

APPLICATION FORM
TRANSITIONAL CROSSING SITE SELECTION & PRELIMINARY DESIGN SERVICES
APPLICATION FORM

FY24 RFR ID: DER 2024-02

1) APPLICANT INFORMATION

Eligible applicants must submit an application form and access agreement for *each crossing*.

i. Municipality Applying: Town of West Newbury

ii. Applicant's Name: Christine Wallace, P.E., DPW Project Manager

iii. Email & Phone: DPWprojects@wnewbury.org
978-363-1100 x130

2) SITE INFORMATION

i. Crossing Site Name (e.g. Road): River Road Site 1 – near 25 River Rd

ii. Waterway (River or Stream): Crossing is over an unnamed perennial stream near its connection to the Merrimack River

iii. Location (latitude & longitude, or closest street address): 25 River Road, 42.81554, -70.99937

iv. Condition of Crossing: Crossing is a paved roadway over a perched, undersized, 36-inch corrugated plastic pipe in an area facing extreme bank erosion along the Merrimack River

v. Utilities within close proximity to the Crossing, if known (check all that apply):

Gas Electric Water Sewer Telecommunications Stormwater Infrastructure Other

3) PROJECT BACKGROUND

Project Background: Describe the Crossing's location with respect to the Transitional Zone (See Appendix A: Maps of Projected Transition Zone by County). Describe the extent of past discussions related to considering replacement of the crossing. How did this crossing come to be nominated for this application? Who has been involved? Are other options like structure rehab or repair being studied? *Please use as much space as needed.*

This crossing at River Road is located within the Transitional Zone, bounded by the tidally-influenced Merrimack River to the north and an unnamed perennial stream to the south. Because it is known as an area prone to flooding and erosion, this culvert was identified as a problem area in West Newbury's recent MVP Action Grant application (submitted in May 2023 and approved in August 2023) proposing to examine sea level rise and rain event flooding at River Road and its environs. As part of the MVP Action Grant application process, the Town used the Climate Resilience Standards Tool (RMAT), which showed that this area's exposure score is high for:

- Sea Level Rise/Storm Surge,
- Extreme Precipitation- Riverine Flooding, and
- Extreme Precipitation – Urban Flooding.

Recent flooding and erosion in this area occurred in December 2022, March 2023, and August 2023.

Through the MVP Action grant process, there are several partners working on initial planning and assessment stages for resiliency for River Road. Town Departments such as Conservation, Public Works, Planning, and the Town Manager have been involved in these discussions for several years as well as the Select Board and the Climate Change Resiliency Committee. We are actively working with the MVP staff at EEA, as well as Consultants to provide initial technical assistance. This MVP project, which will be completed by June 2024, includes an existing conditions assessment of the area, but does not include specific planning or design of culvert upgrades. The MVP work would provide a good baseline to build on and would tie in nicely with preliminary design services through this DER grant. Structural rehab or repair has not been discussed since we are still in the preliminary fact-finding stage, but also because the transition zone does have several aspects to consider. A simple structural repair would not address the need for say hydrologic/hydraulic modeling, ecological improvements, and other factors to provide a systematic approach to resiliency for the area.

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4) PROJECT BENEFITS

PLEASE USE AS MUCH SPACE AS NEEDED. THE BOXES WILL EXPAND AS YOU FILL THEM.

- i. **Ecological Value:** *To what extent would restoration at this site benefit the environment?* Briefly explain any known environmental information about the Crossing site or possible environmental and ecological benefits for its replacement or removal. Consider future marsh migration potential, critical habitat, bank erosion, water quality, and the fish and wildlife species that inhabit the site/area.

The current crossing is perched and is likely preventing any fish passage or spawning and the majority of wildlife passage through the crossing, severely reducing the habitat connectivity of the unnamed perennial stream to the Merrimack River. The area where this crossing is located is in an area with severe bank erosion along the Merrimack River which has created steep banks immediately adjacent to River Road. These steep banks likely reduce wildlife access from the stream and adjacent upland to the Merrimack River. This exacerbates the loss of connectivity caused by the crossing as almost all terrestrial wildlife species are unable to reach the river in this location. As the current crossing is a corrugated plastic pipe, the bed is unnatural and does not contain substrate or materials matching the surrounding area. This impacts the ability of certain wildlife species and many species of invertebrates to travel through the crossing as it does not mimic natural stream bed conditions of the surrounding area. The crossing is 36-inch in diameter and undersized which makes it vulnerable to impacts of flood water which could degrade wildlife habitat. Because it is undersized it is also more susceptible to being clogged by woody debris or other materials which may make the culvert further impassable for wildlife.

