

# **Amended Project Description**

The applicant, Terry McDonald proposes conducting regulated activities at her property located at 32 Birch Mill Trail. The applicant's property abuts Birch Millpond and all activity will be conducted within the upland review area. More specifically, the applicant proposes removing an existing stone patio currently situated adjacent to the banks of Birch Millpond and relocating it further away from the pond. The stone walkway leading to such existing patio is planned to remain. The existing stone patio immediately adjacent to Birch Millpond and associated boulders will be removed by hand and or small rubber tracked machinery as necessary and relocated to the applicant's desired area.

Past activity includes the removal of leaves, organic sediment, and sticks (the "Materials") submerged on the edge of Birch Millpond. The machinery used for such work was a Komatsu PC27MR-2 Mini excavator (specifications attached). After the Materials were removed from the pond, they were spread on to the soil approximately 2-6 feet from the water. The excavator was used to remove approximately 1 to 2 feet from the top of the pond down into the Materials accumulated in Birch Millpond. The excavator was used to remove Materials from the edge of Birch Millpond extending approximately 2 feet outward into the pond. Such activity was performed for an approximate distance of 100 feet running along the shore of Birch Millpond.

The application has been revised to incorporate DEEP's recommendations dated August 25, 2021 and is attached hereto. Proposed remedial measures include, among other things, installing and maintaining a silt fence along the banks of Birch Millpond to prevent the movement of sediment from the project area into the pond. Native plantings consisting of Red Twig Dogwood, American Cranberry, and winterberry will also be planted adjacent to the banks

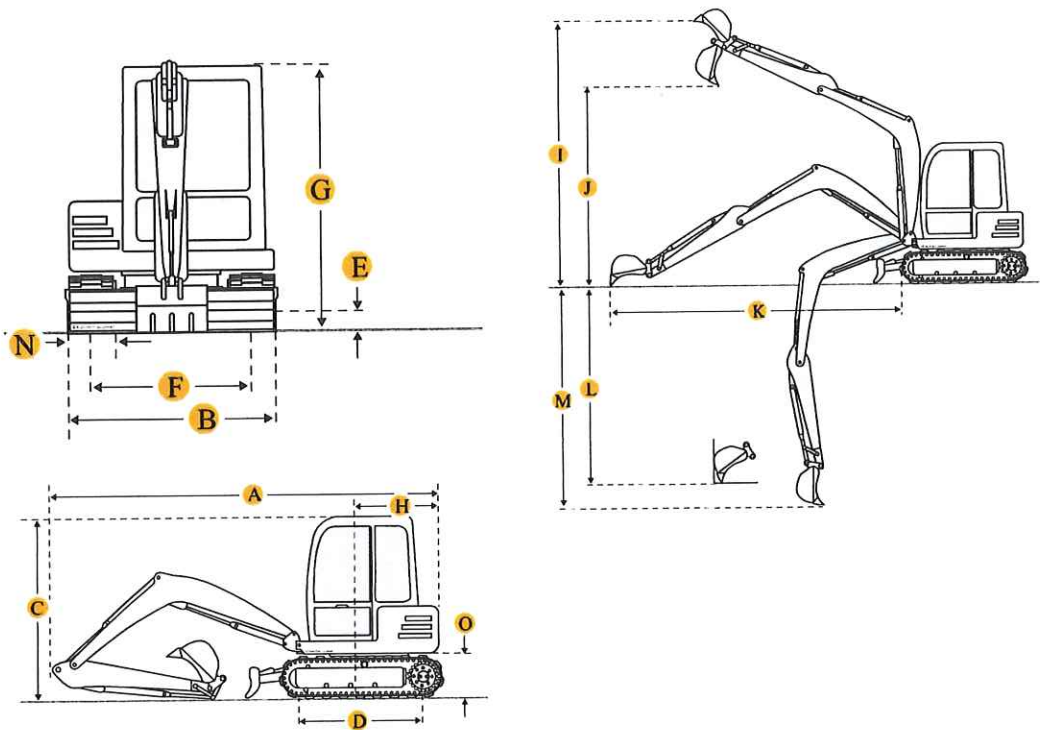
of Birch Millpond and within the area of the proposed former stone patio. Wildflowers will also be planted in place of the existing lower stone patio. The applicant's plan for remediation is in accordance with the recommendations of Bob Russo, Certified Professional Soil Scientist.

