

CHASSELL TOWNSHIP HOUGHTON COUNTY, MICHIGAN



STURGEON RIVER BOATING ACCESS SITE ENGINEERING STUDY

MARCH 2020

TES **Traverse Engineering Services, P.C.**

ENGINEERS / SURVEYORS / GEOLOGISTS

701 HANCOCK STREET • HANCOCK, MICHIGAN 49930

Ph: (906) 482-6696 • E-MAIL: traverseengineering@gmail.com

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1.0 INTRODUCTION:

This preliminary engineering/feasibility study contains the results of an investigation of a possible location for a boating access site for Chassell Township located in Houghton County, Michigan (See Exhibit A).

Chassell Township is located in Houghton County in the Upper Peninsula of Michigan. A portion of the Township borders Baraga County and Portage Lake, the Portage River, and Lake Superior's Keweenaw Bay (Figure 1 - next page). The total land area for the Township is approximately 48 square miles.

Park and recreation properties/facilities within Chassell Township are administered primarily by the 5-member Township Board of Supervisors, with exception of school district-related properties/facilities. Township ski trails are managed by volunteer groups. The Recreation Committee of the Chassell Township Planning Commission assists the Board in the preparation of action plans and proposals associated with recreation opportunities in the Township. Major initiatives are discussed and voted on by the Township Board before implementation.

Chassell Township supports and maintains park and recreation facilities through annual budget appropriations. For fiscal year 2017 (April 1 - March 31), Chassell Township expended approximately \$12,480 for maintenance and upgrades of facilities (this includes \$3,680 for new security cameras at Centennial Park). Additional funds are budgeted for development of new recreation projects and facilities, as funds are available. The maintenance of park and recreation facilities are carried out primarily by Township employees.

The planning process for the 2018-2023 Chassell Township Recreation Plan included (1) solicitation of initial public comments at regular business meetings of the Chassell Township Planning Commission in 2017; (2) design and implementation of a community survey about recreational opportunities in Chassell Township; (3) review and assessment of public comments and survey results for integration in the new Recreation Plan; (4) preparation of a review draft of the 2018-2023 Chassell Township Recreation Plan for final public comment (March 9, 2018), and; (5) presentation of a final draft plan to the Chassell Township Board of Supervisors for approval.

The results of the Chassell Township Recreation Plan Survey (2017) were especially important in identifying priority

recreation improvements in Chassell Township over the next five years. Chassell Township mailed a postcard notice of the recreation plan survey to all recorded households and post office boxes in the Township in late July 2017. Residents and a few adjoining non-residents were encouraged to complete a SurveyMonkey questionnaire online, or pick-up a hard copy of the questionnaire during the month of August 2017. A total of 165 residents of Chassell Township and 9 non-residents completed the questionnaire.

From this 2017 survey, the concepts of a fitness trail and water trail, which includes a boating access site, received the most support of respondents by almost a 3 to 1 margin. This is the reason the Township has decided to move ahead and conduct this preliminary engineering/feasibility study to investigate possibility of a boating access site at the Sturgeon River on the northwest side of the US-41 bridge.

The Township has also received letters of support from the Keweenaw Paddling Club, Copper Country Walleye Association, Duck Unlimited and local residents for this project. These letters of support are provided in the Appendix. A copy of the Sturgeon River Sloughs State Wildlife Management Area Map from the MDNR is also included in the Appendix. The boating access site will

provide an excellent access point to this Wildlife Management Area.

2.0 SCOPE OF STUDY:

Chassell Township has entered into an agreement with the Michigan Department of Natural Resources to conduct a preliminary engineering/feasibility study for a boating access site in 2018. The scope of this preliminary engineering/feasibility study is to investigate the possibility of a boating access site on the Sturgeon River on the northwest side of the US-41 bridge, develop a preliminary plan and cost estimate of the site.

3.0 CHASSELL TOWNSHIP STURGEON RIVER ACCESS SITE:

Chassell Township is located on the southeast corner of the Keweenaw Peninsula in Houghton County in the beautiful Upper Peninsula of Michigan. The Township borders Portage Lake, Chassell (Pike) Bay, Portage River and Lake Superior's Keweenaw Bay, on the east side (see Exhibit A). The potential access site on the Sturgeon River would provide safer access for small boats, canoes and kayaks to explore the Sturgeon River and shoreline areas of Portage Lake. The large amount and variety of publicly available surface waters in Chassell Township make the Sturgeon River access site a prime location for a boating launch. This access site will provide a key piece in the water trail development on the Sturgeon and Pike Rivers, as well as

the Sturgeon Sloughs.

