

# ASHFIELD LAKE DAM VEGETATION CONTROL

February 20<sup>th</sup> , 2025

Presented by – Ron Coler, Dam Keeper  
Daniel Buttrick, PE Tighe & Bond  
Lucas Acaba, Tighe & Bond



**Review & Conversation**

# Regulated with Certain Requirements

Massachusetts Office of Dam Safety (ODS) is part of the Department of Conservation and Recreation (DCR)

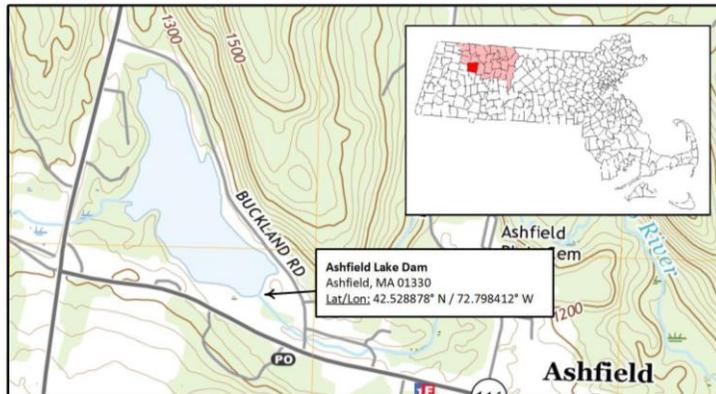
## EMERGENCY ACTION PLAN ASHFIELD LAKE DAM Ashfield, Massachusetts

Plan Revised in March 2023 - Plan Revision 1.20

Army Corps of Engineers ID Number MA00523

MA DCR ID Number 2-6-13-1

Dam Location: 42.528878° N / 72.798412° W



### Dam Owner

Town of Ashfield Select Board  
Select Board Chair  
selectboard@ashfield.org  
O: 413-628-4441 Ext: 7

### Dam Caretaker

Town of Ashfield Highway Department  
Highway Superintendent  
highway@ashfield.org  
O: 413-628-4448

## ASHFIELD LAKE DAM PHASE I INSPECTION / EVALUATION REPORT



Dam Name: Ashfield Lake Dam  
NID#: MA00523  
Owner: Town of Ashfield  
Town: Ashfield, Massachusetts  
Consultant: Tighe & Bond, Inc.  
Date of Inspection: May 18, 2023

**Tighe&Bond**

Commonwealth of Massachusetts Department of Conservation and Recreation - Office of Dam Safety  
CERTIFICATE OF COMPLIANCE WITH DAM SAFETY PERMIT No. 198-2015-198 Issued in Accordance  
with G.L. c. 253, §§ 44-48

Chapter 330 of the Acts of 2002 and 302 CMR 10.14 Certificate Number MA00523



Certified Mail No. 7017 2620 0000 7561 1645  
Return Receipt Requested

Commonwealth of Massachusetts  
Department of Conservation and Recreation  
Office of Dam Safety  
CERTIFICATE OF COMPLIANCE WITH DAM SAFETY PERMIT No. 198-2015-198  
Issued in Accordance with G.L. c. 253, §§ 44-48  
Chapter 330 of the Acts of 2002 and  
302 CMR 10.14

Certificate Number MA00523

In accordance with G.L. c. 253, §44-48, and 302 CMR 10.14 (17), the Department of Conservation and Recreation (DCR) Office of Dam Safety (ODS) hereby acknowledges receipt of the Engineer's Certification stating that the subject dam safety improvements were made in conformance with the plans, specifications and the conditions of the Chapter 253 Dam Safety Permit and any field changes as documented and certified. This Certificate is issued for the permitted dam safety improvements only, and does not mean that the dam or appurtenant features are free from all deficiencies.

