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Characterizing the Watershed

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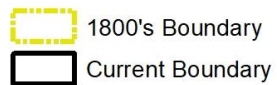
Timeline of Changes in the Watershed

A History of Development Within Lake Mattamuskeet and Surrounding Watershed

1800s Watershed Boundary

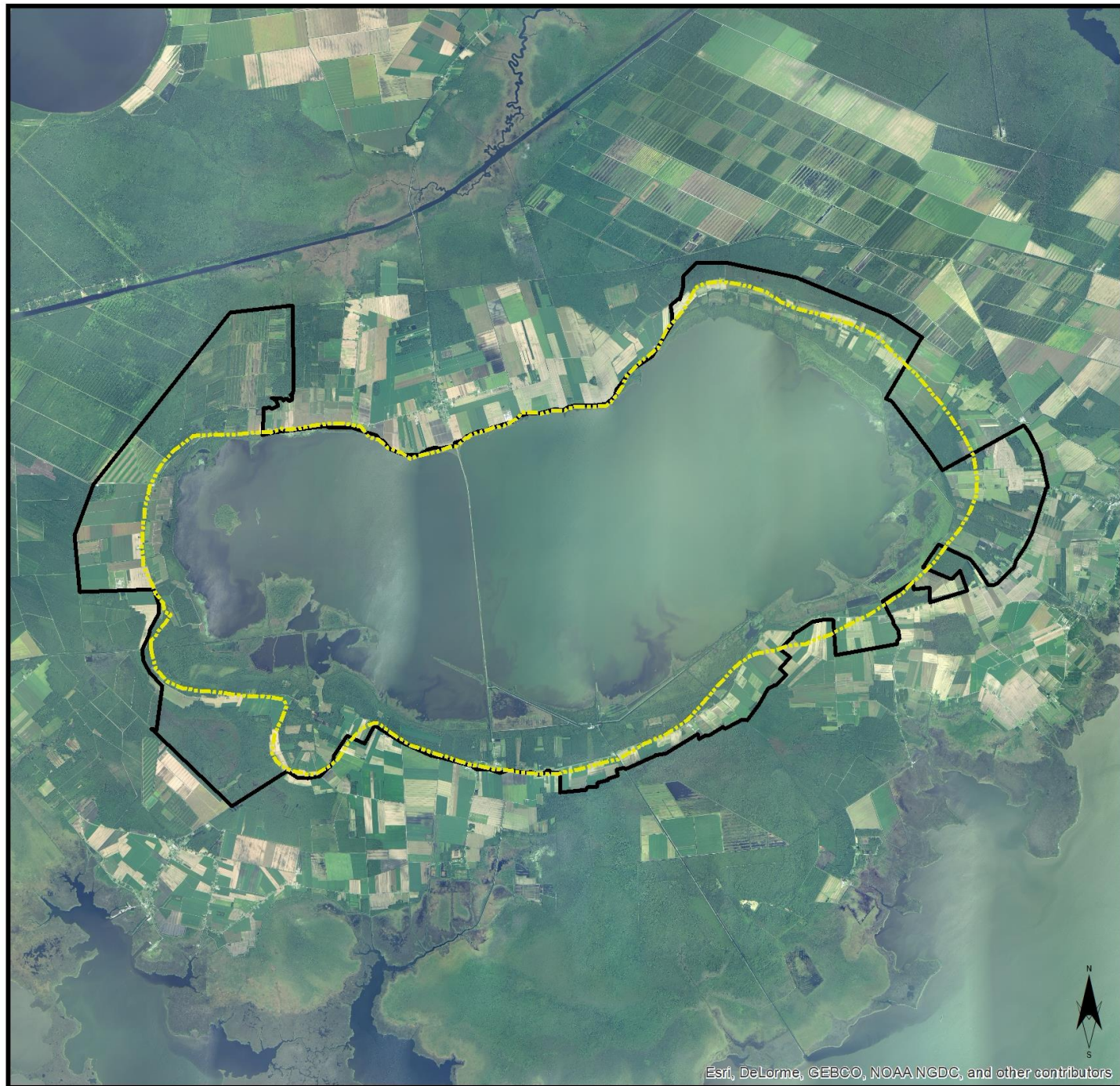
360-1584-	Inputs of organic matter into the lake from the surrounding catchment is extremely limited leaving Lake Mattamuskeet with clear water, a sandy lakebed and few nutrients to support aquatic plant growth. ⁶
1773-	Lake Mattamuskeet covers 110,000 acres and is 6-9' deep. An attempt by the Provincial Congress to dig a canal to Pamlico Sound fails, along with another attempt by an appointed drainage board in 1789. ^{2,3}
1825-	The NC legislature gifts ownership of the lake to the State Literary Board with the expectation they will improve and sell the surrounding lands to support public education. ^{2,3}
Late 1830's-	The State Literary Board assigns \$200,000 (\$4.5 million today) to the construction of canals to drain Mattamuskeet, Pungo and New Lakes. ³
1838-	Lake Landing Drainage Canal is dug by hand approximately 10-15' deep and 15-25' wide extending 7 miles from Lake Mattamuskeet to Pamlico Sound at Wysocking Bay. When complete, drainage to the sound reduces the lake from 110,000 to 55,000 acres. ^{2,3}
1849-	Fairfield Canal is dug north to the Alligator River, providing drainage and transportation for the city of Fairfield. ³
1860-	Heightened European settlement and land alterations dramatically increase organic matter input to the lake. These nutrients support the growth of phytoplankton within the lake over the following decades. ^{3,4,6}
1909-	NC Public Law 509 is passed authorizing the State Board of Education and around 550 Hyde County landowners to