The tragic winter 2018 vehicle/fuel tanker fatality accident resulting in a 5,000 gallon fuel spill at the Sturgeon River Bridge has made the development of a combination motor boat and canoe/kayak launch access site at the northwest side of the US-41 Sturgeon River Bridge a top priority.



Sturgeon River boat launch site. Launch would be located near the group of trees on the left side of the photo.

The project has been discussed with Hunter King with the Department of Environment, Great Lakes, and Energy (EGLE). The discussion with Mr. King regarding this proposed boat launch was

very positive.

The majority of the boat launch development including access road, parking area, docks and boat launch are located in the old US-41 R.O.W. The R.O.W. was abandoned by the MDOT and deeded to the Houghton County Road Commission (HCRC). We have contacted the HCRC and they do not have an issue with the Township utilizing this R.O.W. for this project.

There is a small piece of land located between the current R.O.W. of US-41 and the old US-41 R.O.W. This property is owned by a private party. The portion of the proposed launch access approach is located across this property. The Township has been in contact with the property owner and they are working on an agreement for a property exchange with Township owned property located on the north side of the proposed boat launch.

4.0 DESCRIPTION PROPOSED BOAT LAUNCH CONSTRUCTION

The following is a description of the work to be done to construct a combination motor boat and canoe/kayak launch at the Sturgeon River site. A preliminary plan can be seen in the pocket at the back of this report.

4.1 ACCESS ROAD AND PARKING LOT

The access road will consist of improving the existing

concrete road, which was the old US-41 Highway and serves as the current access to the township property. The improvements to the existing concrete road include clearing brush and trees within 20' on each side of the existing centerline, ditching, grading and adding an approximate two foot shoulder of 8" aggregate surface on each side of the existing concrete road for a 24' wide finished access road. The length of the existing road improvement is approximately 485 feet. The remaining 230 feet of access road will be new construction. For the new construction, the road will be cleared, 40 feet wide, topsoil removed for the proposed road surface, 12 inches of sand placed with 8 inches of aggregate surface on top. Culverts will be installed where required to provide drainage. The proposed road cross section can be seen on the preliminary plan.

The proposed parking lot is 40 feet by 180 feet wide. It will be built for room to hold ten vehicles and trailers including one ADA parking space. There are other areas on the site to expand parking as the demand requires. The parking lot will be constructed like the road section.

4.2 BOAT LAUNCH

The boat launch will consist of precast concrete planks set on stone bedding. There are a couple options for the dock

system that can be used at a boat launch. One common dock is a skid pier. This is a movable structure which can be removed for the winter months, and will not be damaged by ice. Another option, which will work well at this site, is a poured concrete dock with steel framework on steel piling and steel sheet piling. See photo below for an example of the poured concrete dock with steel framework.

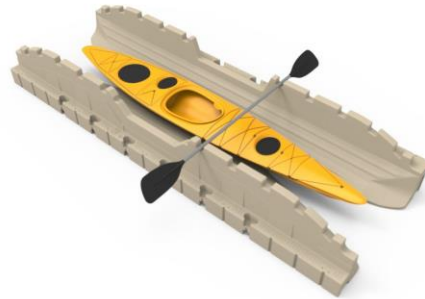


This is an example of the poured concrete dock with steel framework used for the Stanton Township Mucky Bottom Boat Launch.

This option would work very well for the Chassell Township Sturgeon River site because of the depth of water at the shoreline. The river bottom drops off quickly from the riverbank. The end of the launch would be near the existing shoreline and the launch would be cut back into the bank. The sheet pile would be placed on both sides of the launch to serve as a retaining wall and dock for the

boat launch. This is shown on the attached site plan.

The boat launch will have docks on both sides of the launch. The south dock will be L-shaped and provide space for the floating kayak launch dock. This floating kayak launch dock will be a seasonal dock and removed for the winter months and high flow period during spring runoff. See photos below for examples of the floating kayak launch dock.



