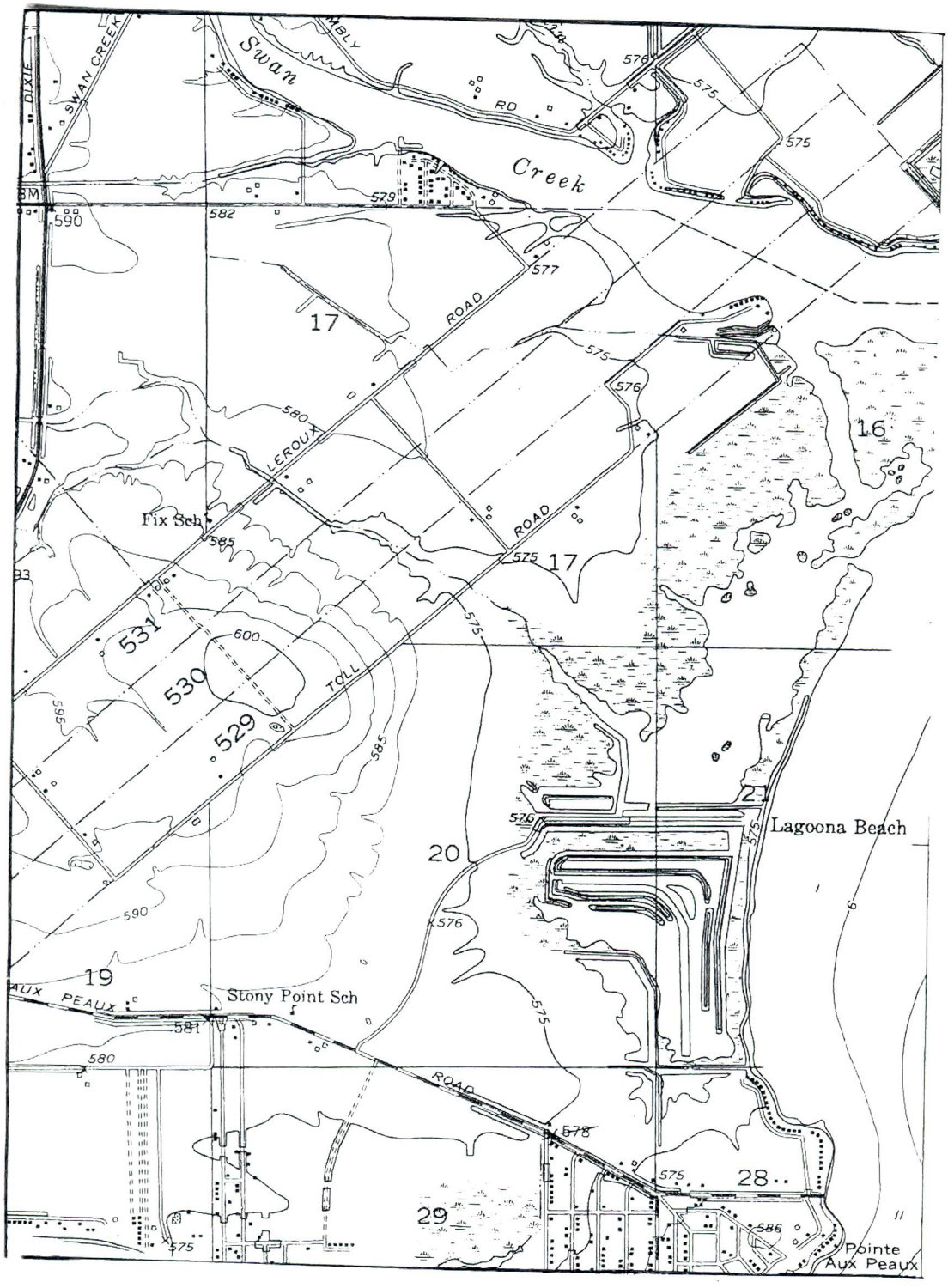
Source: Delorme 1999 U.S.G.S. 7.5' Estral Beach and Stony Point Quadrangles, Michigan