**Section I: Project Information**

Dam Name: Ashfield Lake Dam  
AKA Dam Name: Ashfield Pond Dam  
Name of Impoundment: Ashfield Lake  
AKA Name of Impoundment: Ashfield Pond  
Location (City/Town): Ashfield  
Hazard Potential Rating: High Hazard  
National Dam ID No: MA00523  
State Dam ID No: 2-6-13-1  
Date of Chapter 253 Permit: July 17, 2015; July 17, 2017 (Extension #1); November 29, 2021 (Extension #2); April 28, 2022 (Amendment #1).  
Nature of dam safety improvements: Removal of trees and brush; repointing and injection of grout into spillway; parapet installation on the dike; pipe replacement at dike; placement of supplemental riprap; outlet gate maintenance.  
Dates of completion: November 1, 2022

**Section II: Dam Owner/Applicant Information**

Name: Town of Ashfield, MA  
Representative: Paul McLatchy III, Town Administrator  
Mailing Address: 412 Main Street  
Town/State/Zip: Ashfield, MA 01330

**Section III: Engineer Information**

Company Name: Tighe & Bond  
Project Engineer: Daniel R. Buttrick, P.E.  
Mailing Address: 53 Southampton Road  
Town/State/Zip: Westfield, MA 01085

**Section IV: Contractor Information**

Company Name: David G. Roach & Sons, Inc.  
Representative: Chuck Skerry, Project Manager  
Mailing Address: 99 Barre Depot Rd  
Town/State/Zip: South Barre, MA 01074

**Section V: Franklin County Registry of Deeds Recording Information**

Dam Parcel Deed Book Number: 739  
Dam Parcel Deed Page Number: 302  
Permit Book Number: 6724  
Permit Page Number: 144  
Permit Extension #1 Book Number: 7082  
Permit Extension #1 Page Number: 129  
Permit Extension #2 Book Number: 07973  
Permit Extension #2 Page Number: 35  
Permit Amendment #1 Book Number: 08021  
Permit Amendment #1 Page Number: 202

William C. Salomaa, Director  
Office of Dam Safety

7/1/24  
Date Issued

David Ouellette, P.E., Dam Safety Engineer  
Office of Dam Safety

# Pre-Construction (2022) vs Post-Construction (2024)

## Invasive Bittersweet



# 2024 Flame Weeding Campaign

(June 26th & October 2nd )



Before

After



# Keep an Open Mind – We need a sustainable solution

**PUBLIC NOTICE**  
**RIGHT OF WAY MAINTENANCE**

As required by Massachusetts General Law Chapter 132B, National Grid (New England Power and/or Massachusetts Electric Company) hereby gives notice that it intends to selectively apply herbicides along specific transmission line rights-of-way in 2025.

The selective use of herbicides to manage vegetation along rights-of-way is done within the context of an Integrated Vegetation Management (IVM) program consisting of mechanical, chemical, natural, and cultural components. In right-of-way vegetation management the pest or target is vegetation (primarily tall growing) that will cause outages and safety issues. National Grid's IVM program encourages natural controls by promoting low growing plant communities that resist invasion by target vegetation. The selective use of herbicides and mechanical controls are the direct techniques used to control target vegetation and help establish and maintain natural controls.

National Grid may utilize any of the herbicides noted the MA Sensitive Materials list. Rodeo, and possibly one of the following herbicides, Arsenal or Arsenal Powerline, will be applied directly to the surface of stumps immediately after target vegetation is cut (Cut Stump Treatment). Garlon 4 or Garlon 4 Ultra will be applied selectively to the stems of target vegetation using hand-held equipment (Basal Treatment and Dormant stem treatment). Krenite S or Rodeo, mixed with Escort XP, and one of the following herbicides, Arsenal or Arsenal Powerline, or Milestone will be applied selectively to the foliage of target vegetation using hand-held equipment (Foliar Treatment). Cambistat as a tree growth regulator. Applications shall not commence more than ten days before nor conclude more than ten days after the following treatment periods. The herbicide mixes and additional information about rights of way management in Massachusetts can be found here: <https://www.mass.gov/rights-of-way-vegetation-management>