Examples of a floating kayak launch dock.

5.0 PRELIMINARY COST ESTIMATE

The cost estimate below is based on 2018 Michigan Department of Transportation average unit prices and estimated project quantities.

<u>ITEM</u>	<u>QUANTITY</u>	<u>UNIT PRICE</u>	<u>TOTAL</u>
Mobilization	1 LSUM	\$35,000	\$35,000
Clearing	.75 ACRE	\$5,000	\$3,750
Subgrade Undercutting	815 CYD	\$25.00	\$20,375
Embankment	60 CYD	\$20.00	\$1,200
Excavation, Earth	2570 CYD	\$15.00	\$38,550
Subbase, CIP	880 CYD	\$20.00	\$17,600
Aggregate Surface, 8"	2725 SYD	\$12.00	\$32,700
Culverts	30 LFT	\$75.00	\$2,250
Topsoil, Salvage, 4"	3500 SYD	\$4.00	\$14,000
Seed, Mixture, THV	180 LBS	\$6.00	\$1,080
Mulch Blanket	3500 SYD	\$2.00	\$7,000
Concrete, 6"	140 SYD	\$85.00	\$11,900
Riprap, Plain	40 SYD	\$75.00	\$3,000
Soil Borings	1 LSUM	\$8,000	\$8,000
Floating Kayak Dock	1 LSUM	\$15,000	\$15,000
Boat Launch (Includes Planks, Docks, Piling and Dredging)	1 LSUM	\$250,000	\$250,000
	Subtotal		\$461,405
	Contingency, Legal, Engineering, Etc.		\$128,000
	Estimated Total Project Cost		\$589,405

This cost estimate is based on a preliminary plan. The actual construction costs may vary based on soil borings and after a detailed design is completed for the project. The above estimate is based on a poured concrete dock with steel framework on steel piling and steel sheet piling, as previously mention was used for the Stanton Township Mucky Bottom Boat Launch. We have had nothing but positive comments on the Mucky Bottom Boat Launch. The soil borings will dictate the construction methods and dock construction details. Prior to making application to secure funding to assist in the construction, the estimates should be verified.

The estimate is based on all work being completed by a contractor after a competitive bidding process. In kind work or work done by local organizations will reduce the cash outlay by the Township.

6.0 SOURCES OF FUNDING

The following is a list of possible funding sources the Township may consider to construct the proposed boat launch facility and also to develop the surrounding recreation area:

1. Local service organizations and businesses
2. Township Funds/Recreation Millage
3. Michigan Natural Resources Trust Fund

4. Michigan Natural Resources Recreation Passport
5. Coastal Zone Management Grants
6. Michigan DNR Waterways Grant
7. Miscellaneous Grants

This preliminary engineering study is being funded 50% through a Michigan DNR Waterways Grant and 50% by the Chassell Recreation millage. After the approval of this study, this project will move into phase II, Design and Construction. The percentage of grant available for the project will be from a minimum of 50% grant/50% local match to a maximum of 95% grant\5% local match. This will depend on a review of the Townships certified audits from the last three years. A combination of the previously listed funding sources may be used to fund the local match for the project. Since this project is estimated over \$60,000, the funding will be through legislative appropriations. This means that money for an approved 2020 grant application would be available in 2022.

REFERENCES

Chassell Township Recreation Plan 2018-2023. Chassell Township Recreation Committee, Chassell Township Planning Commission, March 30, 2018.

APPENDIX



STATE OF MICHIGAN -
DEPARTMENT OF
NATURAL RESOURCES



STURGEON RIVER SLOUGHS STATE WILDLIFE MANAGEMENT AREA

- General Map -

Baraga and Houghton Counties

Area Headquarters: Wildlife Office in the Baraga DNR
Customer Service Center, 427 North Highway US-41,
Baraga, MI 49908; phone 906- 353-6651

Legend:

- State Land:
- Wildlife/Game Area
 - Goose Management Pasture / Clearing
 - Impoundment Unit
 - Dike / Ditch Areas
 - Foot Bridges / Walk-in Access
 - Pumping Station
 - State Forest (outside of area)
- Wildlife Refuge - Do NOT Enter - YEAR ROUND
- Allowed Hike Trail - on top of outer dike, but still Do NOT Enter Wildlife Refuge!
- Inset Map - portion shown in detail on back
- Parking: Prepared Lots
- Boating: Prepared Ramp / Access Site
- Roads: Highways or Paved
- Water: Lakes, Ponds
- Marsh in Area
- Rivers, Streams
- Seas, Streams, Drains
- Political: Town-Range-Section Lines (labelled 1-36, near center of block)
- Other: Railroads
- Power Lines, Pipes

GPS coordinates at flagged points (white box near point)

[1] parking at south unit (Baraga Co)
Lat. 46°55'52.8"N, Long. 88°29'15.5"W.

[2] parking and launch at north unit (Houghton Co)
Lat. 47°00'46.0"N, Long. 88°29'41.1"W.

[3] parking and launch at northeast end of Otter Lake
Lat. 46°55'51.3"N, Long. 88°33'21.0"W.

0 0.75 1.5 3 Miles

Important!: 150 yards or 450 feet Safety Zones (No Shooting!) are enforced around all buildings and structures at all times. Be Safe! Always be careful around water & ditch/dikes for deep water!

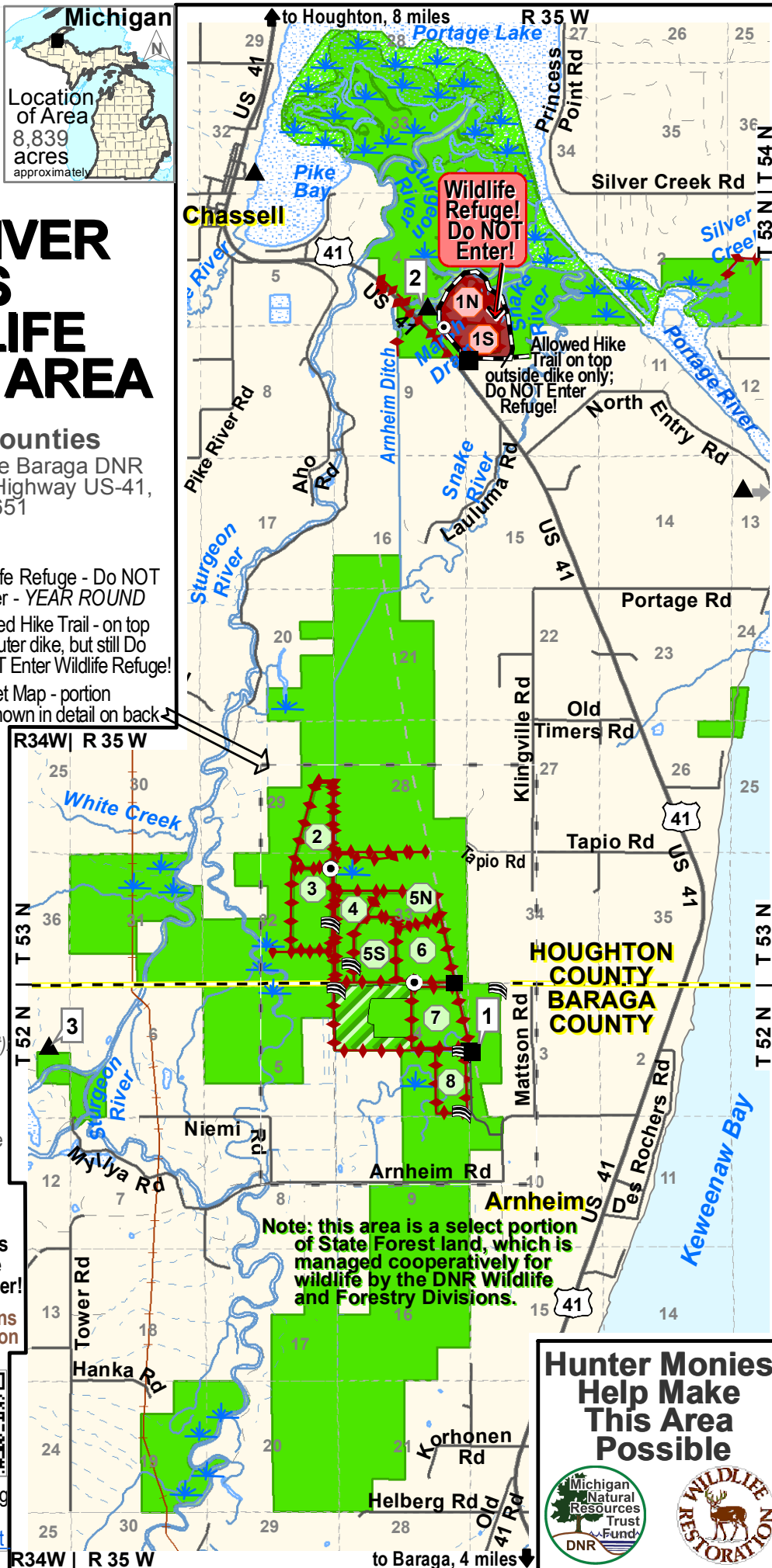
Look for Watchable Wildlife viewing area signs in this area, for locations and more information about wildlife trails or features.

