FISHERIES DIVISION

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

Central Lake Michigan Management Unit

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Staff:

Todd Kalish, Lake Michigan Basin Coordinator

Scott Heintzelman, Unit Manager

Rich O'Neal, Fisheries Management Biologist

Mark Tonello, Fisheries Management Biologist

Heather Hettinger, Fisheries Management Biologist

Eric Askam, Fisheries Technician

Bob Kerry, Fisheries Technician

Olen Gannon, Fisheries Technician

Mark Vaas, Fisheries Assistant Lead Worker

Joe Maka, Fisheries Assistant (Ludington/Manistee)

Kendra Porath, Fisheries Assistant (Petoskey/Charlevoix)

Gene Duncil, Fisheries Assistant (Frankfort/Onekama)

Gina Gittings, Fisheries Assistant (Pentwater/Whitehall)

Joe Thomas, Fisheries Assistant (Platte River)

Jerek Gutierrez, Fisheries Assistant (Grand Traverse Bays)

Tara Novak, Summer Worker

Josh Crane, Summer Worker

What is the CLMMU?

The Central Lake Michigan Management Unit (CLMMU) encompasses all of the waters that make up the watersheds that drain into the central portion of Lake Michigan. Our work area includes all or portions of the following counties; Emmet, Charlevoix, Antrim, Otsego, Crawford, Kalkaska, Grand Traverse, Benzie Leelanau, Manistee, Wexford, Missaukee, Roscommon, Clare, Osceola, Lake, Mason, Oceana, Newaygo, Mecosta, Montcalm, Kent, and Muskegon. Fisheries staff working in this unit include a Management Biologist and Basin Coordinator who work out of the Traverse City Field Office, a Management Biologist and Unit Manager who work out of the Cadillac Operations Service Center, a Management Biologist who works out of the Muskegon Field Office , three Fisheries Technicians and a Fisheries Assistant Lead Worker who work out of the Harrietta Field Office, and six Fisheries Assistants (creel clerks) who work out of various ports.

Walleye Rearing Ponds

In 2014 CLMMU operated three walleye rearing ponds; Beaver Island, Mason County, and I-75. Both Beaver Island and Mason County are ponds where we provide the fish, and cooperative agreements with sportsman's groups allow those folks to rear the walleye until they are ready to be stocked. A cold start to spring put us somewhat behind with our walleye rearing, but we still managed to produce fish in all three ponds. A total of 12 different lakes in CLMMU were stocked during 2014 with spring fingerling walleye. Thanks once again to the Beaver Island Wildlife Club and the Mason County Walleye Association for all of their hard work!

Mason Pond

Hodenpyle Pond	103,311
Tippy Pond	88,528
Silver Lake	33,587
Fremont Lake	51,646
Hackert Lake	16,024
Total	**293,096**

I-75

Lake Bellaire	88,454
Intermediate	81,300
6-Mile	11,870
Fife Lake	20,325
Lake Cadillac	29,431
Lake Mitchell	70,406
Total	**301,786**

Beaver Island

Lake Geneserath	995

Weir Operations

Did you know?

The Central Lake Michigan Management Unit is home to more State Designated Natural Rivers than any other management unit in the state? The Betsie River, Upper Manistee River, Jordan River, Boardman River, Pere Marquette River, White River, and the Pine River are all found within the geographical boundaries

Little Manistee Steelhead Egg Take

The 2014 steelhead egg take was the shortest on record for CLMMU, lasting only one day! On April 21st Fisheries Division staff worked day and night to collect steelhead eggs to meet Michigan and out-of-state egg quotas.

Extremely high water this spring compromised the structural integrity of the weir and eroded the north stream bank between the weir and spillway. The breach steadily grew and then suddenly doubled in size overnight, causing the water level to drop by nearly two feet. This limited our ability to pump water to the holding ponds that were full of steelhead. Rather than running a three or four day egg take operation like we typically plan, a crew was pulled together to run a one-day marathon egg take that began at 8:00am and ended at 11:00pm! The run total in 2014 was over 2,670 steelhead, 4 coho, and many suckers. A total of 4,861,215 steelhead eggs were collected for the state-wide steelhead stocking program through this effort. Once the water began to recede, major repairs were made to fix the weir structure and the eroded bank.

