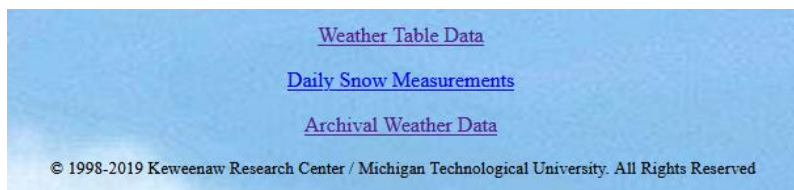


Copyright documentation

- [1] “Houghton County 2020-2025 Hazard Mitigation Plan.” Western Upper Peninsula Planning & Development Region, Hancock, MI. **Fair Use – limited quotations used to support the need for watershed hydrologic and hydraulic analysis examined in this report.**
- [2] United States Geological Survey, 2020. “The National Map.” <https://www.usgs.gov/core-science-systems/ngp/tnm-delivery>. **In the public domain.**
- [3] National Oceanic and Atmospheric Administration National Centers for Environmental Information, 2020. “Climate Data Online.” <https://www.ncdc.noaa.gov/cdo-web/>. **In the public domain.**
- [4] Western Regional Climate Center, 2020. “Monthly Precipitation Listings-Monthly Totals.” *Station CMX Hancock Houghton County AP, MI*. <https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?mi3908>. **Fair Use – precipitation data used originates from NOAA and no direct use of tables or figures are included in report from this source.**
- [5] Keweenaw Research Center, 2020. “Archival Weather Data.” *KRCwthr20180617*. <http://blizzard.mtukrc.org/~weather/>. **Fair Use – facts, nonfiction, references a single precipitation measurement, and copyright expired**, see below from KRC homepage <http://mtukrc.org/weather.htm>.



- [6] National Oceanic and Atmospheric Administration National Weather Service, 2021. “Hydrometeorological Design Studies Center.” *Precipitation Frequency Data Server*. https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html?bkmrk=mi. **In the public domain.**
- [7] United States Environmental Protection Agency. n.d. “Torch Lake AOC.” Accessed 2020. <https://www.epa.gov/great-lakes-aocs/torch-lake-aoc>. **In the public domain and fair use - fact, nonfiction, reference date.**
- [8] Sidhu, Virinder Pal Singh, "Establishing a Vegetative Cap for Sustainable Stabilization of Copper Contaminated Soils in Torch Lake, Michigan" (2016). Theses, Dissertations and Culminating Projects. 92. <https://digitalcommons.montclair.edu/etd/92>. **Fair use- limited quotations used to support the on-going status of restoration efforts at historical mining properties located in the floodplain of the research site.**

[9] Michigan State Police. June 18, 2018. "Houghton County Flooding June 2018." *Helicopter Video*. Emergency Management & Homeland Security Division. Accessed 2020. https://www.youtube.com/user/MichEMHS/videos?view=0&sort=dd&shelf_id=0. **Permission granted and in the public domain. See corresponding email below,**

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Michigan Tech

Brittany Hubbard <hubbard@mtu.edu>

Permission to Use Video Content

3 messages

Brittany Hubbard <hubbard@mtu.edu>
To: MSP-EMHSD@michigan.gov

Mon, Jul 27, 2020 at 4:39 PM

I am a graduate student at Michigan Technological University working on a report in partial fulfillment for a master degree in Civil Engineering. My report analyzes the flooding event in 2018 that severely damaged the cities of Hubbell and Lake Linden, Michigan as well as the MDNR rail-trail grade that connect these towns.

Your video, specifically <https://www.youtube.com/watch?v=jCHsz4-l1Y&t=231s> gives critical insight to the magnitude and spatial damage of this flood event. With your permission I would like to use this footage to create a map that I can use in my report.

This data will help to guide MDNR, MDOT, MTU, and other local professionals in their ongoing restoration efforts across this rural community.

May I have your permission to use the above reference video for the purpose of research?

Thank you,
Brittany

--

Brittany Hubbard
Teaching Assistant
Graduate Student - Water Resource Engineering
Civil & Environmental Engineering Dept.
Michigan Technological University

MSP-EMHSD <MSP-EMHSD@michigan.gov>
To: Brittany Hubbard <hubbard@mtu.edu>

Mon, Jul 27, 2020 at 4:55 PM

Good afternoon,

Thank you for your inquiry. This footage is public, so no permission is necessary. We do, however, ask that you credit it to the Michigan State Police.