The crossing is located in the following mapped areas (see attached MassMapper Maps):

- NHESP mapped priority habitat of rare species, PH2154.
- BioMap Aquatic Core and is mapped as intact aquatic habitat (rivers, streams, lakes and ponds) supporting a diversity of aquatic species and important physical and ecological processes.
- BioMap Rare Species Core and is mapped as an area critical to the long-term conservation of our most vulnerable species and their habitats.
- BioMap Aquatic Core Buffer and is mapped as intact upland areas surrounding Aquatic Cores which support habitat function and enable species to move between habitat types (please note the area mapped as aquatic core buffer is the area upstream of the crossing).

The Merrimack River in West Newbury supports a variety of fish species including herring and both Atlantic and shortnose sturgeon. Bald eagle and osprey are frequently seen along the Merrimack River and there are documented eagle nesting trees along River Road. Many migratory birds and waterfowl stop to feed along the banks of the Merrimack River, its tributaries, and its surrounding marshes.

In addition to supporting fish and wildlife, the Merrimack River is freshwater and tidally influenced creating freshwater floodplains and habitat that supports a wide variety of native plants including rare plants.

Accordingly, ecological benefits associated with improving the culvert at this location include:

- Reducing stormwater-caused erosion to preserve and promote riverbank revegetation to enhance habitat for birds, pollinators, fish, and other wildlife
- Reducing flooding and erosion to preserve and enhance recreational assets at River Road and Coffin Street,

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popular areas for fishing, biking, birdwatching, and hiking

- Protecting River Road’s unique position among north shore riverbanks in that it has miles of natural bank uninterrupted by residential development, with diverse plant and animal communities. Rare species to benefit from this project include nesting bald eagles, waterfowl, American eel, and Atlantic and short-nosed sturgeon

Stabilizing the culvert area would allow West Newbury to pursue nature-based solutions to climate change impacts, such as expanding submerged aquatic vegetation, and promoting a native riverine buffer.

ii. **Community Benefits:** *Will the proposed project have a positive impact on the local community?* Potential benefits may include: Creating or enhancing public open space, improving or protecting infrastructure, potential for decreasing area flooding, eliminating public safety hazards, and/or enhancing recreational opportunities.

Improving the crossing would provide several community benefits:

- Replacing the crossing and thus helping to stabilize River Road would prevent potential impacts to infrastructure including electric, gas, and telecommunications.
- Replacing the crossing would help River Road to stay accessible for emergency response. The road is an approximately 2.5-mile-long road bordered to the north by the Merrimack River and the south by acres of privately owned land with many residential homes along it. Access to River Road is from the west via Bridge Street and the east via Coffin Street. If this crossing was lost, the distance emergency response would have to travel to reach residents at 35 River Road, just to the east of this crossing, more than double increasing from 1.7 miles to 3.7 miles.
- The condition of this part of River Road affects access to the Rocks Village Bridge, which is a critical connector to Haverhill and Merrimac, neighboring municipalities with Environmental Justice Communities. Among other things, school buses serving West Newbury and Merrimac use this crossing to reach this bridge, as do public safety vehicles, commuters, and others from and to adjacent areas and beyond.
- Many people throughout Essex County use the area for hiking, biking, birdwatching, fishing, and other recreational uses. The Merrimack River is frequented by anglers and bird watchers but the steep banks in this area makes it near impossible to access the river in this location. Replacement of this crossing may increase safe access to the river.
- A culvert system designed to strike the balance of mitigating coastal impacts and mitigating upstream impacts will help improve flooding and erosion in the vicinity under multiple scenarios, and will provide longer-term resiliency for future generations.

