Staff Report
Application # IWW, WPL/E-11783-23
18 Partrick Road
Assessor's Map: B13 Tax Lot: 047
Prepared August 16, 2023 revised to September 5, 2023
Public Hearing: September 13, 2023

Receipt Date: **August 17, 2023**

Application Classification: **Plenary**

Application Request: The applicant is representing Earthplace, Inc. The proposed work is to install a wooden plank boardwalk through a seasonally inundated wetlands, connecting two trails within upland areas.

Plans Reviewed:

a. **Standard Wooden Planked Wetland Boardwalk,** (Plan &Section View), sheet 1 of 1, prepared for Earthplace, submitted August 15, 2023

Past Permits:

October 18, 2007- Administrative Approval for installing a water level control device at beaver dam built across Poplar Plains Brook

IWW and WPLO Regulated Areas

The Waterway Protection Line is established 15' landward from the various wetland and watercourse boundaries within the subject property. The proposed activity is within the WPLO boundary. Per Regulation **#30-90-A.** of the Waterway Protection Line Ordinance for "**Permitted Activities**", The Town Engineer has determined the project to have **no** adverse impact on flooding, draining, erosion, or the natural carrying and water-storage capacity of the waterway. The Conservation Director agrees with the Town Engineer's findings. Therefore, pursuant to the Waterway Protection Line Ordinance regulations, the proposed activity is exempt from a Conservation Commission determination.

Partrick wetlands is a palustrine wetland complex comprised of emergent, scrub shrub and forested wetlands as well as a perennial watercourse, Poplar Plains Brook. The proposed wooden boardwalk will be installed through the seasonally inundated portions of the forested wetland in the northeast portion of the parcel. The plan does not propose to cross the main channel of Poplar Plains Brook, which is depicted to the west of the project area.

The Inland Wetland and Watercourse Regulations (IWW) setbacks determined for regulated activities on this property include a 20-ft non-disturbance, review area setback for the installation of a wooden walkway within wetlands with associated soil disturbance and vegetation removal.

Wetlands Description:

There is no site-specific wetland characterization for this project. Conservation Staff referenced US Fish and Wildlife's National Wetland Inventory Web Soil Survey and soil reports from adjacent properties and selected the soils units likely present on the subject property.

The USFWS National Wetland Inventory identifies the wetland areas on site as:

- 7.15 acre freshwater emergent wetland habitat, classified as **PEM1/SS1A**.
- 8.71 acre freshwater shrub wetland habitat, classified as **PSS1E**.
- 2.50 acre freshwater forested wetland habitat is classified as a **PFO1E**.

There is no site-specific soil survey provided for this project. Conservation Staff referenced USGS Web Soil Survey and selected the soils units likely present on the subject property.

Wetland soils *likely found on the property:*

Raypole silt loam (12): This soil type is nearly level, poorly drained soil found in depressions, on plains and terraces. Included in this unit are small areas of moderately well drained Ninigret soils, poorly drained Walpole soils, and very poorly drained Saco and Scarboro soils. The Raypole soil has a seasonal high water table at a depth of 6 inches from fall until late spring. The permeability of the soil is moderate in the surface layer and subsoil, and rapid or very rapid in the substratum. Runoff is slow, and available water capacity is moderate. The soil dries and warms up slowly in spring. Most areas of this soil type are wooded. The seasonal high water table and rapid permeability in the substratum limit this soil for community development. Groundwater pollution is a hazard in areas used for on-site septic systems. Excavations in the soil area commonly filled with water, and many areas do not have drainage outlets. Quickly establishing plant cover and using siltation basins help to control erosion and sedimentation during construction. The soil is poorly suited for trees due to the high water table which restricts root growth. As a result, many trees are uprooted during windy periods.

Timakwa and Natchaug Soils (17): This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 40 to 50 inches (1016 to 1270 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 45 percent Timakwa soils, 40 percent Natchaug soils. 15 percent minor components.

Timakwa soils

This component occurs on depression landforms. The parent material consists of woody organic material over sandy and gravelly glaciofluvial deposits. The slope ranges from 0 to 2 percent and the runoff class is negligible. The depth to a restrictive feature is greater than 60 inches.

