



Department of Public Works | 860.584.6125

MEMORANDUM

DATE: November 25, 2024

TO: Inland Wetlands Commission

FROM: Raymond A. Rogozinski, P.E., Director of Public Works

RE: **DPW – Proposed Inland Wetland Regulation Amendment
Section 3:1 – Inventory of Regulated Areas**

The Department of Public Works request that the **Inland Wetland Commission schedule a public hearing at its February 2, 2025 meeting to update Inland Wetland Regulation Section 3.1**, the map depicting regulated wetland area within the City as indicated below:

SECTION 3.1 – INVENTORY OF REGULATED AREAS

a. Existing Regulation:

The map of regulated areas entitled “Inland Wetlands and Watercourse Map, Bristol, Connecticut” delineates the general location and boundaries of inland wetlands and the general location of watercourse. Copies of this map are available for inspection at the office of the inland wetland agency. In all cases, the precise location of regulated areas shall be determined by the actual character of the land, the distribution of wetland soil types and location of watercourses. The agency may use aerial photographs, remote sensing imagery, resource mapping, soil maps, site inspection observation or other information in determining the location of boundaries of wetlands and watercourses.

b. Proposed Regulation

1. Purpose of Proposed Amendment:

Purpose of Proposed Amendment – The purpose of the proposed regulation amendment is to update the current City-wide wetland map, used as the preliminary assessment of regulated wetlands within the City. The wetlands depicted on the current map area based on soil information from the 1960s along with approved wetland boundary change applications. The intent of this amendment is to adopt a new updated map prepared by BL Company working on behalf of the City of Bristol as reviewed and amended by the Department of Public Works. The proposed map amendment was developed utilizing 2019 aerial imagery, 2016 light detection and Ranging LiDAR, US Fish and Wildlife Service National Wetland Inventory dataset, Natural Resource Conservation Service Soil date along with field verifying section of the City.

Although the primary intent of the Inland Wetland Regulation amendment is to update the City wetland map, the Department of Public Works also proposes the following text amendment to clarify section 3.1 Inventory of regulated areas; The proposed revisions is as follows:

2. Proposed Amendment – Draft

3.1. The map entitled “City of Bristol – City Designated Inland Wetlands Regulated Areas, Dated December 2, 2024” shall delineates the general location and boundaries of inland wetlands and the general location of watercourse within the City of Bristol. The referenced map may be updated by the Inland Wetland Commission on a periodic basis and shall reflect all wetland boundary changes approved by the Commission. Copies of this map are available for inspection at the office of the inland wetland agency and are available on the Departments of Public Works City of Bristol Website.

Applicants and property owners shall be advised that the map may not depict all wetlands within the City. The precise location of regulated areas shall be determined by the actual character of the land, the distribution of wetland soil types and location of watercourses. The agency may use aerial photographs, remote sensing imagery, resource mapping, soil maps, site inspection observation or other information in determining the location of boundaries of wetlands and watercourses. The Inland Wetland Commission or its agents reserves the right to require applicants or property owners to submit a report prepared by a Certified Soil Scientist indicating that an area of concern is NOT classified as an inland wetlands or watercourse. It should also be noted that Applicants and property owners reserve the right to submit an application of wetland boundary change to the Commission for review and approval to amend the map entitled “City of Bristol – City Designated Inland Wetlands Regulated Areas, Dated December 4, 2024”.

Inland Wetland Commission approval to schedule a public hearing shall include forwarding the proposed regulation amendment, included the revised map entitled “City of Bristol – City Designated Inland Wetlands Regulated Areas, Dated December 2, 2024” to the CT DEEP for review and comment.

The DPW is requesting the scheduling of a public hearing at the IWC’s February meeting to comply with the following CT DEEP regulation amendment requirements:

- 1) The amendment and the notice of public hearing must be submitted to the Commissioner of DEEP at least 35 days before such hearing on the amendment is held.
- 2) A public hearing on the amendment must be held within 65 days after the receipt of the amendment proposal.
- 3) The public hearing must finish within 35 days after it has started.
- 4) The inland wetlands agency must take action on the amendment proposal within 65 days after the hearing ends.
- 5) The inland wetlands agency must submit the final adopted amendment language to the Commissioner of DEEP not later than 10 days after adoption.

A memorandum prepared by BL Company Inc. outlining the methodology used to prepare the updated map is attached and the proposed map along with text amendments to section 3.1, Inventory of Regulated Areas shall be available to public review at eh Department of Public Works, 111 North Main St Office along with being posted on the Department’s website.

A Department of Public Works representative is scheduled to attend the Commission’s December 2024 meeting and BL Company will be presenting propose map amendments to the Commission at the January 6, 2024 hearing associated with amendments to Section 3:1 of the City’s Inland Wetland Regulations.



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Please feel free to contact me at 860-584-6113 with any questions.