Equipment Types

Manufacturers

[Home](#) [Mini Excavator](#) [Komatsu](#) [PC27MR-2](#)

Komatsu PC27MR-2 Mini Excavator



Units Imperial Metric

Dimensions

Boom/Stick Option (Hex) 1

A	Shipping Length Of Unit	14.17 ft in
I	Max Cutting Height	14.75 ft in
C	Shipping Height Of Unit	8.33 ft in
J	Max Loading Height	10.58 ft in
K	Max Reach Along Ground	14.92 ft in
L	Max Vertical Wall Digging Depth	7.17 ft in
M	Max Digging Depth	8.67 ft in

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<b>Boom/Stick Option (Hex) 1</b>		Standard
<b>Dimensions</b>		
<b>B</b>	<b>Width To Outside Of Tracks</b>	5.08 ft in
<b>D</b>	<b>Length Of Track On Ground</b>	4.83 ft in
<b>G</b>	<b>Height To Top Of Cab</b>	8.33 ft in
<b>H</b>	<b>Tail Swing Radius</b>	3.17 ft in
	<b>Removal Counterweight Clearance</b>	1.75 ft in
<b>Undercarriage</b>		
<b>N</b>	<b>Shoe Size</b>	11.8 in
<b>F</b>	<b>Track Gauge</b>	4.08 ft in
	<b>Max Travel Speed</b>	2.9 mph
	<b>Number Of Carrier Rollers Per Side</b>	1
	<b>Number Of Track Rollers Per Side</b>	4
	<b>Ground Pressure</b>	4.3 psi
	<b>Drawbar Pull</b>	7055 lb

## Specifications

### Engine

<b>Engine Make</b>	2238
<b>Engine Model</b>	3D82AE
<b>Gross Power</b>	25.5 hp
<b>Power Measured @</b>	2600 rpm
<b>Displacement</b>	81 cu in

### Operational

<b>Operating Weight</b>	6590 lb
<b>Fuel Capacity</b>	11.6 gal
<b>Hydraulic System Fluid Capacity</b>	7.9 gal
<b>Engine Oil Capacity</b>	1.5 gal

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Operating Voltage	12 V
Alternator Supplied Amperage	40 amps
Hydraulic System Relief Valve Pressure	3555 psi
Hydraulic Pump Flow Capacity	20 gal/min
Swing Mechanism	
Swing Speed	9.2 rpm
Buckets	
Reference Bucket Capacity	0.2 yd3

## Compare similar models

Manufacturer/Model	Operating Weight	Reference Bucket Capacity
<a href="#">Pel-Job EB306</a>	6988.7 lb	0.2 yd3
<a href="#">Caterpillar 302.5C</a>	6283 lb	0.1 yd3
<a href="#">Pel-Job EB250</a>	6007.6 lb	0.1 yd3

Compare

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OEM specifications are provided for base units. Actual equipment may vary with options.

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August 25, 2021

Mr. Robert Doane  
Doane Engineering Company  
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Project: Town Reported Wetlands Violation at 32 Birch Mill Trail in Essex, Connecticut  
NDDB Final Determination No.: 202104876

Dear Robert Doane,

I have reviewed Natural Diversity Data Base maps and files regarding the town reported wetlands violation located at 32 Birch Mill Trail in Essex, Connecticut. According to our information there are extant populations of two state listed turtles in the area of this reported wetland violation. The species are:

- **Eastern box turtle (*Terrapene carolina carolina*) State Special Concern**
- **Spotted turtle (*Clemmys guttata*) State Special Concern**

The following protections measures will minimize impacts to any unknown occurrences of these turtle species.