Municipalities that have rights-of-way scheduled for herbicide treatments in 2025:  
Athol, Royalston

**Treatment Periods**

February 1, 2025 – May 30, 2025	May 30, 2025 - Oct 15, 2025	Oct 15, 2025 – Dec 31, 2025
CST	Foliar	CST
Basal	CST	Basal
Dormant Stem	Basal	Dormant Stem
	Cut stubble	

*\*The exact treatment dates are dependent upon weather conditions and field crew progress.*

Further information may be requested by contacting (during business hours, Mon-Fri from 8:00 am-4:00 pm):  
Mariclaire Rigby, National Grid, 939 Southbridge Street, Worcester, MA 01610.  
Telephone: (781) 290-8310 or email: mariclaire.rigby@nationalgrid.com



**When you flip the switch and turn on the lights,  
That convenience has very real consequences**

**When you impound a natural water  
body for recreational use.....**

## **What Happens Next**

**Receive Written T&B  
Ashfield Lake Dam Vegetation Control Advice**



**Public Presentation(Feb 20, 2025) – Conversation, Receive Input**



**Dam Keeper & Caretaker – Confer & Prepare Recommendation**



**Dam Keeper & Caretaker – Submit Recommendation & Proposed Budget to Joint Select Board/FinCom Meeting (March 3<sup>rd</sup>, 2025)**