Come visit us! Our weirs are open to the public while we are harvesting fish and conducting egg takes. Both the Boardman Weir and the Little Manistee Weir have thousands of visitors each spring and fall. Group tours are also available for educators and program coordinators.

Little Manistee Salmon Egg Take & Harvest

The weir grates were installed on August 14th to begin blocking fish passage, and egg take began the week of October 6th. We harvested a total of 2,781 Chinook, passed 760 coho, passed 392 steelhead, and passed 79 brown trout. The total number of Chinook eggs collected was 4,251,892 and included eggs taken for Indiana and Illinois. The facility was drained , the weir grates were removed, and the weir was officially closed up during the week of October 20th.

Boardman Weir Salmon Harvest

During the 2014 season the Boardman Harvest Weir was operated for a total of four days, from September 23rd through October 15th. At this facility Chinook salmon and coho salmon are harvested and sent to a contractor for processing, while all other species are passed upstream. No eggs are collected for hatchery rearing purposes from this weir. During the fall of 2014 a total of 9 steelhead and 3 brown trout were passed upstream, while 1,363 Chinook salmon and 566 coho salmon were harvested for a total salmon harvest of 1,929 fish.

Enhancement Project at the Little Manistee Weir

This project is a great example of partnerships that meet both resource management and economic development goals. The improvements will create opportunities for a growing number of people to see and learn about our fisheries programs and stewardship of natural resources. A grant of $300,000 was secured from the Michigan Natural Resources Trust Fund through a cooperative effort involving the Alliance for Economic Success in Manistee and the Department of Natural Resources Fisheries Division. The enhancement project is part of the expanding Explore the Shores program and includes some major upgrades for the many visitors that come to the Little Manistee River Weir to see egg take operations and enjoy the river.

Construction includes a universally accessible observation deck over the river to view salmon and trout pooled below the weir, universally accessible walkways for guided and self-guided facility tours, unisex universally accessible restrooms and parking spaces, and interpretive and educational signage. In addition an access road with turnaround is underway that will lead to the new kayak/ canoe launch site.

To learn more about the Explore the Shores initiative please visit: www.**exploretheshores**.org.

To plan a visit to the Little Manistee River Weir please visit: http://www.michigan.gov/documents/dnr/

Left: Downstream view of the Little Manistee Weir prior to improvements; Right: Downstream view after the installation of the viewing platform.

Right: Little Manistee Weir visitors making use of the new viewing platform to watch salmon enter the facility.

Manton Mill Pond Dam Removal

In recent years, the DNR and its partners conducted a dam removal project on the Manton Millpond Dam on Manton Creek. Manton Creek is a trout-stream tributary to the Manistee River in northern Wexford County near the city of Manton. Constructed in 1919, the dam had partially failed in the 1980s, and had further deteriorated since then. The goal of the project was to return the stream to a free-flowing state, allowing fish passage and alleviating the temperature effects the remnants of the dam were having on Manton Creek. The dam was warming the water so much in the summer that trout could no longer live in the reach just downstream. The removal project took place in steps, during the summers of 2011 and 2012. So this past summer, we returned to the site to investigate the impact of the dam removal on the fish population of Manton Creek. We found that the trout have responded in a big way!

In August of 2014, we sampled Manton Creek using a battery powered backpack electrofishing unit. We shocked approximately 550 feet of Manton Creek, starting about 250 feet below the old dam site and then proceeding another 300 feet upstream from there. This included the newly created "Manton Rapids", a high gradient reach that was created when the dam was removed. In that 550 foot reach, we caught seven different fish species. Brown trout were by the far the most numerous, with 125 caught up to 15 inches in length! This included many small, young-of-the-year brown trout, indicating strong natural reproduction. We also caught five brook trout. Before the dam removal, there were no trout in this reach at all! Other species caught included blacknose dace, creek chubs, brook stickleback, central mudminnow, and white sucker. Our conclusion from the survey was that the trout populations of Manton Creek have recolonized the area and are thriving. Anglers have taken note- we saw signs that folks have been fishing the area, which is exactly what we hoped for when we began the project!