Lake Mattamuskeet Watershed Boundaries Through Time



Historic Watershed Boundary was delineated through the utilization of historic topographic maps, geologic conditions, datasets and maps from the following sources: Heath 1975, Luke & Mauger 1984

0 0.75 1.5 3 Miles



Esri, DeLorme, GEBCO, NOAA NGDC, and other contributors

1932- Lake Mattamusket Drainage Developments




Hyde County Drainage Associations & Historic Drainage District 1


 Watershed

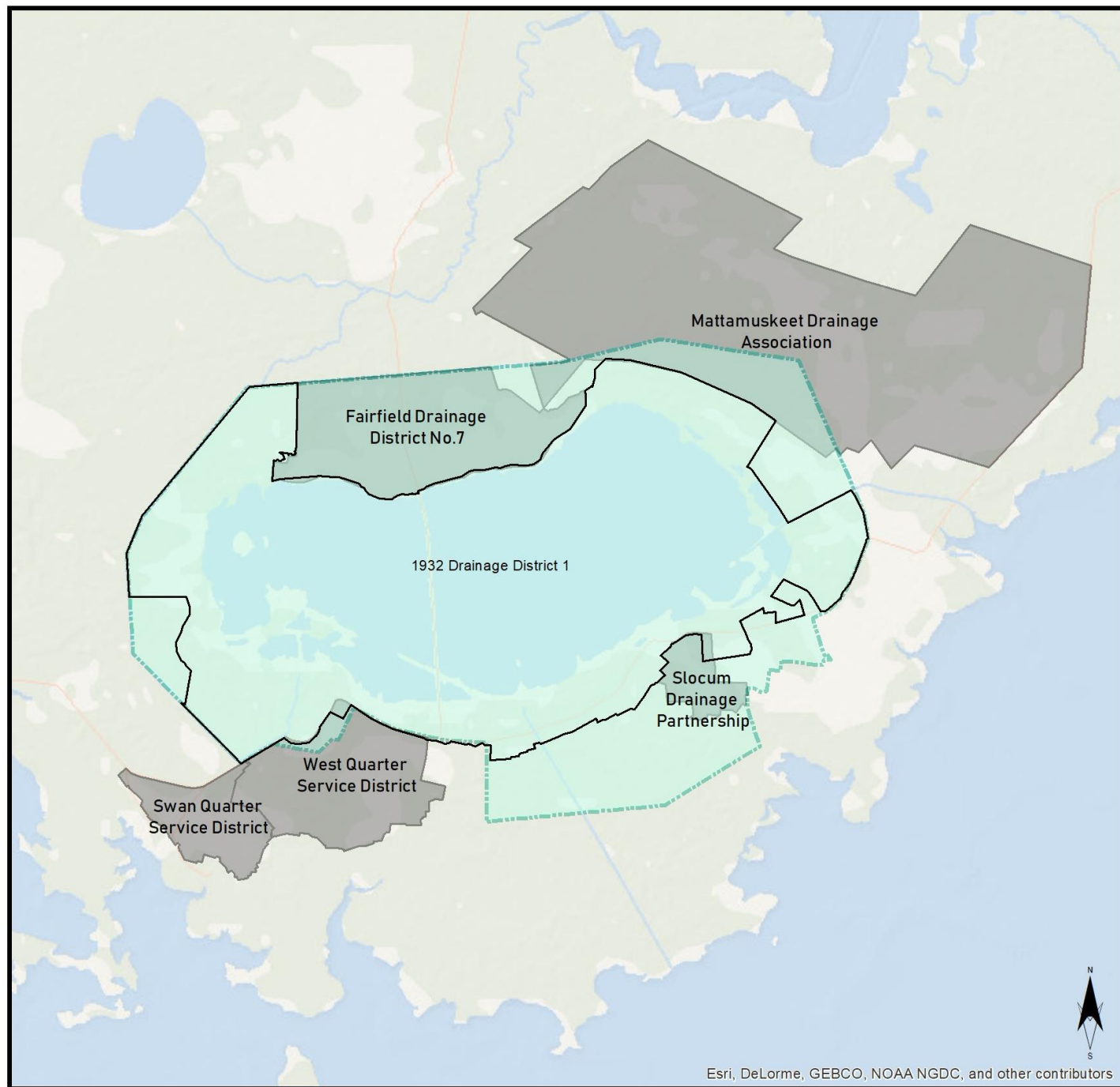
Drainage Districts

 1932 Drainage District 1

 Hyde County



Historic Drainage District 1 was adapted from a 1932 map provided by Hyde County Soil and Water Conservation. DD1 displays the boundaries of the first original drainage association in Hyde County.

 Miles
0 1.25 2.5 5



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Hyde County Drainage Associations & Hot Spot Flooding Regions