For more information on this or other areas, contact DNR offices, visit the DNR online at www.michigan.gov/dnr or scan this QR-block.



Try **MI-HUNT**, the DNR's online interactive mapping tool that helps you plan your hunting, trapping, or outdoor recreation adventures! www.michigan.gov/mihunt

Map Revised 04/15/2016 - Wildlife Div./MS



**Hunter Monies
Help Make
This Area
Possible**



September 4, 2019

Mr. Paul Petersen
Waterways Grant Program Manager
Parks and Recreation Division
Michigan Department of Natural Resources
525 Allegan Street
P.O. Box 30028
Lansing, Michigan 48909-7528

Dear Mr. Petersen:

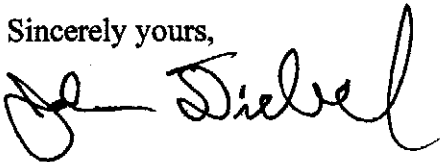
On behalf of the Keweenaw Paddling Club, I would like to offer this letter of support for the motorboat, canoe and kayak launch project being pursued by Chassell Township.

Many of our members enjoy floating the Sturgeon River from points upstream, including below Prickett Dam, M-38, and Otter Lake. The most formal public take-out at the current time is at Centennial Park along Pike Bay in Chassell. Unfortunately, wind conditions can make crossing the bay difficult for paddlers. While informal take-out is possible along the river, steep banks, private land and deep water make this challenging at present.

If constructed, this project will provide an important and much needed put-in and take-out point along the Sturgeon River at a place that will provide easy access to our members. We would greatly appreciate the DNR's support of this project to enhance our members' experience as well as to encourage new paddlers, visitors, fishermen and hunters to utilize this excellent Upper Peninsula waterway!

Thank you for your consideration!

Sincerely yours,

A handwritten signature in black ink, appearing to read "John Diebel". The signature is fluid and cursive, with the first name "John" written in a more compact, stylized manner and the last name "Diebel" written in a more extended, flowing script.

John Diebel
john.diebel@sbcglobal.net
Keweenaw Paddling Club

The Copper Country Walleye Association
P.O. Box 451
Houghton, MI 49931
www.ccwalleye.com

DATE September 17, 2019

Good Afternoon Brian,

The Sturgeon River is just one of the hidden gems in our area. It is like you are in a completely different world when using the river. The wild life, fishing and sightseeing are top notch. To have the opportunity to launch right on the river is a great advantage to the small craft users. The Copper Country Walleye Association fully supports the idea of creating convenient access to the river.

Sincerely

A handwritten signature in black ink, appearing to read "Gerry Lucier", with a stylized flourish at the end.

Gerry Lucier
Vice President

RE: Sturgeon River Boat Launch
ATTN: John Paul Pietila

January 22nd, 2020

Dear Mr. Pietila,

I am excited to write a letter supporting the motorboat/canoe/kayak launch on the Sturgeon River. The Sturgeon River is recognized and prized for its biodiversity. There are roads and businesses that bear the name of the river, and it is an integral part of the scenery when commuting along Highway 41. I was first introduced to kayaking through a Summer Youth Program at Michigan Tech, where we were brought to the Sturgeon River. Yet this riparian zone, and the surrounding wetlands can be difficult for even able-bodied persons with small watercraft to access the water without creating erosion.