The drainage class is very poorly drained. The slowest permeability within 60 inches is about 5.95 in/hr (rapid), with about 16.2 inches (very high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 3.9 LEP (moderate). The flooding frequency for this component is rare. The ponding hazard is frequent. The minimum depth to a seasonal water table, when present, is about 4 inches. The maximum calcium carbonate within 40 inches is none.

Natchaug soils

This component occurs on depression landforms. The parent material consists of woody organic material over loamy alluvium, loamy glaciofluvial deposits, or loamy till. The slope ranges from 0 to 2 percent and

the runoff class is negligible. The depth to a restrictive feature is greater than 60 inches. The drainage class is very poorly drained. The slowest permeability within 60 inches is about 0.20 in/hr (moderately slow), with about 15.6 inches (very high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 3.9 LEP (moderate). The flooding frequency for this component is rare. The ponding hazard is frequent. The minimum depth to a seasonal water table, when present, is about 0 inches. The maximum calcium carbonate within 40 inches is none.

Upland soils *likely found on the property:*

Agawam Fine Sandy Loam, 3 to 8 percent slopes (29B): This map unit is in the Connecticut Valley New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation Is 32 to 50 inches (813 to 1270 millimeters) and the average annual air temperature is 45 to 50 degrees F. (7 to 10 degrees C.) This map unit is 80 percent Agawam soils. 20 percent minor components. This component occurs on valley and outwash plain terrace landforms. The parent material consists of eolian deposits over glaciofluvial deposits derived from schist, granite, and gneiss. The slope ranges from 3 to 8 percent and the runoff class is low. The depth to a restrictive feature is greater than 60 inches. The drainage lass is well drained. The slowest permeability within 60 inches is about 1.98 in/hr (moderately rapid), with about 4.8 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet.

Agawam Fine Sandy Loam 8 to 15 percent slopes (29 C): This map unit is in the New England and Eastern New York Upland, Southern Part Connecticut Valley Major Land Resource Area. The mean annual precipitation is 32 to 50 inches (813 to 1270 millimeters) and the average annual air temperature Is 45 to 50 degrees F. (7 to 10 degrees C.) This map unit is 80 percent Agawam soils. 20 percent minor components. This component occurs on valley and outwash plain terrace landforms. The parent material consists of eolian deposits over glaciofluvial deposits derived from schist, granite, and gneiss. The slope ranges from 8 to 15 percent and the runoff class is low. The depth to a restrictive feature is greater than 60 inches. The drainage class is well drained. The slowest permeability within 60 inches is about 1.98 in/hr (moderately rapid), with about 4.8 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet.

Ninigret fine sandy loam (701): This nearly level to gently sloping, moderately well drained soil is found on plains and terraces in stream valleys. This soil has a seasonal high water table at a depth of about 20 inches from late fall until mid-spring. Permeability is moderately rapid in the surface layer and subsoil, and rapid in the substratum. Runoff is slow and available water capacity is moderate. The soil dries out and warms up slowly in spring. Many areas of this soil are used for hay, corn, vegetable and nursery crops. Some scattered areas are used for community development and a few small areas are wooded. The seasonal high water table is the main limitation of this soil for community development. The water table makes special design and installation of on-site septic systems necessary. Slopes of excavations are commonly unstable. Where outlets are available, footing drains help prevent wet basements. Quickly establishing plant cover, mulching, and using siltation basins help to control erosion and sedimentation during construction. This soil is well suited for cultivated crops and trees, but drainage is needed in some of the farmed areas. Minimum tillage and the use of cover crops help to control a moderate hazard of erosion in cultivated areas. Machine planting is practical in areas used for woodland.

Property Description and Relative Facts

1. The property is 22.12 acres (963,547.2 sq.ft.) in size; located in Zone OSRD.
2. The parcel is located within the Poplar Plains Brook Watershed. Poplar Plains Brook flows from the south to the north through the property.
3. The property is not within the Aquifer Protection Overlay Zone.
4. Property does not exist within the Coastal Areas Management Zone.
5. The Waterway Protection Line (WPL) is established 15' from the wetland boundary.
6. The wetland boundary and soil types are provided on the Town's GIS.
7. The parcel has a single outbuilding (pump house).