-  Watershed
-  Drainage Districts


Flooding Regions

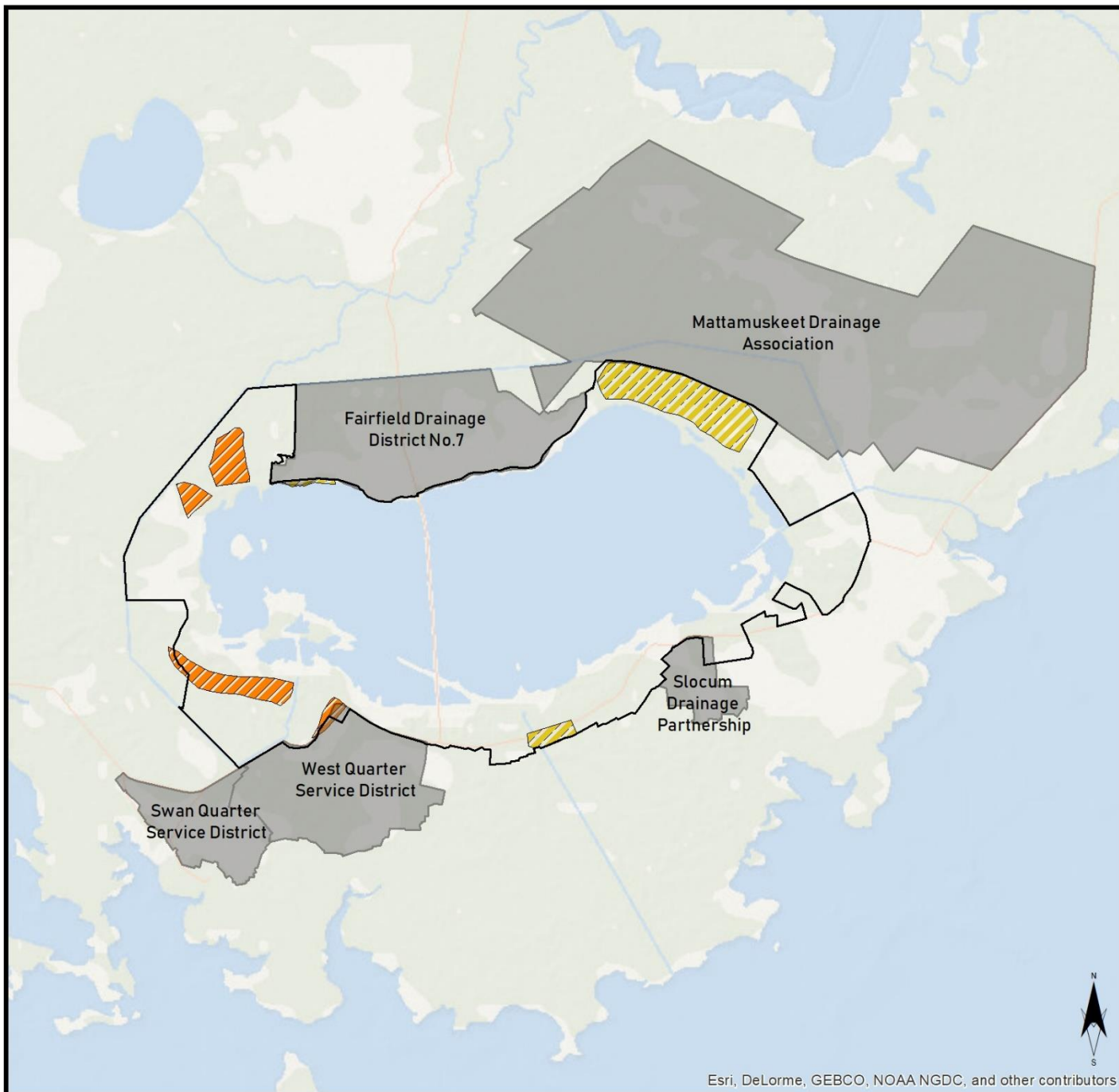
-  Residential
-  Farming

Hot Spot Flooding Regions surrounding Lake Mattamuskeet were broken down into two categories, Residential and Farming. These regions exist in lower elevation or depressional regions surrounding the lake.

Residential areas represent portions of those communities surrounding Lake Mattamuskeet which experience regular flooding during storms, strong winds, or severe weather events.

Farming areas represent regions of farmland which regularly experience flooding during storms or severe weather events.