I was born and raised in a town that perched upon the banks of the Fox River in the suburbs of Chicago, where I witnessed firsthand the community's relationship with the water; what they took for granted and what they relied on for their wellbeing. Over the last three decades I have witnessed the change in accountability and care for the Fox River as well as the development of recreational programs designed to utilize the resource including efforts to reclaim the river that was devastated by pollution and general neglect. In 2010, I set out on an expedition to be the youngest person to solo kayak the entire Mississippi River, from its headwaters in northern Minnesota (where the young river is most similar to the Sturgeon), to the Gulf of Mexico. On this journey, I observed the massive gradient of ways that our society interacts with its water. I was greeted by the difficulties of planning a trip based on information and water access infrastructure that was scattered or nonexistent. This project proposal includes much more than just paddling the Sturgeon River; it includes investing in a wide array of social and natural infrastructures to create a better recreational destination. I imagine this project as a platform for promoting the healing and stress relieving properties of nature, low risk physical activity, wildlife viewing, and stewardship.

There is no question that this river is a treasure. The question lies in how to appropriately share this treasure with the world, while preserving it for future generations. My desired outcome is a destination for outdoor enthusiasts, built around the biodiversity and unique geomorphology of the Sturgeon River, with access for paddlers, researchers, and native food gathers that encourages commerce in the surrounding communities as well as a sense of pride and accountability for the land. I believe this project helps actualize that outcome.

Sincerely,
Will Lytle
Mayor Pro-Tem, City of Hancock
PhD Candidate, Environmental and Energy Policy
Dept. Social Sciences, Michigan Technological University



Keweenaw Convention & Visitors Bureau

56638 Calumet Avenue Calumet, MI 49913

Phone: (906) 337-4579 Fax: (906) 337-4285

Website: www.keweenaw.info Email: info@keweenaw.info

January 31st, 2020

John Paul Pietila, President
Traverse Engineering Services
701 Hancock Street
Hancock, MI 49930

RE: Chassell Township DNR Waterways Grant Application

Dear John:

Please accept this letter of support for Chassell Township's application to the Michigan Department of Natural Resources (DNR) Waterways Grant Program. It is my understanding they are requesting funding to construct a new motorboat/canoe/kayak launch on the Sturgeon River which feeds into Portage Lake and Pike Bay. As the region's designated destination marketing organization, the Keweenaw Convention & Visitors Bureau strongly supports this project because of its synergy with existing efforts to improve waterway access and water trail development and its positive contribution to the local tourism economy.

As the demand for water recreation increases, it is important that our communities have the proper infrastructure to facilitate a wide variety of boating and paddling needs. We are seeing a growing interest by tourist in our region's navigable waterways Chassell Township is uniquely positioned to serve as an access point to the Keweenaw Waterway network due to its location on U.S. 41, proximity to or regional population centers and the unique ecological and geological characteristics of the aquatic ecosystem and nearby Jacobsville sandstone cliffs. I believe this investment, in addition to the township's recent recreation development (e.g. dog park, fitness trail, etc.) demonstrate a commitment to a healthy and vibrant community!

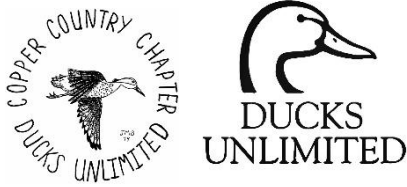
It is also important to recognize the changing demographics of our outdoor recreationalists. Increasingly, seniors and individuals with mobility limitations are pursuing water and boating recreation activities. Our current infrastructure is not suitable to supporting the needs of these populations. DNR's support will help to remedy this shortcoming in Chassell which will demonstrate this Administration's commitment to barrier-free, outdoor recreation.

Our community strongly encourages your department to consider the project for funding. Thank you for your time and support.

Sincerely,

Brad Barnett

Executive Director, Keweenaw Convention & Visitors Bureau



The Copper Country Chapter of Ducks Unlimited
Scott Pugh, Area Chairman
14774 Liminga Road
Atlantic Mine, MI 49905
906-487-6719
spughdaup@gmail.com

January 23, 2020

Mr. Paul Petersen
Waterways Program Grant Manager
525 W. Allegan St.
P.O. Box 30028
Lansing, MI 48909

Dear Mr. Petersen,

On behalf of the Copper Country Chapter of Ducks Unlimited (CCDU), I am writing in support of the Sturgeon River boat launch and public access project under consideration for a Waterways Program grant.