**Tighe&Bond**



# ASHFIELD LAKE DAM VEGETATION CONTROL

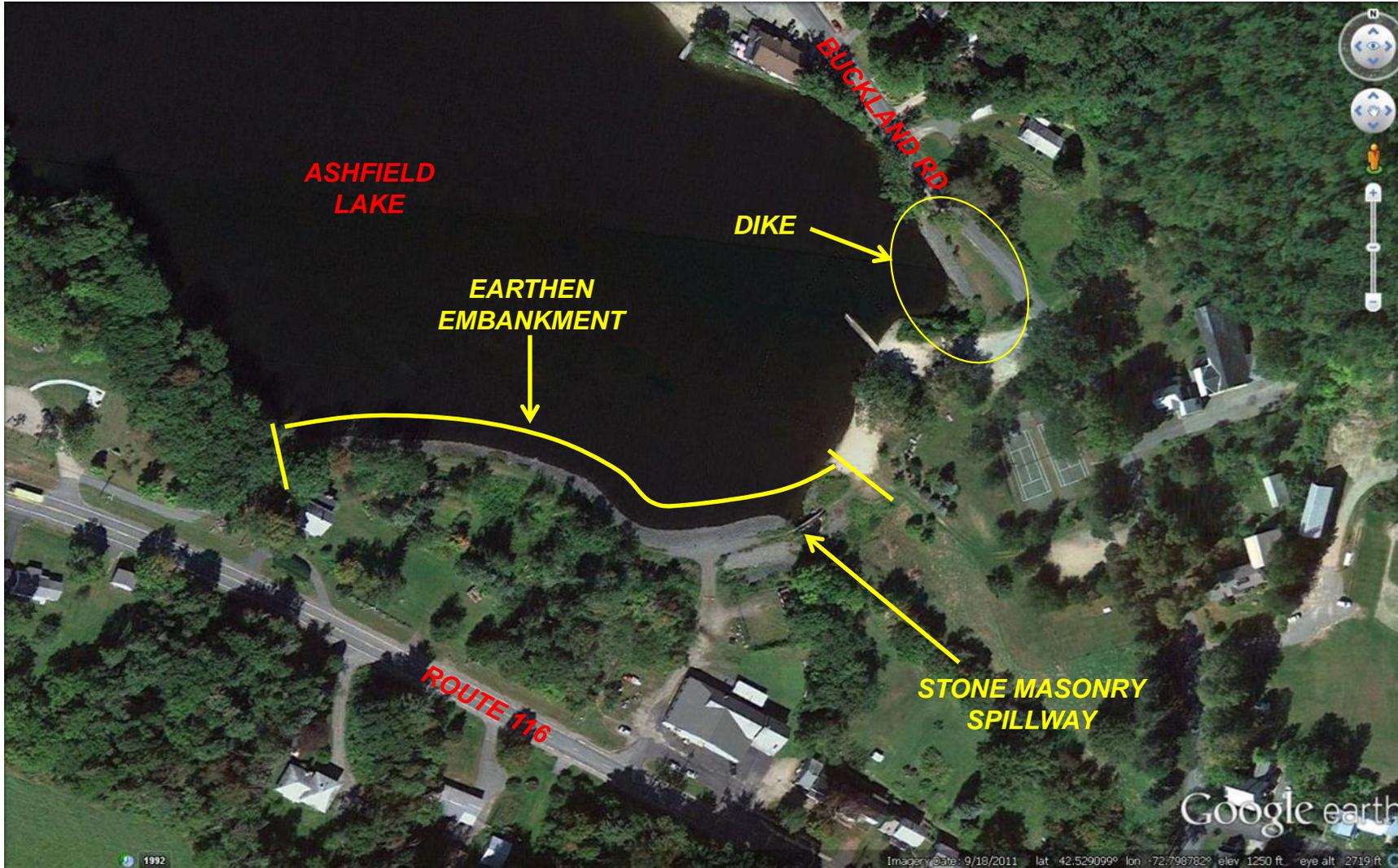
## Public Town Meeting

Project Team: Daniel Buttrick, PE (Tighe & Bond), Lucas Acaba (Tighe & Bond)

# MEETING OUTLINE

- **Ashfield Lake Dam Background and Status**
- **Dam Inspection and Maintenance Requirements**
- **Need for Vegetation Control**
- **Proposed Vegetation Management Study**

# Ashfield Lake Dam



# ASHFIELD LAKE DAM

- **Regulated by MassDCR Office of Dam Safety**
- **“Intermediate” sized structure**
  - 18 feet high
  - 512 acre feet of available storage of water
    - 167,000,000 gallons
- **“High” hazard classification**
  - Failure could cause
    - Loss of life
    - Serious damage to homes, commercial facilities
  - Hazard Class unrelated to dam’s condition

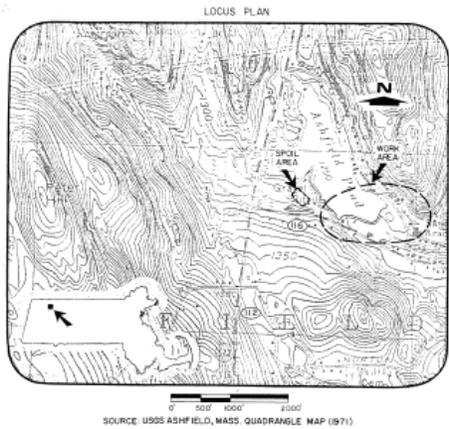
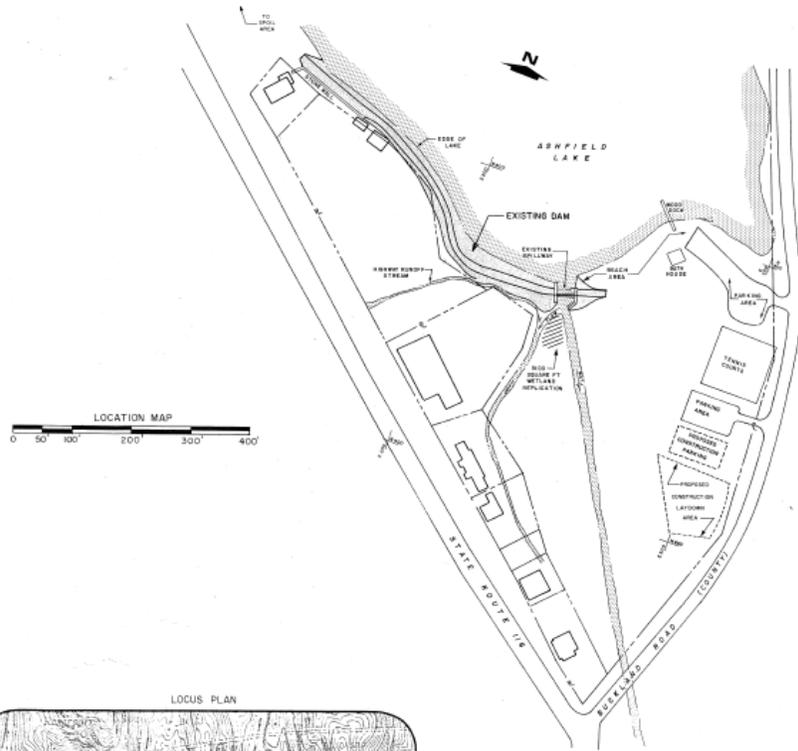
# ASHFIELD LAKE DAM