 Miles
0 1.25 2.5 5

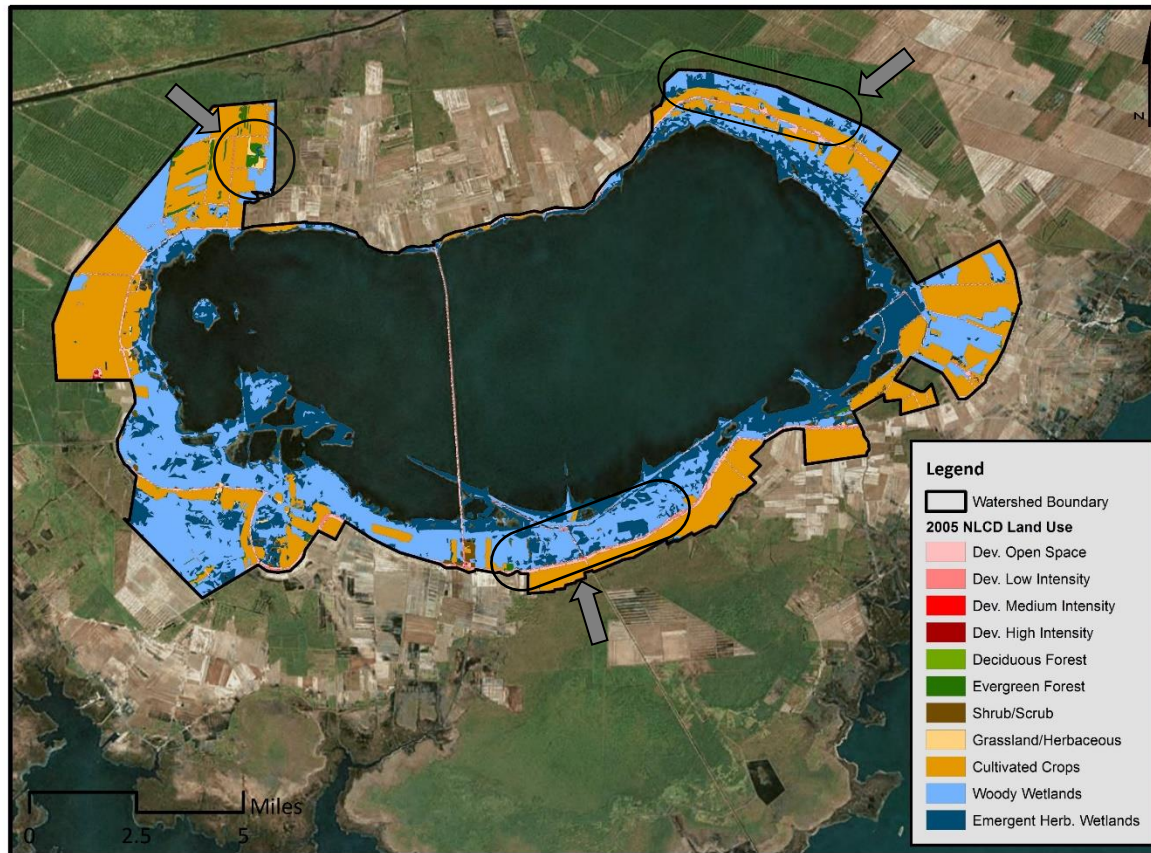


Tracking Changes in Land Use

Lake Mattamuskeet Watershed Land Use: 2001-2006-2011

NLCD Land Use Class	2001 (Ac)		2006 (Ac)		2011 (Ac)
Developed	1,569		1,569		1,569.8
Forest	279.8	↓	246.4		250.5
Shrubland	222.2		222.2	↓	195.8
Herbaceous	34.2	↑	67.6	↑	89.1
Planted/Cultivated	10,110.0		10,110.8		10,106.1
Wetlands	17,267	↑	17,330	↓	15,010

Lake Mattamuskeet Watershed Land Use: 2011



Top Three Land Uses:

1. Woody Wetlands
2. Cultivated Crops
3. Developed Open Space

Summary: Minor changes in land use over the last 15 years. No significant changes in developed land or agricultural lands

Next Step: Analysis 2016 data set when available; Identify any data for pre-2001 land use.