November 18, 2024

City of Bristol
Inland Wetland Commission
111 N. Main Street
Bristol, CT 06010

RE: City of Bristol's Inland Wetland and Watercourse
Mapping Updates
City of Bristol, CT
BL Project No. 2201957

Dear City of Bristol Inland Wetland Commission:

I am pleased to present a summary of the recently completed project, "City of Bristol Regulatory Inland Wetland and Watercourse Mapping Updates". This memorandum summarizes the recent updates made to the City of Bristol's (City) Inland Wetland and Watercourse Mapping (IWW Mapping), including the methods, field verification process, and the significance of the mapping enhancements for future regulatory and planning decisions.

Project Overview

The current City GIS Inland Wetlands map layer indicating the approximate location/extent of Inland Wetlands within the City was developed from Soil Conservation Service (SCS) mapping from the 1960s. It is our understanding that the City's IWW mapping was generated by digitizing those paper maps and incorporating them into the City's GIS system. These maps that were developed over 55 years ago, from hand drawn paper mapping, have been used by the City and the general public to identify wetlands and watercourses in the City. The mapping is available on the Department of Public Works' website and referenced in Section 3 of the City's Inland Wetland Regulations. The IWW mapping is used to make a preliminary determination on whether a wetland permit is required for site specific projects.

BL Companies (BL) was selected by the City to update the current map sets using both updated GIS field driven data collection, and recently available GIS data layers from various public resource agencies to modify the existing GIS IWW layers used by the City. The IWW mapping project was undertaken by the City in order to provide a more accurate depiction of regulated wetland and waterway resources within the City's jurisdiction to help streamline permit determinations and reduce costs to the public.

To achieve the project's goals, BL completed a comprehensive review and analysis of multiple datasets, including 2019 aerial imagery, 2016 Light Detection and Ranging (LiDAR) data, both derived from UCONN's online imagery repository, the latest US Fish and Wildlife Service National Wetland Inventory (NWI) dataset, Natural Resource Conservation Service (NRCS) soil survey data,

the existing City of Bristol Inland Wetland dataset, and then limited field verification of specific areas of concern for either presence or absence of wetlands and watercourses as currently shown on the City's IWW mapping.

Key Tasks and Accomplishments

1. **Data Analysis:** We utilized a GIS-based Topographic Wetness Index (TWI) derived from LiDAR data, employing geospatial processes to differentiate upland areas from regions with a high probability of inundation. This involved analyzing flow direction, flow accumulation, and slope.
2. **Overlay and Identification:** The TWI was then overlain with various datasets, allowing us to identify areas that were inaccurately mapped or omitted entirely from the City's current IWW map GIS layer.
3. **Field Verification:** BL's soils and wetlands scientists conducted 80 hours of field verification of parcels identified during the data analysis phase. This limited field review included collecting GPS points of sub foot accuracy, at key locations to ensure that BL's GIS analysis accurately reflects the current location of regulated wetlands and watercourses, or lack thereof.
4. **Incorporation of Past Revisions:** Following our initial analysis and field verification, BL's GIS team reviewed and incorporated the previous five (5) years of the City's IWW Map Revisions. These map revisions were the result of Inland Wetlands Commission driven field delineations completed by others for development located within the City limits. These map revisions are on file with the Department of Public Works.

Challenges and Solutions

BL encountered challenges related to data discrepancies and the need for thorough field validation. By leveraging our team's expertise and employing a meticulous approach to data analysis and verification, we were able to overcome these challenges effectively. BL deployed soils/wetlands scientists to identify areas of interest throughout the City. The BL field teams were able to confidently and accurately update wetland boundaries at these limited locations, as appropriate, based upon the data analysis findings.

Impact and Significance

The updated mapping will serve as a crucial resource for the City of Bristol by enhancing decision-making for environmental planning and conservation efforts. The City will be able to more effectively guide residents and business owners on the need to utilize a wetland consultant to delineate wetland and watercourse boundaries and obtain wetland encroachment permits for proposed projects. The updated mapping accuracy in wetland and watercourse habitat will allow the City to continue to support sustainable land use practices and protection of natural resources more effectively.

Disclaimer

It is essential to understand that the mapped wetland and watercourse data, while derived from high-resolution GIS analysis and aerial imagery, may not comprehensively represent all wetland areas within the City. Not every wetland or stream area identified in this updated mapping has undergone on-site field review due to the limited resources allotted to the overall mapping update. Wetlands, by nature, can be highly variable, with boundaries that may shift based on environmental conditions, such as soil moisture and vegetation changes.

The revised map layer serves as a preliminary guide to identify potential wetland areas and should not be solely relied upon for site-specific planning or regulatory purposes. BL strongly recommends that any proposed project within or near indicated wetland areas undergo a field-specific assessment by a qualified soil scientist or wetland professional to confirm the presence or absence of wetlands and to accurately delineate boundaries if needed. Such field verification is critical to ensure compliance with applicable local, state, and federal wetland regulations.

Sincerely,

BL Companies



Joseph P. Kempf
Senior Project Scientist II



Wesley G. Wolf
Senior Project Manager