- Dam at the site constructed in early 1800s
- Dam raises the level of a Great Pond
- Dam breached in 1878
- Reconstructed in 1879
- Repaired following 1936 flood
- Rehabilitated in 1989-1990
- Rehabilitated in 2022

MASSACHUSETTS HISTORICAL COMMISSION  
Office of the Secretary, State House, Boston

(10)





# ASHFIELD LAKE DAM REHABILITATION

PREPARED FOR  
TOWN OF ASHFIELD, MASSACHUSETTS  
and  
MASSACHUSETTS DEPARTMENT OF  
ENVIRONMENTAL MANAGEMENT

DRAWING SCHEDULE

SHEET No.	TITLE
1	PROJECT LOCATION MAP & LOCUS PLAN
2	EXISTING CONDITIONS AND BASELINE - STATION 0+00 to 4+00
3	EXISTING CONDITIONS AND BASELINE - STATION 4+00 to 13+00
4	DAM MODIFICATION PLAN - STATION 0+00 to 4+00
5	DAM MODIFICATION PLAN - STATION 4+00 to 13+00
6	DAM MODIFICATION SECTIONS AND DETAILS
7	DAM MODIFICATION SECTIONS AND DETAILS
8	RESTORATION OF SPILLWAY AND OUTLET WORKS
9	PEDESTRAIN BRIDGE
10	NOTES AND SPECIFICATIONS
11	EXISTING DOWNSTREAM CONDITIONS PLAN
12	DOWNSTREAM MODIFICATION PLAN

JUNE 1988



FOR PERMIT

ASHFIELD LAKE DAM  
ASHFIELD, MASS.

PROJECT LOCATION MAP  
& LOCUS PLAN

JUNE 1988

SHEET 1 of 12

# 1989 CONSTRUCTION



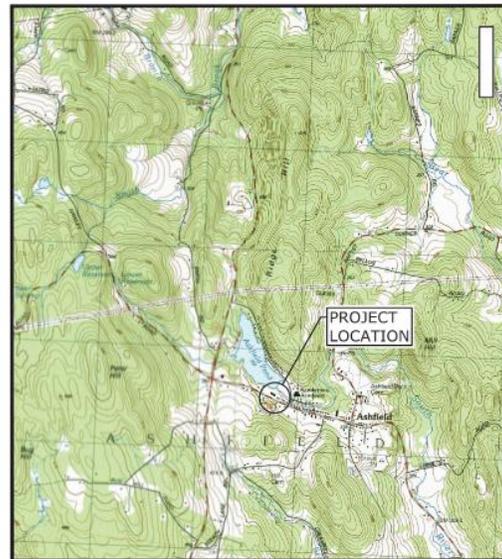
# 2014 CONDITION



# TOWN OF ASHFIELD, MASSACHUSETTS ASHFIELD LAKE DAM REPAIR PROJECT

DECEMBER 2021

LIST OF DRAWINGS		
SHEET NO.	DRAWING NO.	DRAWING TITLE
1	G-001	COVER SHEET
2	G-002	GENERAL NOTES, LEGEND, AND ABBREVIATIONS
3	C-101	EXISTING CONDITIONS SITE PLAN
4	C-102	PROPOSED CONDITIONS SITE PLAN
5	C-103	DOWNSTREAM DRAINAGE IMPROVEMENTS
6	C-104	SPILLWAY AND OUTLET STRUCTURE REPAIRS SITE PLAN
7	C-105	STRUCTURAL GENERAL NOTES AND DETAILS
8	C-106	DETAILS
9	C-107	DETAILS
10	C-108	DETAILS
11	C-109	DETAILS