Pictures– *Top: Manton Creek with the dam still in place. Bottom: Manton Creek after the dam was removed.*

Left: Technician Bob Kerry conducting a stream shocking survey. Right: Brown trout and brook trout found in the survey.

Lake, River, and Stream Surveys

During the spring, summer, and early fall of 2014, the CLMMU staff completed 40 different surveys. These surveys included spring and fall Serns Index surveys, stream and river electrofishing surveys, and combination netting and electrofishing lake surveys. A total of 9 different lakes and 16 different streams were surveyed (some streams had multiple sampling locations). Those waterbodies include;

Bear Creek
Boardman River
Brundage Creek
Brush Lake
Carter Creek
Cedar Lake
Collison Creek
Crystal Lake
Grass Creek
Green Lake
Houghton Lake
Kinney Creek
Jordan River
Little Manistee River
Manistee Lake
Manistee River
Manton Creek
Maury Creek
Moyer Creek
Muskegon River
Nichols Lake
North Branch Manistee River (2 sites)
North Branch Platte River
Pere Marquette River (8 sites)
Platte River
Sand Lake
Stanley Creek
Third Creek
Unnamed Tributary to Manton Creek
Walloon Lake

Summer Workers

For the summer months of 2014, CLMMU was lucky enough to be able to hire two summer workers to help the field crew and biologists with various duties throughout the management unit. Tara Novak and Josh Crane, both recent college graduates, were able to spend the summer helping with walleye pond work, inland lake netting surveys, stream and small creek electrofishing surveys, and egg takes at various weir locations. These two were able to gain some hands on work experience in their chosen field, and our unit benefitted tremendously from their hard work, dedication, and willingness to teach the staff new things. Thanks for a great summer Tara and Josh!

Crystal Lake Survey— Mark Tonello

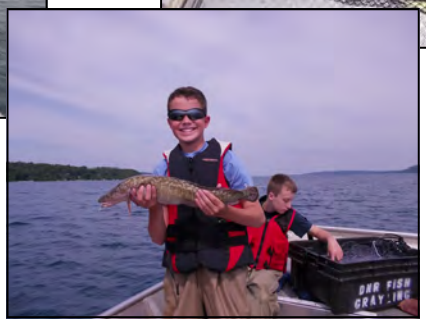
At 9,711 acres in size, Crystal Lake is one of the bigger inland lakes in Michigan. Boasting famous fisheries for yellow perch, rainbow smelt, lake trout, and smallmouth bass, it is one of the most popular fishing lakes in the northwestern Lower Peninsula. It had not been surveyed by DNR Fisheries personnel since the early 2000s, so in the summer and fall of 2014, we spent several weeks surveying it.

The survey took place in two parts- one week of netting in June, and another week in November. We used several different types of nets in the survey, including fyke nets, trap nets, and three different types of gill nets. Because it is so large and so close to Lake Michigan, weather always seems to be an issue when surveying Crystal Lake, and this year was no different. In June, we ran into thunderstorms and drenching rains, and in November we ran into dangerously heavy winds. But we were able to persevere and complete the survey.

In June, we caught a total of 4,263 fish, the vast majority of which were rock bass. Crystal Lake is a rock bass factory, and it produces big ones too! We caught them up to 12 inches long, and we caught many over the Master Angler standard of 11.5 inches. We also caught over 700 yellow perch, some of which were up to 13 inches long. Other species caught in June included smallmouth bass (up to 21 inches long), northern pike (up to 32 inches), lake trout (up to 32 inches), lake whitefish (up to 23 inches), coho salmon, rainbow trout, burbot, and white sucker.

In November, we caught just shy of 200 fish. Although we caught fewer fish in November than we did in June, the November fish were very high quality. Many were beautiful yellow perch from 9-12 inches in length. We also caught northern pike up to 36 inches, lake trout up to 36 inches, lake whitefish, burbot, rock bass, smallmouth bass, longnose sucker, and white sucker.