Ducks Unlimited conserves, restores, and manages wetlands and associated habitats for North America's waterfowl. These habitats also benefit other wildlife and people. Ducks Unlimited has donated hundreds of thousands of dollars to enhance, maintain and provide public access to the Sturgeon River Sloughs areas located to the north and south of the proposed access site. For over 43 years, CCDU has been raising funds in support of this mission.

Currently, there are limited access sites to the river and sloughs areas. Most boats must access the river and sloughs from Chassell Centennial Park, South Portage Entry or Bootjack. These routes are dangerous at times since they require travel over large bodies of water, Portage Lake or Portage River. Smaller watercraft such as canoes and kayaks also have limited access due to limited easy road access from public land. The new access site would provide more and safer opportunities for people to enjoy the river and associated wetlands. CCDU has made substantial investments in the area and providing enhanced access would be greatly appreciated by CCDU and many others.

CCDU thanks you for your time and consideration on this project. Please feel free to contact me with any questions or comments.

Sincerely,

/Scott Pugh/
Scott Pugh

Chairman, on behalf of The Copper Country DU Committee

September 11, 2019

Parks and Recreation Division
Michigan Department of Natural Resources;
525 Allegan Street;
P.O. Box 30028
Lansing, MI 48909-7528

Dear Paul Peterson - Waterways Grant Program Manager,

This letter is in regards to the Kayak Launch on the Sturgeon River.

I am a 60 year old woman who loves to paddle. I have had hip-replacement and would greatly love the assist into getting in and out of the kayak.

It is my hope that this kayak launch comes to fruition.

I typically paddle with a group of women, a half dozen or so, and knowing there is a kayak friendly launch, would increase our visiting the Sturgeon River to paddle.

Thanks for your considerations,
Beth Jukuri

39941 Aho Road
Chassell, MI 49916



Ducks Unlimited Chapter at Michigan Technological University

November 15, 2019

Mr. Paul Petersen
Waterways Program Grant Manager
525 W Allegan St
PO Box: 30028
Lansing MI 48909

Sturgeon River Boat Launch Project

Dear Mr. Petersen,

On behalf of the Ducks Unlimited Chapter at Michigan Technological University, we are writing to express our support for the Sturgeon River Boating access site project submitted for a Waterways Program grant.

The purpose of Ducks Unlimited at MTU is to inform students about the ever-growing responsibility to conserve, restore, and manage North American wetlands and associated habitats for North America's waterfowl. This, in turn, will teach the many important ways each person can contribute to conservation, restoration, and protection of our nation's waterfowl habitat. We currently have 52 members in our campus chapter, all of which are in support of this project.

There are many large advantages to this Sturgeon River access point chosen by the Chassell Township. It relieves the primary boat traffic that currently congregates at the Centennial Park boating access site. This newly proposed location would be a safer option as well. Taking into consideration location, it protects smaller watercraft when they are trying to enter the waterway. Due to northeast winds that come across the Portage, the access point at Centennial Park often poses a major safety concern for waterfowl hunters and outdoor enthusiasts, who typically have boats and kayaks less than 17-foot in length. Location wise as well this is a more effective site for both hunters and boaters making their way out to the Portage River which is most outdoor enthusiasts' destination. As the required travel distance is much shorter, hunters and boaters will save not only time but fuel as well.

Feel free to contact our organization with any questions regarding this letter of support at ducks@mtu.edu and thank you for taking the time to read our letter.