Conformance to Section 6 of the Inland Wetlands and Watercourses Regulations:

6.1 GENERAL STANDARDS

a) disturbance and pollution are minimized;
b) minimize height, width, length of structures are limited to the minimum; dimension to accomplish the intended function;
c) loss of fish, other beneficial organisms, wildlife and vegetation are prevented;
d) potable fresh water supplies are protected from dangers of drought, overdraft, pollution, misuse and mismanagement;
e) maintain conservation, economic, recreational and aesthetic qualities;
f) consider historical sites

Discussion:

The project proposes a permanent boardwalk structure within the forested wetlands within the northeast portion of the parcel. The boardwalk will be constructed of 36"-long planks affixed to 4"x4" cross supports (sills) laid on the ground surface. Earth disturbance and vegetation will be minimal and exclusively associated to improve ground surface for the sills. Cutting and sealing of lumber will take place offsite and the boardwalk will be installed by a team of four to eight volunteers to minimize foot traffic within the wetland. There is no proposed use of machinery for the installation of the boardwalk. Earth disturbance will be temporary and will become stabilized immediately after installation. Some herbaceous and shrub vegetation within the wetland will be disturbed but preferred habitat within the nearby areas will be left undisturbed. Staff notes that disturbed conditions are temporary and do not pose any long-term adverse impacts to wildlife, vegetative community, and or fish habitat. The applicant states that the boardwalk will help decrease the long-term impacts of pedestrian disturbance throughout the wetland by concentrating future foot traffic to a single accessible pathway.

6.2 WATER QUALITY

a) flushing rates, freshwater sources, existing basin characteristics and channel contours will not be adversely altered;
b) water stagnation will neither be contributed nor caused;
c) water pollution will not affect fauna, flora, physical or chemical nature of a regulated area, or the propagation and habitats of fish and wildlife, will not result;
d) pollution of groundwater or a significant aquifer will not result (*groundwater recharge area or Aquifer Protection Overlay Zone*);
e) all applicable state and local health codes shall be met;

f) water quality will be maintained or improved in accordance with the standards set by federal, state, and local authority including section 25-54(e) of the Connecticut General Statutes
g) prevents pollution of surface water

Discussion:
The nearest perennial water course is Poplar Plains Brook, located within the property. The surface water quality classification for Poplar Plains Brook (State Waterbody ID: CT7200-26_01 (Connecticut Environmental Conditions Online, http://www.cteco.uconn.edu/), located offsite to the west, is Class A water for Inland Surface Water Class. The Class A designation indicates that the water is suitable habitat for fish other aquatic life and wildlife and recreation.

Staff referenced UConn's CLEAR Local Watershed Assessment Tool. The local watershed basin (7200-26) for Poplar Plains Brook has a combined condition index (CCI) score of 0.32. A CCI score of less than 0.43 indicates the watershed basin may be significantly impaired. The Tool defines Poplar Plain Brook's Recovery Status as "Mitigation", identifying that watershed condition can be improved with mitigation efforts such as restoring naturalized riparian zones. Earthplace is a steward of Partrick wetlands and the watercourse and endeavors to maintain the existing naturalized riparian zones of the watercourse, which improves the local water quality of Poplar Plains Brook.

Based on the limited and temporary nature of the ground disturbance, Staff does not feel the surface water quality of Poplar Plains Brook will be impacted from the proposed excavation activity across the subject property. Post-installation site conditions will be restored as close to existing conditions as practically possible.

6.3 EROSION AND SEDIMENT
a) temporary erosion control measures shall be utilized during construction and for the stabilization period following construction;
b) permanent erosion control measures shall be utilized using nonstructural alternatives whenever possible and structural alternatives when avoidable;
c) existing circulation patterns, water velocity, or exposure to storm and flood conditions shall not be adversely altered;
d) formation of deposits harmful to aquatic life and or wetlands habitat will not occur;
e) applicable state, federal and local guidelines shall be met.

Discussion:

The applicant does not provide an erosion and sediment control plan. In the project narrative, the applicant states that soil disturbance will be temporary and minimal. Erosion and sedimentation will be limited to improving the ground surface for the boardwalk's wooden sills. Any digging for the sills will be immediately backfilled after each sill is installed. Staff does not recommend the utilization of any silt fencing, haybales or straw waddles as the installation of these controls may cause more disturbance from foot traffic and soil destabilization than the project itself proposes.