Best of luck,

Bre Lehmann

Operations Management Section Secretary

Emergency Management and Homeland Security Division

Michigan State Police

7150 Harris Drive

Dimondale, Michigan 48821

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Tx: 517-284-3959

Mailing Address:

P.O. Box 30634

Lansing, Michigan 48909

"A PROUD tradition of SERVICE through EXCELLENCE, INTEGRITY, and COURTESY"



From: Brittany Hubbard <hubbard@mtu.edu>
Sent: Monday, July 27, 2020 4:39 PM
To: MSP-EMHSD <MSP-EMHSD@michigan.gov>
Subject: Permission to Use Video Content

CAUTION: This is an External email. Please send suspicious emails to abuse@michigan.gov

[Quoted text hidden]

Brittany Hubbard <hubbard@mtu.edu>
To: MSP-EMHSD <MSP-EMHSD@michigan.gov>

Mon, Jul 27, 2020 at 5:27 PM

Excellent, and Thank You!
[Quoted text hidden]

[10] Michigan Department of Natural Resources. 2019. "Houghton County Incident Dashboard" Accessed 2020-2021.
<https://midnr.maps.arcgis.com/apps/dashboards/55960572383749a7bfd030d8cabfc5>. Flood incident locations along the upper and lower rail grade from the June 17, 2018, flood event, and hydraulic structure imagery provided by the Michigan Department of Natural Resources (MDNR) [10]. **Permission granted, see corresponding email below.**

Michigan Technological University Mail - Introduction

<https://mail.google.com/mail/u/0?ik=eec5be159c&view=pt&search=all...>

kennedyk5@michigan.gov

[Quoted text hidden]

Brittany Hubbard <hubbard@mtu.edu>
 To: "Yesney, Ronald (DNR)" <YESNEYR@michigan.gov>

Tue, Mar 10, 2020 at 5:52 PM

Do you have access to a downloadable point shapefile for the location points where washouts occurred that you sent me before?

Brittany Hubbard
 Graduate Student - Water Resources Engineering
 Teaching Assistant
 Civil & Environmental Engineering Dept.
 Michigan Technological University

[Quoted text hidden]

Yesney, Ronald (DNR) <YESNEYR@michigan.gov>
 To: Brittany Hubbard <hubbard@mtu.edu>

Wed, Mar 11, 2020 at 2:48 PM

I do not. Kim may have something that she can share with you.

[Quoted text hidden]

Brittany Hubbard <hubbard@mtu.edu>
 To: "Yesney, Ronald (DNR)" <YESNEYR@michigan.gov>

Mon, Dec 7, 2020 at 6:02 PM

Hi Ron,

May I use photos from the data you shared with me in my project presentation? Specifically, from the link you shared with me <http://midnr.maps.arcgis.com/apps/opsdashboard/index.html#/55960572383749a7bfd030d8cabfc5>

Best,
 Brittany
 [Quoted text hidden]

--
 Brittany Hubbard
 Teaching Assistant
 Graduate Student - Water Resource Engineering
 [Quoted text hidden]

Brittany Hubbard <hubbard@mtu.edu>
 To: "Yesney, Ronald (DNR)" <YESNEYR@michigan.gov>

Mon, Dec 7, 2020 at 6:25 PM

Sorry, is there an update to that link? That was from a year ago.

Thanks.
 [Quoted text hidden]

Yesney, Ronald (DNR) <YESNEYR@michigan.gov>
 To: hubbard <hubbard@mtu.edu>

Tue, Dec 8, 2020 at 9:05 AM

Michigan Technological University Mail - Introduction

<https://mail.google.com/mail/u/0?ik=eec5be159c&view=pt&search=all...>

Brittany:

You can use the photos and data from the link. There isn't really any updates from 2019 as we've been restricted by COVID and funding issues and didn't do any construction in 2020.