Figure 1. Project Location and Area of Potential Effect



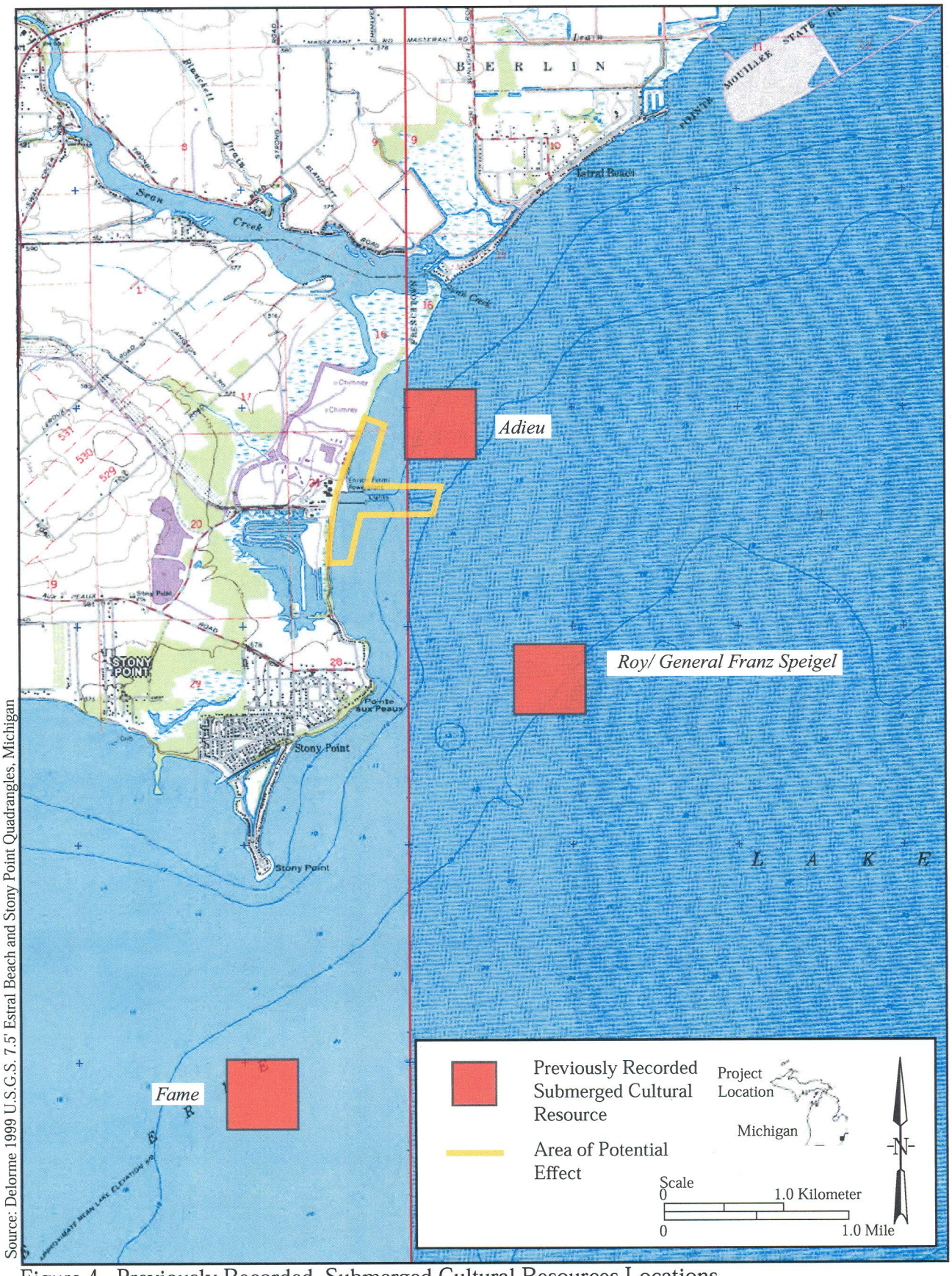
Source: U.S.G.S. 7.5' Stony Point Quadrangle, Michigan 1942

Figure 2. Fermi Site, 1940



Source: U.S.G.S. 7.5' Stony Point Quadrangle, Michigan 1952

Figure 3. Fermi Site, 1952



Source: Delorme 1999 U.S.G.S. 7.5' Estral Beach and Stony Point Quadrangles, Michigan

Figure 4. Previously Recorded Submerged Cultural Resources Locations

Figure 6. Site 20MR702, Reported Site Location, Rip Rap on Lake Erie Shore, View North

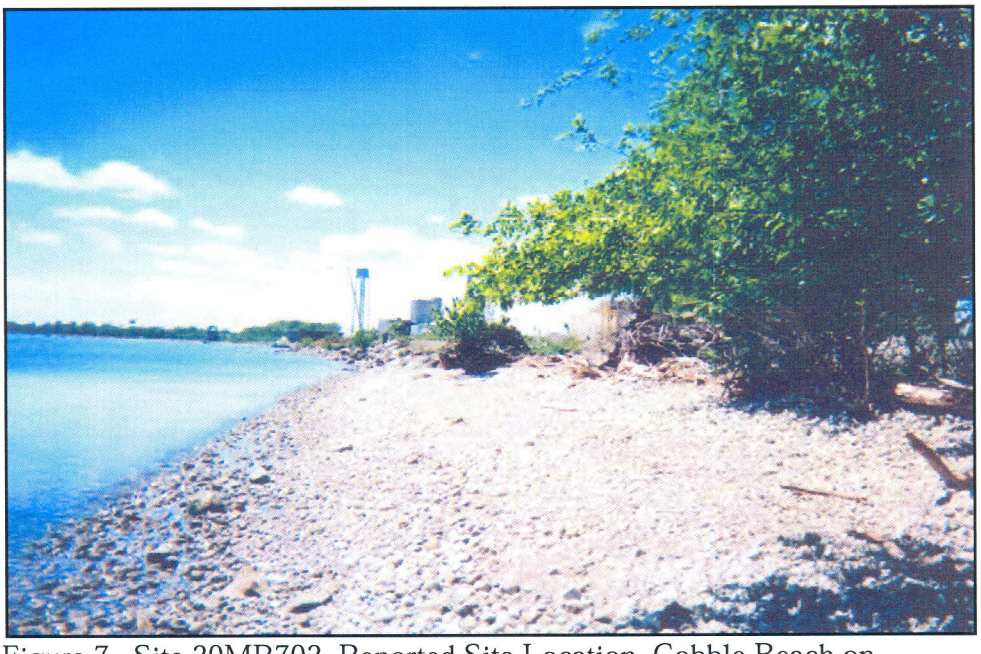


Figure 7. Site 20MR702, Reported Site Location, Cobble Beach on Lake Erie Shore, View South

Figure 8. Site 20MR702, Reported Site Location, Eroded Lake Erie Shore, View North

Figure 9. Site 20MR702, Reported Site Location, Eroded Lake Erie Shore, View South