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iii. **Environmental Justice:** Is the crossing site located near or within an Environmental Justice Community? Describe expected economic benefits to the community for the Crossing replacement or removal. Consider increased economic activity, enhanced recreation, cost savings through improved infrastructure resilience, and/or reduced maintenance cost, and benefits to EJ communities. DER will consult the Executive Office of Energy and Environmental Affairs' "Environmental Justice Map Viewer" to verify the applicants assessment.

West Newbury has no Environmental Justice Communities. The condition of this part of River Road, however, affects access to the Rocks Village Bridge, which is a critical connector to Haverhill and Merrimac, neighboring municipalities with EJ communities. Among other things, school buses serving West Newbury and Merrimac use this crossing to reach this bridge, as do public safety vehicles, commuters, and others from and to adjacent areas and beyond. Additionally, River Road is heavily used not only by those from West Newbury but by people from throughout Essex County and beyond for birdwatching, biking, hiking, fishing, and other recreational activities.

SIGNATURES

I HEREBY DECLARE THAT THE ABOVE INFORMATION IS TRUE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Applicant Signature: 	Position: <i>Town Manager</i>	Date: <i>10/13/23</i>
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Culvert Across from 25 River Road

10/4/2023

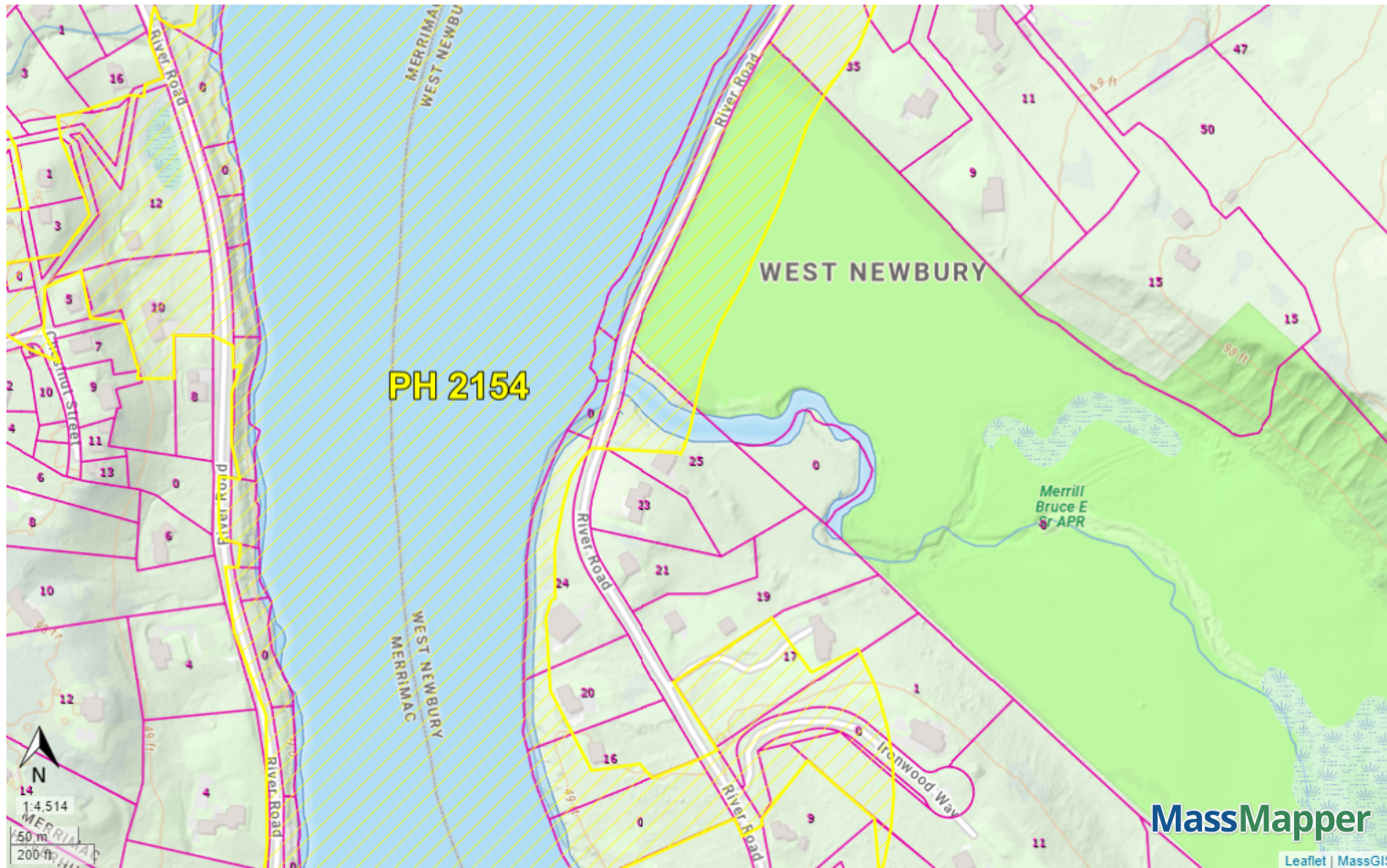


Data Sources: Produced by Merrimack Valley Planning Commission (MVPC) using data provided by the Town of West Newbury & MassIT/MassGIS. MVPC AND THE TOWN OF WEST NEWBURY MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, CONCERNING THE ACCURACY, COMPLETENESS, RELIABILITY, OR SUITABILITY OF THESE DATA. THE TOWN OF WEST NEWBURY AND MVPC DOES NOT ASSUME ANY LIABILITY ASSOCIATED WITH THE USE OR MISUSE OF THIS INFORMATION.

MVPC Boundary	Parcels	Roads	Interstate	Major Road	Local Road
Water Hydrant	Water Main	1 Inch	2 Inch	4 Inch	6 Inch
8 Inch	10 Inch	12 Inch	Trails	Easements	