6.4 NATURAL HABITAT STANDARDS
a) critical habitats areas,

b) the existing biological productivity of any Wetland and Watercourse shall be maintained or improved;
c) breeding, nesting and or feeding habitats of wildlife will not be significantly altered;
d) movements and lifestyles of fish and wildlife (plant and aquatic life) will not be significantly affected;
e) periods of seasonal fish runs and bird migrations shall not be impeded;
f) conservation or open space easements will be deeded whenever appropriate to protect these natural habitats.

Discussion:
Conservation Staff performed a preliminary review of the State of Connecticut DEEP Natural Diversity Database (NDDB) for potential presence of state-listed species on or adjacent to the subject property using the EZfile online tool. The review provided results of potential nesting habitat for a state threatened species; egret (*Ardea alba*), and year-round habitat for a state species of special concern, the eastern box turtle (*Terrapene carolina carolina*). Staff notes work will in areas that are not representative of either species' habitat. The NDDB review states preferred nesting habitat for great egret occur within tree canopy, 20' to 40' above ground surface, while box turtles preferred habitat is found in well-drained forest bottomlands within a mix of forest and early successional fields. Staff does not anticipate any impacts to state listed species. At present, Conservation Staff does not require additional review or consultation for listed species or critical habitat(s).

Staff recommends the boardwalk should be routed around mature trees and densely vegetated areas to reduce loss of canopy and nesting habitat. work should be done outside of the period of March to June, when the wetlands are inundated with rain and snowmelt, to allow wetland fauna to breed. Staff notes that the work may encounter amphibians and semi-aquatic turtles at any point of the year. Construction could take place in the winter which would reduce impacts on nesting or foraging wildlife. Staff recommends any amphibians or turtles found within the immediate work area or staging areas be allowed to move to adjacent habitat prior to proceeding with work.

Staff notes there will be minimal loss of wetland vegetation within the footprint of the boardwalk. Staff feels enough of the vegetation will be left undisturbed to maintain the function and value of the forested wetland. Staff does not recommend the Commission require any restoration planting or seeding, as it is not practical to implement such efforts. Successional growth of wetland plants will likely occur naturally over time along either side of the boardwalk. Staff does not anticipate long-term adverse impacts to the natural habitat and vegetative community from the temporary minimal disturbance proposed with this project.

6.5 DISCHARGE AND RUNOFF
a) the potential for flood damage on adjacent or adjoining properties will not be increased;
b) the velocity or volume of flood waters both into and out of Wetlands and Watercourses will not be adversely altered;
c) the capacity of any wetland or watercourse to transmit or absorb flood waters will not be significantly reduced;
d) flooding upstream or downstream of the location site will not be significantly increased;
e) the activity is acceptable to the Flood & Erosion Control Board and or the Town Engineer of the municipality of Westport

Discussion:
The Town Engineer has determined the project to have no adverse impact on flooding, draining, erosion, or the natural carrying and water-storage capacity of the waterway. Consequently, the project will not be before the Flood and Erosion Control Board. There will be no grading and the boardwalk construction does not propose to introduce impervious surface, so Staff does not anticipate the project will diminish the capacity of wetland or watercourse to transmit or absorb flood waters.

6.6 RECREATIONAL AND PUBLIC USES

a) access to and use of public recreational and open space facilities, both existing and planned, will not be prevented;
b) navigable channels and or small craft navigation will not be obstructed;
c) open space, recreational or other easements will be deeded whenever appropriate to protect these existing or potential recreational or public uses;
d) wetlands and watercourses held in public trust will not be adversely affected.

Discussion:
Current application will not have a significant impact on recreational and public uses.

Information Gaps / Errors

What is the protocol if work areas become inundated with rainwater while the installation is in progress?

Alternatives to Reduction of Impacts

1. No construction alternative.
2. Approval of application with the following conditions:

    a. Work should be done outside of the period of March to June, when the wetlands become inundated with rain and snowmelt, to allow wetland fauna to breed.
    b. Any amphibians or turtles found within the immediate work area or staging areas should be allowed to move to adjacent habitat prior to proceeding with work.
    c. The boardwalk should be routed around large trees and sensitive vegetated areas to reduce impacts to habitat.