



WATERWAYS BUREAU
PROGRAM GUIDANCE

Wisconsin Department of Natural Resources
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**Third Party Navigability Determination Data Collection
Procedure**

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This document is intended solely as guidance and does not contain any mandatory requirements except where requirements found in statute or administrative rule are referenced. Any regulatory decisions made by the Department of Natural Resources in any matter addressed by this guidance will be made by applying the governing statutes and administrative rules to the relevant facts.

APPROVED:

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Waterways Bureau Director

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Date



THIRD PARTY NAVIGABILITY DETERMINATION DATA COLLECTION PROCEDURE

Standard operating procedure for Navigability Determination Data Collection and WDNR Concurrence

***Disclaimer:** This document is intended to aid in conducting desktop and field data collection to inform navigability determinations conducted by a third party and provided for Department review and concurrence.*

Notice: Collection of this information is authorized under ch. 30, Wis Stat. DNR has the authority to make waterway jurisdictional determination but this procedure can be used by any third party to provide information to the Department to help make this determination. DNR will use information gathered using this procedure to make jurisdictional determinations if it is true, accurate and complete.

Overview of Third-Party Navigability Determination Data Collection and WDNR Concurrence Request Steps

Step 1: Identify the project location

Step 2: Review sources and gather data to understand waterway regulatory history

Step 3: Review sources and gather data to understand waterway geomorphological history

Step 3a: Gather in-field data using navigability determination data form (See [WDNR Form 3500-139](#))

Step 4: Make a preliminary determination

Step 5: Document your findings using the navigability determination data form ([WDNR Form 3500-139](#))

Step 6: Submit your preliminary determination to the Department to review for concurrence



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Preface: *The primary intention of this standard operating procedure is to help third parties collect data to determine the navigability status of streams; however, the same concepts also apply to determining the navigability status of lakes and ponds. To be considered navigable, a waterway must have a defined bed, banks, an Ordinary High Water Mark (OHWM), and evidence of enough water present on a recurring basis to support navigation by the smallest recreational watercraft. The presence of water need not be continuous; rather, if a stream channel contains sufficient water only during periods of spring snowmelt or after heavy rain events, the criteria for “recurring basis” has been met.*

Note that in locations where emergent wetlands transition to open water, it can be difficult to determine the extent of the navigable waterway since the ordinary high water mark may not be easily identified using typical, easily recognizable characteristics. In these circumstances, Department waterway staff should be contacted to help determine whether an area is considered to be vegetated lake bed.

Water depth and stream width requirements will vary depending on the dimensions of the watercraft utilized and weight of the person navigating. A common “rule of thumb” is that a stream should be consistently around 3’ wide with 3-6” of water depth (as measured from the bed in the thalweg to the OHWM indicators on the bank) to support navigation. Keep in mind, for In-Fact determinations it is important to know the dimensions of the smallest watercraft you have access to for a field determination and how much water you can float in freely using that watercraft, since those dimensions will help serve as the basis for your determinations remotely and in the field. Additionally, the ability to solely float in a single location without physically navigating from one point to another may not clearly support navigability. A strong case can be made when a person is physically able to go from point “a” to point “b”; however, this length has not been established so it is important to look at each scenario from the perspective of whether you could testify in the court of law to the fact that you would be able to “navigate” the stream in question. To simplify, the longer the length of stream supporting the ability to navigate uninterrupted, the stronger this argument. To that end, if channel dimensions would support navigation, but debris such as logs or rocks in the stream, or dense vegetation growing along the stream bank (tag alders, willows, etc.) would impede one’s ability to physically navigate, this debris/vegetation is not in itself an impediment on the overall determination of navigability. If a site needs this level of detail, an onsite review would likely need to be conducted. It is with these considerations in mind that desktop and field reviews are being conducted. We hope to look at all resources available to determine whether a stream meets these criteria on a recurring basis.

Step 1: Identify the Project Location.

Identify the project location utilizing the DNR’s publicly available mapping program called the [Surface Water Data Viewer \(SWDV\)](#). This can provide the legal description of the property and help to identify mapped surface waters and other environmental features which may be helpful to inform a determination.

Step 2: Review sources and gather data to understand waterway regulatory history.