Ron

Ron Yesney**Michigan DNR****Upper Peninsula Trails Coordinator**1990 US-41 **South****Marquette, MI 49855**yesneyr@michigan.gov**906-228-6561 Telephone****906-236-2602 Cell**

From: Brittany Hubbard <hubbard@mtu.edu>
Sent: Monday, December 7, 2020 8:25 PM
To: Yesney, Ronald (DNR) <YESNEYR@michigan.gov>
Subject: Re: Introduction

CAUTION: This is an External email. Please send suspicious emails to abuse@michigan.gov

[Quoted text hidden]

[11] Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. "Houghton County, Michigan." *MI061*. Accessed 2020. <http://websoilsurvey.sc.egov.usda.gov/>. **In the public domain.**

[12] State of Michigan GIS Open Data. 2021. "Shapefile Digital Data: Roads, Village, and Census Designated Place." Accessed 2020. <https://gis-michigan.opendata.arcgis.com/>. **Custom license and are in the public domain. See below license available from <https://gis-michigan.opendata.arcgis.com/datasets/>.**

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[13] National Land Cover Data (NLCD 2001), MDNR, Forest, Mineral, and Fire Management Division. 2003. "IFMAP/GAP Upper Peninsula Land Cover." Accessed 2020. http://www.michigandnr.com/spatialdatalibrary/sdl2/Land_Use_Cover/2001/. **Permission granted, see email below.**

Michigan Technological University Mail - Permission to Use IFMAP/GAP... <https://mail.google.com/mail/u/0/?ik=eec5be159c&view=pt&search=all...>



Michigan Tech

Brittany Hubbard <hubbard@mtu.edu>

Permission to Use IFMAP/GAP Land Cover Raster

3 messages

Brittany Hubbard <hubbard@mtu.edu>
To: donovanm@michigan.gov

Wed, Jul 14, 2021 at 2:31 PM

Hello Michael,

Are you still the MDNR contact for the IFMAP/GAP Land Cover Raster dataset?

I am a graduate student at Michigan Technological University working on a report in partial fulfillment for a master degree in Civil Engineering. My report analyzes the flooding event in 2018 that severely damaged the cities of Hubbell and Lake Linden, Michigan as well as the MDNR rail-trail grade that connect these towns.

IFMAP/GAP Land Cover raster dataset gives critical insight to the land use in this area. With your permission I would like to use this dataset to create a map that I can use in my report.

This data will help to guide MDNR, MDOT, MTU, and other local professionals in their ongoing restoration efforts across this rural community.

May I have your permission to use the above referenced digital data for the purpose of research?

Thank you,
Brittany

--

Brittany Hubbard
Graduate Student - Water Resource Engineering
Civil & Environmental Engineering Dept.
Michigan Technological University

Donovan, Michael (DNR) <DONOVANM@michigan.gov>
To: hubbard <hubbard@mtu.edu>

Wed, Jul 14, 2021 at 3:09 PM

Hi Britany,

Yes you have my permission. I am not sure you need it, but if you do need it, you have it. The data set is very old, I believe 2001 time frame. There are more recent landcover datasets for Michigan from the NOAA CCAF program or the USGS National Landcover dataset.

Mike



Michael Donovan (he/him/his)
Management Information Unit
Supervisor
Michigan Department of Natural
Resources

[14] United States Department of Agriculture. Natural Resource Conservation Service. Conservation Engineering Division. 1986. "Urban Hydrology for Small Watersheds, Exhibit A. *Technical Release 55 (TR-55)*. **In the public domain.**

[15] Google Earth Pro 7.3.3.7786. (May 9, 2014). Hubbell and Lake Linden, Michigan. Landsat/ Copernicus WorldView. Accessed 2020. **Fair Use – uses historical imagery (properly attributed) in a transformative manner in production of Figures 2.7 and C.1.**

[16] Michigan Department of Environment, Great Lakes, and Energy. 2021. “Site Investigation and Remediation.” *Accomplishments to Date*. Accessed 2020. https://www.michigan.gov/egle/0,9429,7-135-3311_4109_9846_76560-390789--,00.html. **Fair use- limited quotations used to support the on-going status of hydraulic structure maintenance and restoration efforts at historical mining properties located in the floodplain of the research site.**

[17] EROS, 2020. Earth Explorer. United States Geological Survey’s Earth Resources Observation and Science Center (EROS). <https://earthexplorer.usgs.gov/>. **In the public domain.**

[18] EGLE MiWaters Water Resource Division. 2021. “Water Resource Information Database.” Accessed 2020. <https://miwaters.deq.state.mi.us/nsite/map/help>. **In the public domain. See below disclaimer from referenced website.**

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