In Connecticut, **Eastern box turtles** are found in well-drained forest bottomlands and a matrix of open deciduous forests, early successional habitat, fields, gravel pits, and or powerlines. Turtles are dormant between November 1 and April 1 and hibernate in only a few inches from the surface in forested habitat. The greatest threat to this species is habitat loss, fragmentation, and degradation due to development. This species is very sensitive to adult mortality because of late maturity (10 years old) and long life span (50-100years). Vehicular traffic, heavy equipment used for farming, and ATV use in natural areas are implicated specifically in adult mortality through collisions. Illegal collection by the pet trade and unknowing public for home pets exacerbates mortality rates and removes important individuals from the population. Predation rates are also unnaturally high because of increased predator populations (e.g. skunks, foxes, raccoons, and crows) that surround developed areas.

**Spotted turtles** are associated with wetlands and vernal pools. Over the course of a season and lifetime, individuals will travel large distances (up to 1km) over upland forest and fields between multiple wetlands. They overwinter burrowed into the mud in wetlands between Nov 1- March 15. They do not begin to reproduce until 7-10 years old and adults can live at least 30 years. This species is threatened most by any activities that reduce adult survivorship including road kills, commercial and casual collection, increased predation in areas around commercial and residential development, mortality and injury from agricultural equipment or other mechanical equipment. Land disturbance activities that will crush adult turtles or unearth hibernating turtles or turtle nests need to consider local habitat features and apply fencing and/or time of year restrictions as appropriate. We recommend you consult with a herpetologist familiar with preferred habitats to assist you with proper techniques to ensure the best protection strategies are employed for your site.



If land disturbance will occur in open fields, early successional habitat you may need to take precautions to prevent active turtles from entering work area and setting up nests. This fencing would need to be in place before May 15.

For land disturbance that will occur in forested habitat you will need to take precautions to avoid crushing hibernating adult Eastern box turtles.

- Restrict your land disturbance activities in forested habitat to the turtle active season (**conduct land disturbance activities between April 1- November 1**).

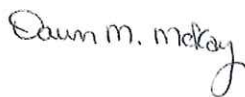
**For land disturbance that will occur between April 1- November 1:**

- Exclusionary practices will be used to prevent any turtle access into disturbance areas. These measures will need to be installed at the limits of disturbance as shown on the plans.
- Exclusionary fencing be at least 20 in tall and must be secured to and remain in contact with the ground and be regularly maintained (at least bi-weekly and after major weather events) to secure any gaps or openings at ground level that may let animal pass through.
- All staging and storage areas, outside of previously paved locations, regardless of the duration of time they will be utilized, must be reviewed to remove individuals and exclude them from re-entry.
- All construction personnel working within the turtle habitat must be apprised of the species description and the possible presence of a listed species.
- The Contractor search the work area each morning prior to any work being done.
- Any turtles encountered within the immediate work area shall be carefully moved to an adjacent area outside of the excluded area and fencing should be inspected to identify and remove access point. This animal is protected by law and should not be relocated off-site.
- In areas where silt fence is used for exclusion, it shall be removed as soon as the area is stable and disturbance is finished to allow for reptile and amphibian passage to resume.

The result of this review does not preclude the possibility that listed species may be encountered on site and that additional action may be necessary to remain in compliance with certain state permits. This determination is good for two years. Please re-submit an NDDB Request for Review if the scope of work changes or if work has not begun on this project by August 25, 2023.

Natural Diversity Data Base information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Natural History Survey and cooperating units of DEEP, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the Data Base should not be substitutes for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the Data Base as it becomes available. The result of this review does not preclude the possibility that listed species may be encountered on site and that additional action may be necessary to remain in compliance with certain state permits. Please contact me if you have further questions at (860) 424-3592, or [dawn.mckay@ct.gov](mailto:dawn.mckay@ct.gov) . Thank you for consulting the Natural Diversity Data Base. Sincerely,

Dawn M. McKay



Environmental Analyst 3