Verify previous department Waterway permits and determinations upstream and downstream the site. Utilizing SWDV, navigate to your project site and turn on the “permits and determinations” layer located in the “show layers” tool within the “basic tools” tab. This layer provides information for previous department waterway and wetland permit decisions, wetland confirmations, and jurisdictional determinations (navigability and ordinary high water mark). Make sure to also make active the layer for “Navigability



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Determinations (Older Data)” to bring up additional navigability-related records. This information allows a reviewer to determine whether there are records available for that location that would help inform the site specific determination. Be sure to review the stream feature for past determinations up and downstream of the project area as streams can appear to go “in and out” of navigability depending on underlying geology and/or connected wetland features. If there is a record located along the waterway, you can utilize the point identify feature under the “locate and identify” tab to view critical details about the determination. Chapter 30 permits with an approved status would indicate the stream has previously been determined to be navigable. For jurisdictional determinations, you will need to reach out to your local [Department Water Management Specialist](#) to obtain more information regarding the outcome of the determination.

For streams which exhibit characteristics of going in-and-out of navigability, generally, if a stream is determined to be navigable upstream, and the stream intermittently loses features that support navigability (defined bed/bank, OHWM, enough water on a recurring basis) but the stream eventually becomes navigable again, or connects with a navigable waterway, then the entire stream downstream of the location where navigability features are first identified is considered navigable. If this scenario exists as diffuse flow conditions through wetlands, additional information may be available by identifying the wetland type in the mapped wetlands layer of the SWDV. Open marsh type wetlands with characteristic periods of standing water often exist “below” the OHWM of a connected navigable waterway and hence the navigable waterway would include the entire area of the wetland. Locations where a stream flows into a forested wetland or sedge meadow, losing defined bed/banks while in the wetland, and reemerging downslope as a defined navigable waterway are more challenging circumstances and may require an in-field review for verification of the extent of the navigable waterway.

It is beneficial to reach out to the local zoning office and inquire about any local permits that may have been issued at or near the area of focus. The implementation of shoreland zoning standards implies that the waterway feature is considered navigable. Sometimes, these records are available through [County specific land information online GIS mapping websites](#), otherwise a conversation with local County or Village Shoreland Zoning staff can provide valuable information.

Step 3: Review sources and gather data to understand waterway geo-morphological history

Review mapping resources, Google Earth, [county online GIS mapping](#), [Wisconsin Historical Aerial Imagery Finder](#), or additional resources for evidence of a defined bed/bank, and recurrence of water capable of floating a small craft such as a kayak. Look at multiple years of aerial imagery to understand whether there is a regular recurrence of high water or navigable conditions in the stream. Establishing stream history can help support a long term “recurrence” of water within a defined bed/bank which will further support a navigability determination, but a lack of stream history doesn’t necessarily mean that a stream is not navigable.

Using the “measure” tool in various mapping resources can be useful to determine stream bed/bank widths. Streams that are identified with the minimum widths necessary to potentially float likely require further review through on the ground photo documentation or a site visit since features such as narrow stream bank widths, tight meanders, steep slopes, and shallow water depths taken together may be difficult to support navigation.



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Review [Wisconsin Land Economic Inventory \(Bordner Survey\)](#) maps and the [Wisconsin Public Land Survey Records](#) to help identify and evidence of stream history. Typically, if a stream crossed a section line it was noted in the record and drawn. Some streams may fall interior to the surveyed section lines and may not be shown on survey even though the waterway might currently meet the state's definition of navigable.

Another option is reviewing [Wisconsin DEM and Hillshade from LiDAR](#) or High resolution county topographical maps often found on county web mapping applications (Lidar is a method for measuring distances by illuminating the target with laser light and measuring the reflection with a sensor. This method bounces off water however can scan through tree cover. This data can provide you with a visual mark for an established bed and bank.

Review any site photographs for evidence of an [Ordinary high water mark](#) existing at least 3-6" in elevation above the stream bed. This may be a good indicator that water has been at this elevation persistently and likely exceeds such depths during spring flows or storm events – further supporting evidence of enough water to floating a small craft on a recurring basis. It is important that any photos provided contain an item in the photo that can be used to scale from for an accurate estimation. Photos without items of known relative size are can be challenging to obtain an accurate representation from. One can also focus on looking for the necessary water depths in riffle sections of the stream as these features can be the limiting factor or bottle neck to support the ability to navigate a small craft.

If you are near a road crossing in a stream located in a more urbanized setting, using google street view on the road crossings may also give an "on the ground" perspective if site photos are not available. Be careful not to mistake any features associated with the roadway crossing as representative of the overall stream. Crossings can increase velocities leading to stream scour up and downstream which stands to alter bed/bank dimensions. Plunge pools may also form downstream of a culvert crossing. These plunge pools are characterized by deeper water downstream of the crossing as a result of stream bed scour. As such, these plunge pools should not be considered when reviewing stream conditions for navigability overall, as they do not accurately characterize stream conditions being reviewed for navigability. Similarly, looking for OHWM indicators on straighter stream sections is encouraged rather than focusing on indicators found on outstream stream bends. The outside bend is an actively eroding area on streams systems so focus on documenting indicators that are on straighter sections of stream channel.