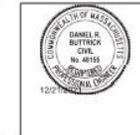


LOCATION MAP  
SCALE: 1" = 2000'

PREPARED BY:  
**Tighe & Bond**



PETER M. VALINSKI, PE



DANIEL R. BUTTRICK, PE

PREPARED FOR:  
TOWN OF ASHFIELD

BOARD OF SELECTMEN  
STEVEN GOUGEON - CHAIR  
TOM CARTER - VICE CHAIR  
TODD OLANYK

HIGHWAY DEPARTMENT  
TOM POISSANT - SUPERINTENDENT

COMPLETE SET 11 SHEETS



# 2022 CONDITION



## HOWEVER – RECALL YOUR KEATS

*A thing of beauty is a joy for ever:*



**COST**

**(Dr. M.G. Wolman, Ca. 1968)**

*Its loveliness increases; it will never  
Pass into nothingness; but still will keep  
A bower quiet for us, and a sleep  
Full of sweet dreams, and health, and quiet breathing.  
Therefore, on every morrow, are we wreathing  
A flowery band to bind us to the earth,  
Spite of Despondence, & of the inhuman death*

# 2023 CONDITION - MAY



# 2023 CONDITION - OCTOBER





# PLEASE NOTE

- **Not advocating for herbicide**
- **Advocating for maintenance of the dam**
- **Maintenance \$ << Rehabilitation \$**
- **Consider practical, implementable, cost- and labor-effective approaches**

# STUDY METHODOLOGY

- Establish four test plots with different control methods
- Monitor and evaluate at end of 2025 growing season

Test Plot	Control Method
1	Herbicide Treatment
2	Smothering
3	Hand Pulling or Flame Weeding
4	No Management – Study Control



# TEST PLOT #1 – HERBICIDE TREATMENT

- South side of embankment, 250 feet from beach
- Approximately 35 feet by 25 feet
- Herbicide application on slope facing away from lake



- Initial application in early summer (July) Foliar treatment with Triclopyr based, aquatic approved product (eg., Vastlan®)
- Follow-up application in early fall (September)
- Typically requires several seasons of progressively reduced chemical usage to achieve desired level of control

# TEST PLOT #2 – SMOTHERING

- **South side of embankment, east of spillway**
  - More sheltered from wind
- **Approximately 45 feet by 30 feet**



- Cut vegetation low and cover area with rubber pond liner
- Deprives plants of energy from photosynthesis
- Leave in place for several seasons
- Ability to reuse smothering material in other areas