NHESP Priority habitat

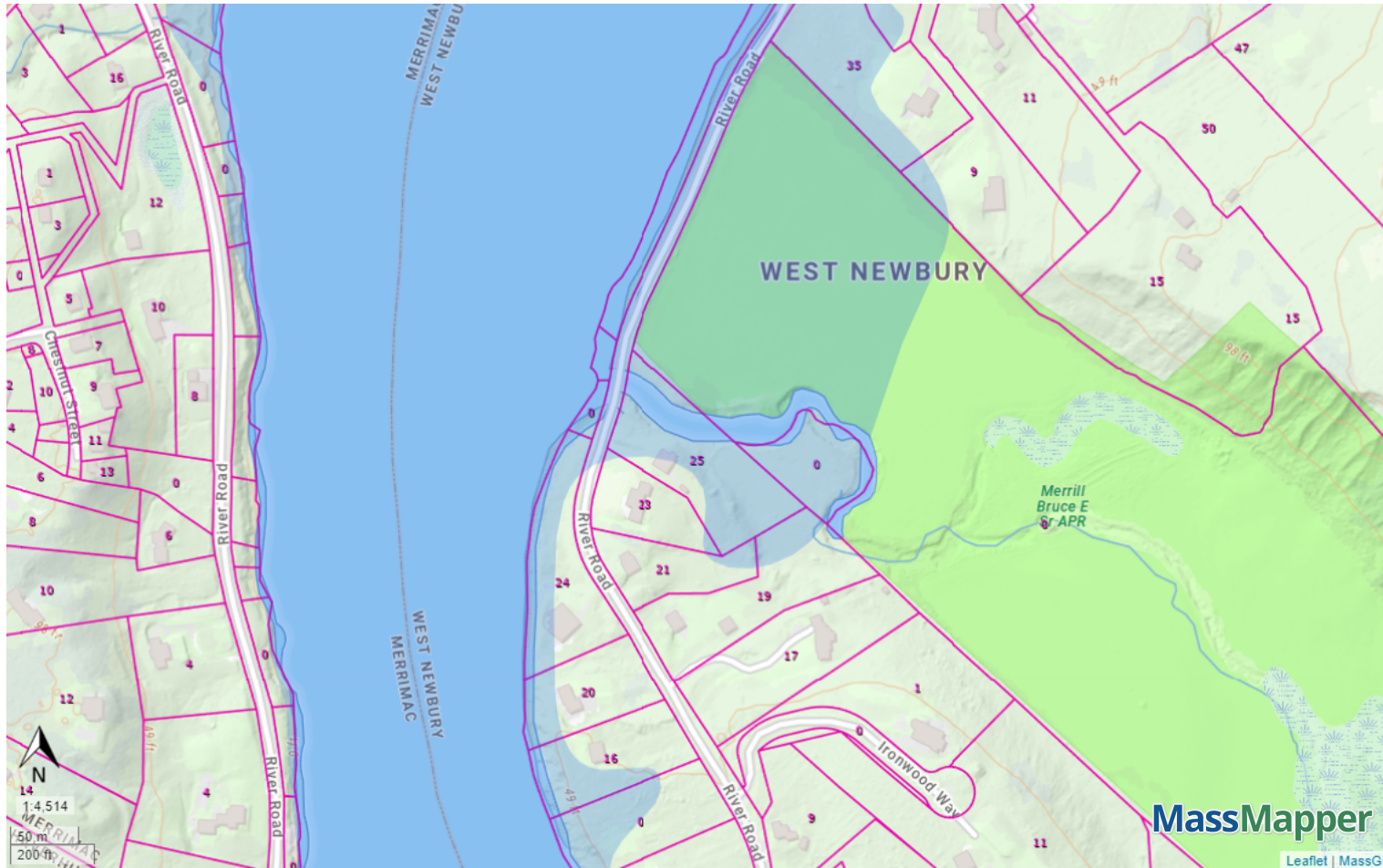


NHESP Priority Habitats of Rare Species



Property Tax Parcels

BioMap Aquatic Core

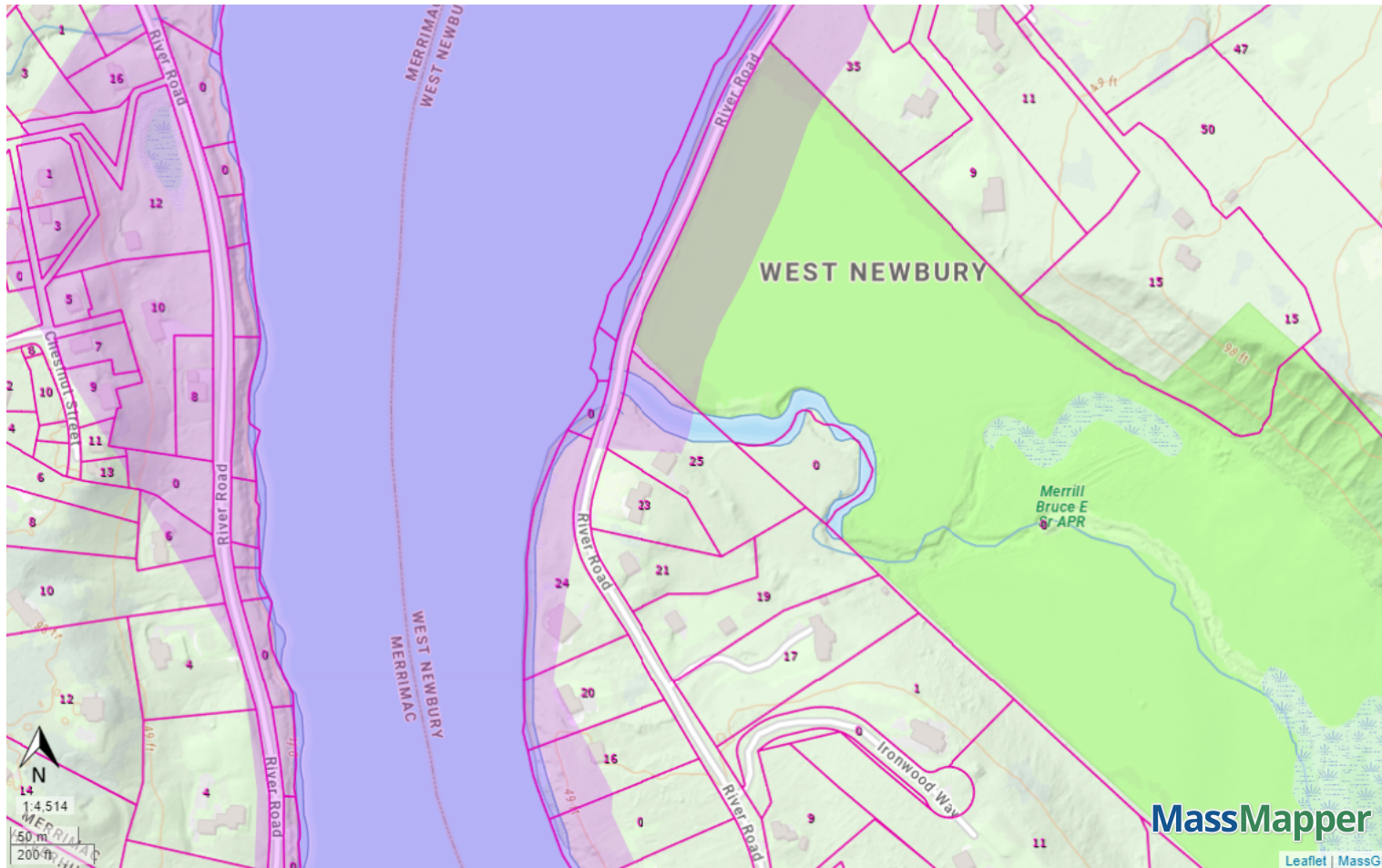


BioMap Core Habitat Components: Aquatic Core



Property Tax Parcels

BioMap Rare Species Core



BioMap Core Habitat Components: Rare Species Core

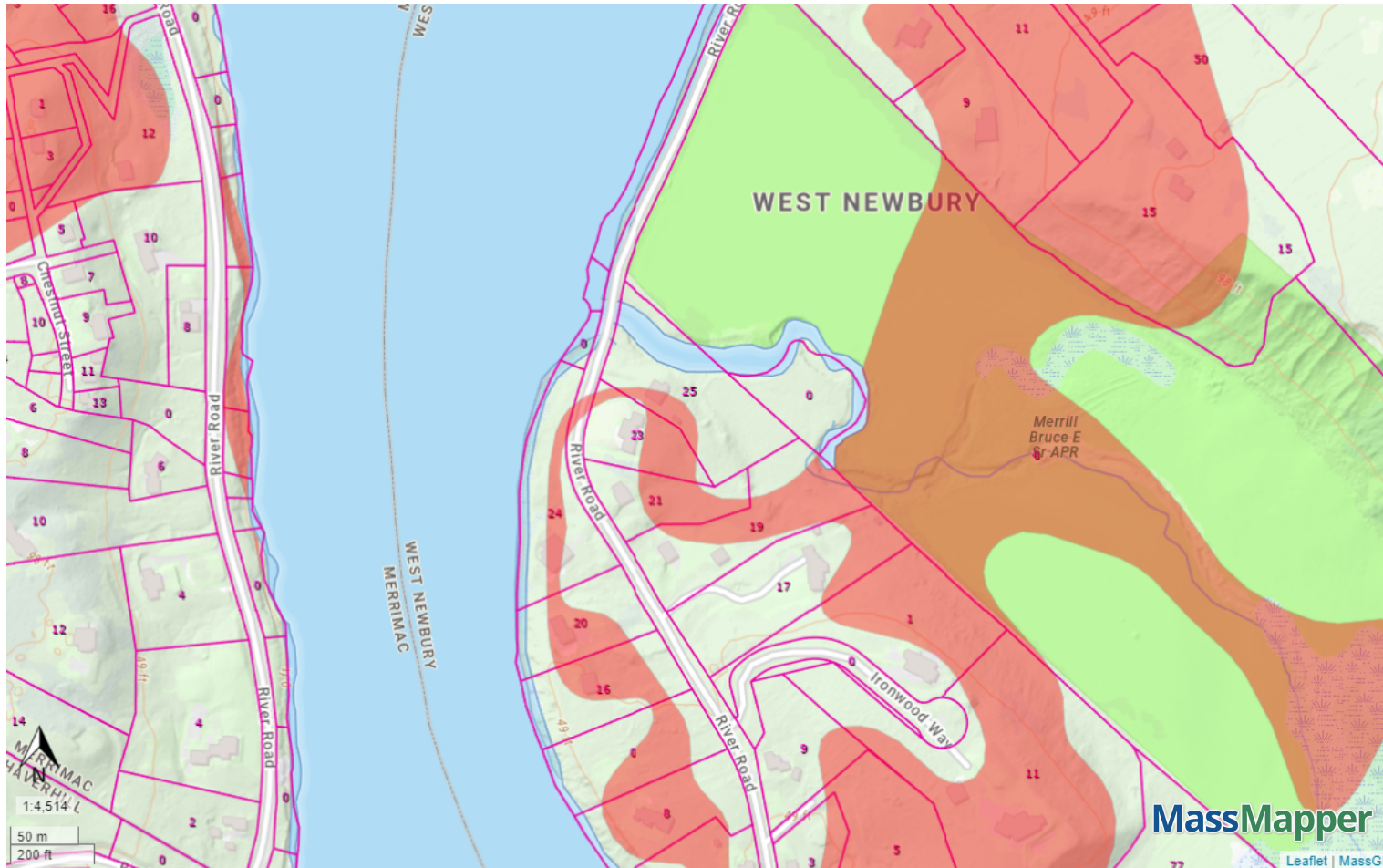


Property Tax Parcels

MassMapper

Leaflet | MassGIS

Aquatic Core Buffer



BioMap Critical Natural Landscape Components: Aquatic Core Buffer



Property Tax Parcels

View of crossing looking west on River Road. Note the support utility pole within inches of the eroded river bank. 10/5/2023



Inlet of culvert and tidally influenced perennial stream 10/5/2023



Culvert outlet at Merrimack River 10/5/2023



CROSSING OWNER ACCESS AGREEMENT FORM FOR TRANSITIONAL CROSSING PRELIMINARY DESIGN SERVICES

for

THE MASSACHUSETTS DEPARTMENT OF FISH & GAME