Step 3A: Gather in-field data using navigability determination data form (See [WDNR Form 3500-139](#))

Navigable-in-Fact

The best evidence of navigability is whether a lake or stream is navigable-in-fact. Using the direction in [DeGayner v. DNR](#), 70 Wis. 2d 936 (1975), a stream is navigable-in-fact if it is navigable by canoe or skiff on a reoccurring basis (i.e. annually during freshets) and has a discernible bed and banks.

The test of navigability is whether you can float a canoe, kayak or duck skiff down the stream. Obstacles or interruptions to navigation such as brush, fallen trees, tight meanders, do not make a stream not navigable-in-fact by themselves. Remember that Lewis Creek (subject of [Olson v. Merrill](#), 42 Wis. 203



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(1877)) was found to be navigable-in-fact even in light of the fact that it was (and still is) such a winding, twisting, alder covered creek that logs being driven down it could not make some of the bends and were continually hanging up in the alders. Take notes and gather information that will help support your determination:

1. If doing a navigable-in-fact determination, note size of the kayak, canoe, or boat. The weight of the navigator. The start and stopping points, date, startup and finishing time.
2. Note water level depth. Use the top of a bridge, culvert or other permanent reference point; measure level at start and finish of floating.
3. The relation of the water level to the ordinary high water level.
4. Estimated or measured flow rate.
5. Photographs, particularly with navigator in boat at narrow, normal and obstructed sites. Video clips are excellent evidence especially if the determination is likely to be disputed. You may need someone else along to help document while you are in the watercraft.

Note any interruption or obstacles to navigation such as fallen trees, brush, etc.

Note: Due to the nature of these types of determinations and the case-law definition of *navigability*, navigable in fact methods may not be appropriate to use during certain times of the year (ex. late summer low flow) and the inability to navigate during that time may not be reflective of the true navigability of the waterway. The Department reserves the right to review information in support of a determination.

Navigable-in-Opinion

This is the most common method used for navigability determinations. Case law has determined that a waterway is navigable if it has a defined bed (bottom) and bank (side) with enough water to float a shallow draft watercraft (boat, canoe, kayak) on a recurring basis such as spring freshets and heavy rains. Remember, it does not necessarily need to have water in it at the time of determination to be determined navigable. If the waterway is dry, the potential depth of water can be measured from a horizontal line drawn between the banks at the OHWM. This is called navigable-in-opinion. Take notes and gather information that will help support your determination:

1. To document navigability, determine if there are clearly defined bed and banks.
2. Identify the OHWM.
3. Measure bed width at top of bank and at the OHWM.
4. Measure bank height.
5. Measure water depth at OHWM (which would be water level during a freshet).
6. Measure current water level to the bed.
7. Locate the ordinary high water mark, measure the width of the waterway from bank to bank at the OHWM elevation, and then measure the depth of the water from the line drawn between the bank OHWM on each side (if dry, use a level to make sure you are drawing the tape across as if there was water in it, then measure to the bed).



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8. Photographs will also be part of this documentation. It's important to consider/imagine the waterway under normal spring runoff events or heavy rain when/if the stream leaves the banks during those conditions.

Step 4: Make a preliminary navigability determination

Make a preliminary professional determination about whether the stream is navigable in opinion based on the information gathered and reviewed. If all or majority of evidence reviewed in steps 1-3 point towards a similar determination, then one can feel confident in the accuracy and defensibility of the preliminary determination. Conflicting evidence should be reviewed carefully to inform a preliminary determination.

Step 5: Document your findings using the Navigability Determination Data Form ([WDNR Form 3500-139](#))

Your report should include the following components:

- Landowner and Site location information
- Narrative describing purpose for determination (waterway project planning for ch. 30 jurisdiction, upland construction planning for shoreland zoning jurisdiction, informational, etc.)
- Summary of the information reviewed including attachments of site maps, aerial photos, previous determinations, etc. and a narrative interpretation of the resources reviewed
- Field data (navigability determination data form, field photos, stream bed/bank/depth measurements) and a summary of field information gathered
- Conclusion and Preliminary navigability determination

Step 6: Submit your preliminary determination report and request for concurrence to the Department for review.

Navigability Determination preliminary reports can be submitted to local Department Water Management Specialists for review by email. You can find your local Water Management Specialist at <https://dnr.wisconsin.gov/topic/Waterways/contacts.html>. Department staff will respond within 30 days of receipt of a request for concurrence and may concur with the preliminary determination, request additional information in support of the preliminary determination, or not concur with the preliminary determination. The Department will provide the outcome of the review in writing and will clearly explain additional informational needs or the reason for not concurring with the preliminary determination if those outcomes apply.