# TEST PLOT #3 – HAND PULLING OR FLAME WEEDING

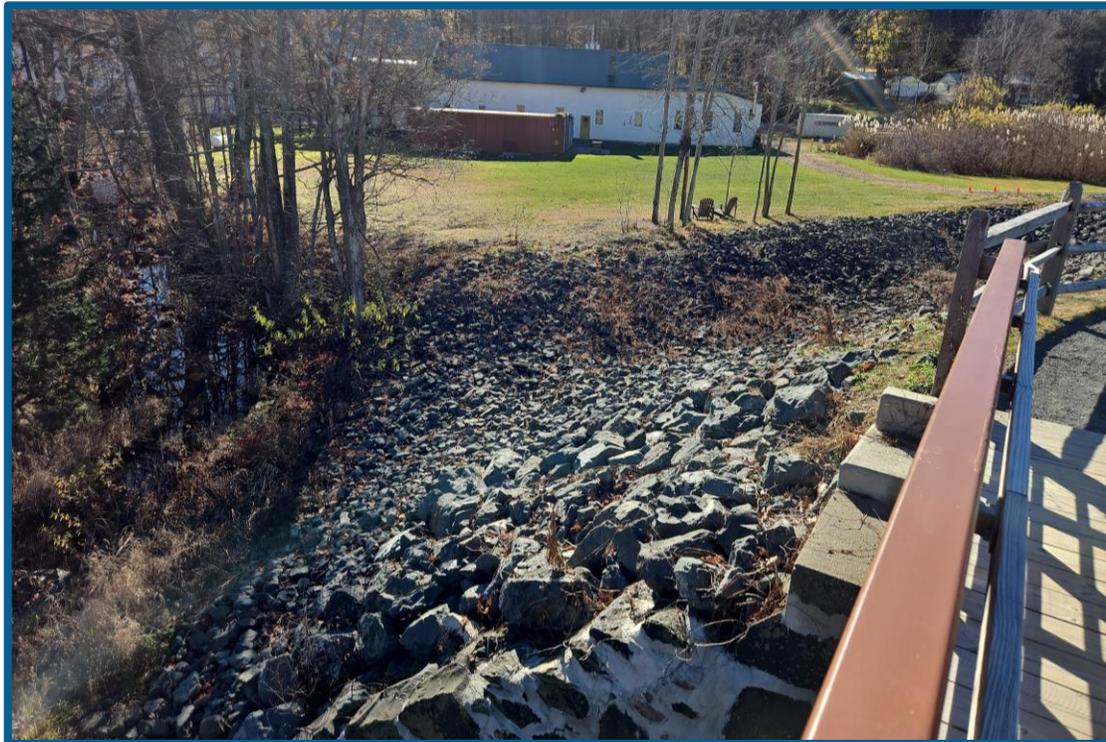
- North side of embankment, adjacent to beach
- Approximately 40 feet by 30 feet
- Hand pulling or flame weeding is recommended



- Hand pull and remove root systems to extent possible
- Follow up with flame weeding every two weeks
- Adjust frequency of flame weeding depending on rate of regrowth
- Prevent the emergence of new leaves to deprive plants of energy through photosynthesis

## TEST PLOT #4 – NO MANAGEMENT (CONTROL)

- South side of embankment, west of spillway
- Approximately 40 feet by 30 feet
- No management



- This area will serve as a control plot to compare the relative effectiveness of the different management methods

# PROPOSED STUDY DESIGN – NOT INCLUDED IN CURRENT SCOPE

- Record pre-study vegetation species, density
- Track expenditure, labor, materials
- Record post-study vegetation species, density
- Report findings

# NOTE ON HERBICIDE PRECAUTIONS AND SAFETY

- **Town will hire licensed applicator**
- **Formulation approved for use on and near water**
  - BEE: Triclopyr butoxyethyl ester
    - Generally higher environmental toxicity, not for aquatic use
  - TEA: Triclopyr triethylamine salt
    - Overall lower environmental toxicity, approved for aquatic use
- **Triclopyr TEA health and ecological risks:**
  - Acute eye irritant, but classified as “slightly toxic” to “practically non-toxic” in other pathways
  - Class D chemical: “not classifiable as to human carcinogenicity”
  - “Practically non-toxic” to freshwater fish and aquatic invertebrates
  - Can be used to treat aquatic weeds with no recreational restrictions
  - Potential to migrate through soil and encounter groundwater in permeable soils and shallow water tables

# NOTE ON HERBICIDE PRECAUTIONS AND SAFETY

Category I	Category II	Category III	Category IV
DANGER	WARNING	CAUTION	No signal word
Highly Toxic	Moderately Toxic	Slightly Toxic	Practically Non-Toxic

- **Triclopyr TEA health and ecological risks:**

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[http://www.finder.org/Species/Celastrus\\_orbiculatus.php](http://www.finder.org/Species/Celastrus_orbiculatus.php)

# QUESTIONS?