DIVISION OF ECOLOGICAL RESTORATION (DER)

RFR ID: DER 2024-02

This document serves to express my interest as a crossing¹ owner, or the authorized representative, to seek assistance from the Massachusetts Division of Ecological Restoration (DER) for the purposes of performing early feasibility study and conceptual engineering designs for possible crossing replacement or removal. The signature at the bottom of this form indicates concurrence with the following terms:

1. As a designated and authorized representative for the crossing, I seek assistance from DER with performing early feasibility study and conceptual engineering designs for the following crossing(s) - please list all sites that may apply:

River Road crossing across from
25 River Rd.

2. As a designated and authorized representative for this crossing (or crossings), I commit to pursue good-faith and sustained efforts to support DER and its representatives for the duration of the study period as mutually agreed upon between me and DER.
3. As a designated and authorized representative for the crossing, I authorize DER and its representatives to access my crossing and the surrounding property for the duration of the study period. DER will provide adequate notice prior to any planned site visit or field work activity and welcomes owner participation.


¹ As defined in the RFR, a "Crossing" is an existing structure, including a closed-bottom structure (e.g. corrugated metal, concrete or PVC pipe; 4-sided box culvert) or an open-bottom structure (e.g. 3-side box culvert, corrugated metal arch, precast concrete arch, or deck set on footings or pilings). For the purposes of this RFR, existing structures with spans greater than 20 feet and categorized as a National Bridge Inventory (NBI) structure are not an eligible project under this RFR.

4. I agree, or designate the following person, to serve as DER's primary point of contact for the duration of the study period. The primary contact is responsible for maintaining regular communications with DER on all project-related activities.

Christine Wallace 978-363-1100 x 130 DPWprojects@wnewbury.org
Printed Name Primary Phone # Email Address

Nothing stated herein shall legally obligate the Commonwealth of Massachusetts, the Executive Office of Energy and Environmental Affairs, the Department of Fish and Game, or the Division of Ecological Restoration to expend any funds or provide technical assistance in excess of current appropriations or otherwise prohibited by law or contractual agreement.

The Division of Ecological Restoration reserves the right to terminate its efforts at any time, for any reason, at its sole discretion. Notice of termination will be made in writing by DER with a minimum notice of 10 business days.



Signature, Authorized Representative Date 10/5/23

Townmanager@wnewbury.org 978-363-1100 x115
Authorized Representative's Email Phone