Fisheries Biologist Mark Tonello is in the process of analyzing the data and writing a Status of the Fishery Report for this awesome fishing lake. He hopes to have the report completed by the spring, so stay tuned!



Volunteers Derek Tonello and Mark Matzke helping out on the Crystal Lake survey!

Bigelow Creek Survey-Rich O'Neal

Bigelow Creek is located in Newaygo County, Michigan and is a tributary of the Muskegon River and thus, part of the Lake Michigan watershed. Bigelow Creek is a high quality coldwater stream that has standard (Type 1) fishing regulations for coldwater fish. The principal species of trout and salmon found in Bigelow Creek include brown trout, rainbow trout (steelhead), brook trout and Chinook salmon. Rainbow trout and Chinook salmon migrate to Lake Michigan for part of their life history. Brook trout and brown trout are resident species although some brown trout may migrate to Lake Michigan. Most brook trout reside in the upper portion of the creek.

Trout and salmon abundance estimates were collected at the 58th Street Status and Trends site on July 12-13, 2005; September 6-7, 2006; August 13-14, 2007; August 17-18, 2011; August 13-14, 2012; and August 12 -13, 2013.

These surveys showed that average trout and salmon densities (number per acre) at the 58th Street site were greatest in 2011 and 2013. Brown trout densities were much greater than rainbow trout and Chinook salmon densities in all years. Average biomass (pounds per acre) of all trout and salmon at the 58th Street site was higher during 2011 – 2013 than during 2005 - 2007. Brown trout accounted for an average of 98.7% of total trout and salmon biomass for the six years sampled. Average brown trout densities were highest during 2011 and 2013. Average biomass of brown trout was also higher during the 2011 – 2013 period compared to 2005 – 2007. Brown trout collected during the six year sample period ranged in size from 2.0 – 30.9 inches with ages ranging from 0 -9. Additionally the average biomass of all trout and salmon combined, and brown trout in Bigelow Creek at the 58th Street site was the highest found among other Fixed Status and Trends stream sites in Michigan.

Densities of trout and salmon are very high in Bigelow Creek. The size structure of the brown trout population is very favorable to anglers with many fish in the size range from 8 inches to 30 inches. Reproduction of trout and salmon is good as indicated by juvenile fish densities. Stocking additional fish into Bigelow Creek is not recommended and would not meet Fisheries Division Fish Stocking Guidelines (MDNR 2004).

Production of trout and salmon throughout Bigelow Creek is currently not known because systematic sampling has not occurred throughout the entire stream. Water temperature evaluations indicate that trout and salmon production should occur from 24th Street to Section 17 downstream of 58th Street. Fish sampling and abundance estimates should be conducted at sites from the headwaters to the mouth of the river to better determine trout and salmon production in this stream..

Water temperatures are relatively high at the 58th Street site, indicating that trout and salmon production in this stream could be at risk if land alterations increase stream temperatures. Additional water temperature monitoring (along with fish) should be conducted to establish current conditions throughout Bigelow Creek. Important land-use changes that should be avoided in this watershed include deforestation within the watershed and along stream buffers, urban and agricultural runoff, and dam construction.

Cedar Lake Survey— Heather Hettinger

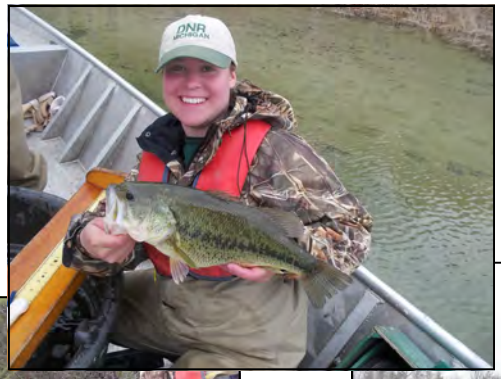
Cedar Lake in Leelanau County is one of the most talked about lakes in our unit– local rumors have always been that there were large brown trout, muskellunge, and smelt, despite none of these species ever being stocked into the lake. Cedar Lake had not been surveyed since the late 1960's, so we set out to see if there was any truth to these rumors!