Sincerely,

On behalf of the members of the Ducks Unlimited Chapter at Michigan Tech,

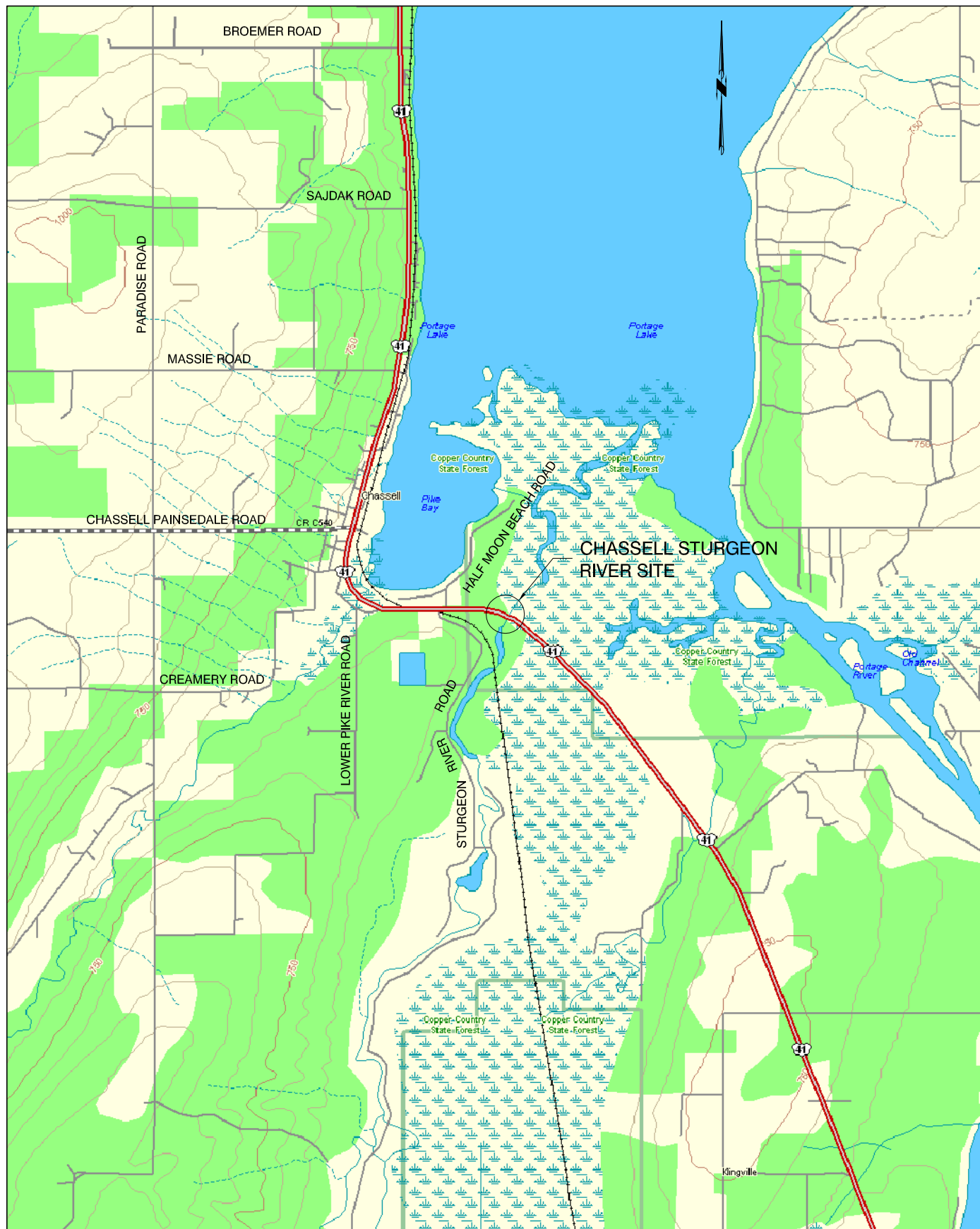
Jacob Bart - President

EXHIBITS



LOCATION MAP FOR CHASSELL TOWNSHIP, HOUGHTON COUNTY, MICHIGAN

EXHIBIT A



3-D TopoQuads Copyright © 1999 DeLorme Yarmouth, ME 04096
1500 ft Scale: 1: 50,000 Detail: 12-0 Datum: WGS84

TRAVERSE ENGINEERING SERVICES, P.C.
701 HANCOCK STREET, HANCOCK MICHIGAN
ENGINEERS - SURVEYORS - GEOLOGISTS
(906) 482-6886 E-MAIL: traverseengineering@gmail.com

CHASSELL TOWNSHIP BOATING ACCESS SITE

EXHIBIT B