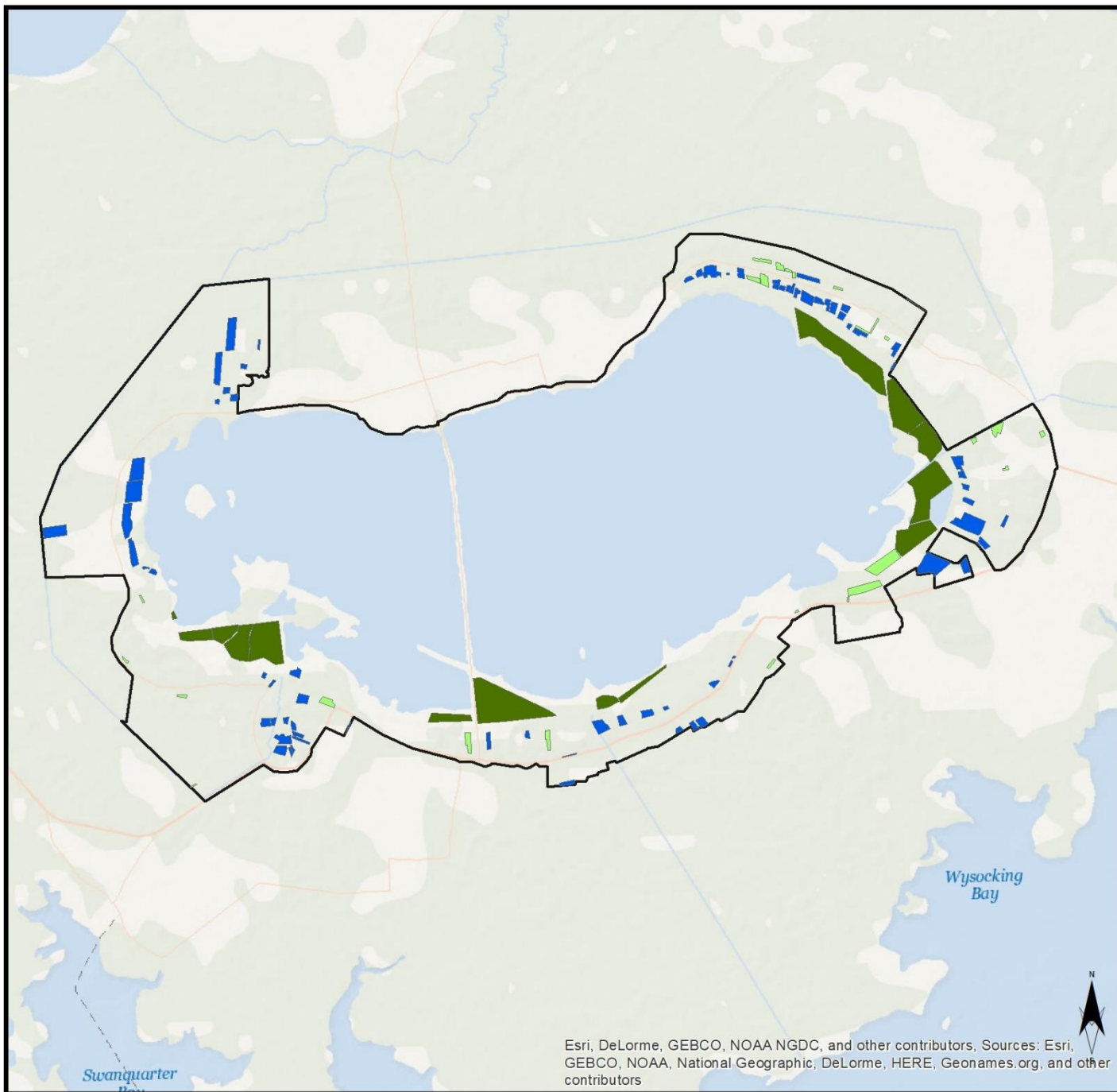
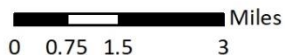
Lake Mattamuskeet Watershed Impoundment Development

Year Developed



Historic aerial imagery and google earth timescales were utilized to track the development of waterfowl impoundments within Hyde County over the years.

Most impoundments were developed during the late '80s and early to mid '90s during the height of the CPR program which promoted the conversion of low producing cropland into waterfowl impoundments.



Esri, DeLorme, GEBCO, NOAA NGDC, and other contributors. Sources: Esri, GEBCO, NOAA, National Geographic, DeLorme, HERE, Geonames.org, and other contributors