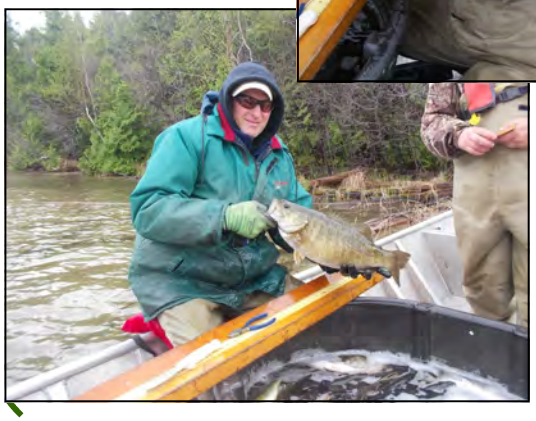
The survey took place in two parts- one week of netting in May, and a night of electrofishing in June. We used several different types of nets in the survey, including fyke nets, seines, trap nets, and gill nets.

Between the two survey techniques we caught a total of 2,480 fish, the vast majority of which were actually forage fish! A little over 1,200 mimic shiners were caught, followed by 384 rock bass, 218 bluegill, and 214 largemouth bass. Other species caught included black bullhead, blunt-nose minnow, brown trout, brown bullhead, brook stickleback, white sucker, green sunfish, Iowa darter, Johnny darter, logperch, sculpin, northern pike, pumpkinseed, smallmouth bass, yellow perch, and yellow bullhead,

The fish were collected in this survey all looked extremely healthy, in particular the black bass. Largemouth from 3-18 inches and smallmouth from 1-22 inches were all present. We did manage to catch one of the rumored species that interested us– three brown trout from 15-24 inches were collected!

Summer Worker Tara Novak is in the process of analyzing the data and writing a Status of the Fishery Report for this great lake. She hopes to have the report completed by the spring.





Creel Surveys

Surveys of Great Lakes anglers were conducted by our Fisheries Assistants at the following ports during 2014; Charlevoix, Petoskey (Bear River), Elk Rapids, Grand Traverse Bays, Frankfort, Arcadia, Onekama (Portage Lake), Manistee, Ludington, Pentwater, and Whitehall. We also had one clerk who surveyed the Platte River from April thru October. These valuable surveys are used to obtain estimates on fish harvest rates and angling effort. Our clerks work some of the busiest ports in the state and do a phenomenal job collecting data!

Left: Clerk Joe Maka takes samples from a fish in Manistee. Above: Clerk Gene Duncil interviews an angler at the docks in Frankfort.

Where do we stock fish?

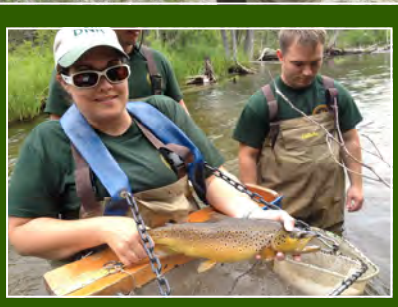
CLMMU staff partners with all of our State Fish Hatcheries to stock the waters within our area. You can use our online database tool to search stocking record from the present back to 1979. This feature lets you search by county, waterbody, and by fish species– check it out at:

http://www.michigandnr.com/fishstock/

Where should I go fishing?

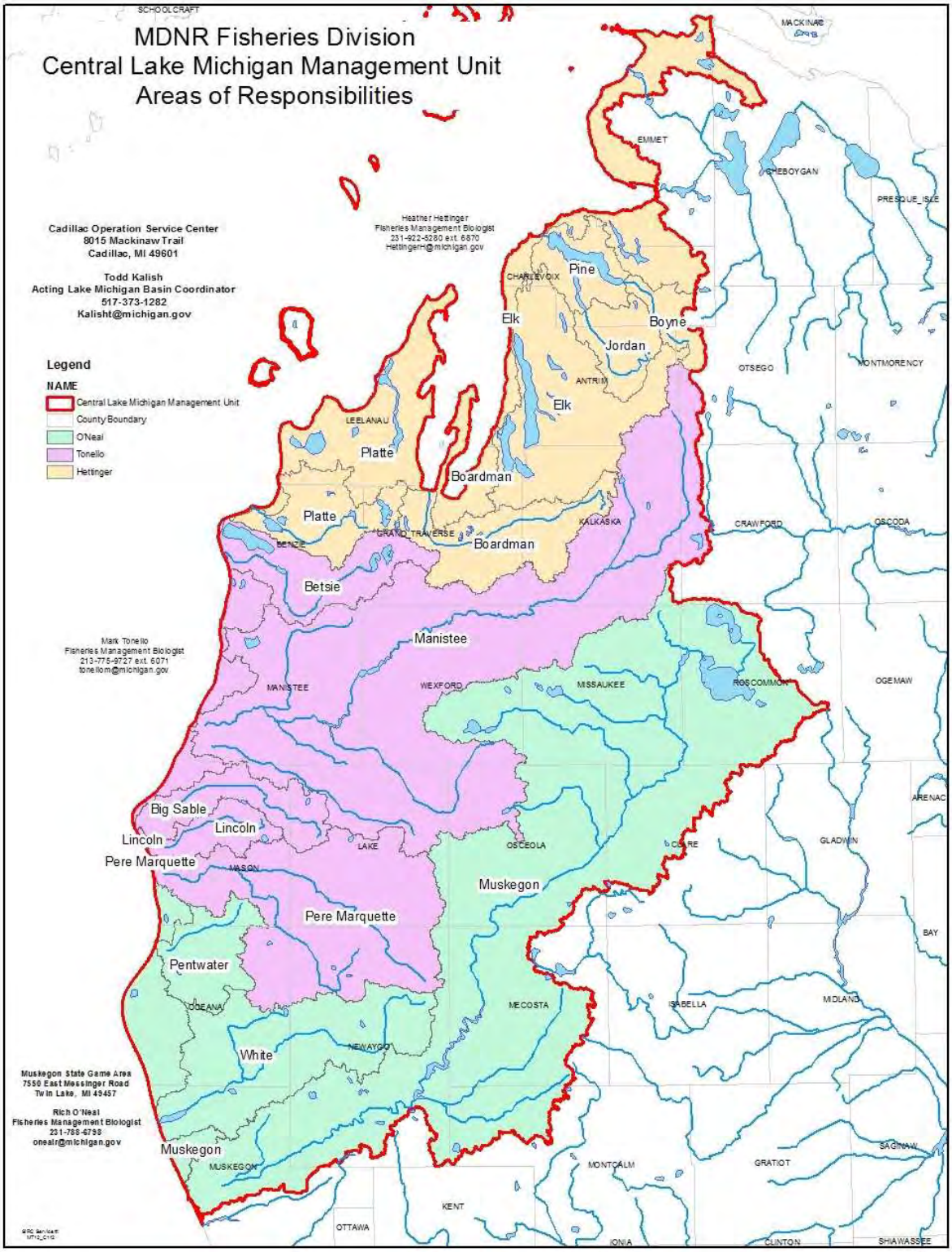
Not sure where the fishing hotspots are? Or where you can take your kids fishing? Look no further– our Family Friendly Fishing Waters program can help! Using the link below you can search by county for locations to go fishing;

http://www.michigan.gov/dnr/0,4570,7-153-10364_52261-299046--,00.html




DEPARTMENT OF NATURAL RESOURCES
DNR
MICHIGAN

To obtain information on lake or stream surveys from this year or years prior or to ask any questions, please feel free to contact us. Use the map below to select the most appropriate biologist to contact:



Cadillac Operations Service Center

231.775.9727

Traverse City Field Office

231.922.5280

Heather Hettinger

231.922.5280
Ext. 6870
hettingerh@michigan.gov

Mark Tonello

231.775.9727
Ext. 6071
tonellom@michigan.gov

Rich O'Neal

231.788.6798
onealr@michigan.gov