JOINT SELECTBOARD and BOARD OF HEALTH
MEETING NOTICE

Due to COVID-19 Public Participation will be by:

Join Zoom Meeting: https://zoom.us/j/91064944111

Meeting ID: 910 6494 4111 Password: 474014

Dial into meeting: +1 646 558 8656 or +1 312 626 6799 or +1 301 715 8592

Monday, December 14, 2020

Topics may start earlier than specified, unless there is a hearing scheduled

Meeting Being Taped **Votes May Be Taken**

1. 6:30 PM Selectboard Chair opens the meeting, including announcing that the meeting is being recorded and roll call taken

2. 6:30 Board of Health Chair opens the meeting, roll call taken

3. 6:31 Approve Minutes:
   - Joint Selectboard and Board of Health: December 7, 2020

4. 6:32 Public Comment Period: Individuals will be limited to two (2) minutes each and the Selectboard will strictly adhere to time allotted for public comment

5. 6:35 COVID-19 Updates and Action Items
   - Health Director: Review of New State Orders and roll back to Phase 3, Step 1
   - Review of any Updated State Guidance or Orders
   - Update on Montague COVID case counts and other summary data

6. 6:45 Chris Williams, Chief of Police
   - CoMIRS update and JAG grant update

7. 6:55 Tom Bergeron, DPW Superintendent
   - 3rd Party Transfer Station Inspection Report and Corrective Action Form

8. 7:05 Personnel Board
   - Appoint Joshua Lively as full member of Zoning Board to fill Bob Sojka's term expiring 6/30/2025
   - Appoint Airport Commissioner to fill Peter Golrick's unexpired term through 6/30/21

9. 7:15 Suzanne LoManto, Assistant Planner
   - Use of Public Property: Parade, Santa tour of Montague, 12/22/20 (raindate 12/23/20); 6:00 PM to 7:00 PM

10. 7:20 Brian McHugh, FCRHRA
    - Approve payment of $550 to Berkshire Design Group for Architectural services rendered for the Spinner Park Restoration Project

11. 7:25 Discussion of First Light Settlement proposal
    - Town Staff and Selectboard
    - Franklin Regional Council of Governments and CT River Conservancy

12. 7:35 Walter Ramsey, Town Planner
    - Execute Regulatory Agency Correspondence regarding Millers Falls Road Embankment repair project
    - Authorize request for technical assistance from the Local Rapid Recovery Planning Program to develop a COVID recovery strategy for downtown Turners Falls.
    - Discuss 500 Avenue A Bid Results

13. 7:45 DPW Facility Construction Close Out
    - Authorize subdivision plan for town-owned land identified as Assessors Map 21 Lot 5 to be submitted to the Planning Board for endorsement. Lot 1 (9.3 acres) is the DPW Facility Site with Frontage on Turners Falls Road. Lot 2 (14.6 acres) is an undeveloped parcel with frontage on Turnpike Road
    - Proposal to Dedicate the DPW Conference Room as the "Ken Morin Conference Room"
    - Notes on project close-out and budget

14. 8:00 Town Administrator's Report
    - Update on Town Meeting survey results and plans for Remote Town Meeting
    - Topics not anticipated in 48 hour posting

<u>Upcoming Meetings:</u>

- Selectboard Meeting, **MONDAY, December 21, 2020, 6:00** PM via Zoom

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MEETING NOTICE

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CoMIRS update and JAG grant update

Dispatch component: Revised price/request would be $25,000. Hopeful that the state will come through with funding for this later this month or at least before a Feb STM.

Mobile (Cruiser/Handheld) Component: Fully covered by $29,000 JAG grant

Implications: We currently expect that the state will pay for all the required equipment for our migration to the 800 system, but will continue to propose a $25,000 special article for the dispatching upgrades until such time as we receive confirmation from the state that it will cover those costs.

(7)

REDUCTION
RECYCLING
COMPOSTING
DISPOSAL

Franklin County
Solid Waste Management District

117 Main Street., 2nd Floor, Greenfield, MA 01301 • (413) 772-2438 • Fax: (413) 772-3786
www.franklincountywastedistrict.org • info@franklincountywastedistrict.org

MEMORANDUM

To: Transfer Station Towns
From: Jan Ameen, Executive Director
Date: November 18, 2020
RE: 3rd Party Inspection Report and Corrective Action Form

Enclosed are the final 3rd Party Transfer Station Inspection Report and Corrective Action Form. The Corrective Action Form identifies deficiencies noted during the inspection. One set is an original copy for DEP which requires a signature. **Return these to my office.** There is a copy for the Board of Selectmen. There is also a copy for the Board of Health, which is required by regulation. There may be an additional copy for the town's highway department or other supervisory department for the transfer station operation.

It is important for you to read through pages 4, 5, and 12/13 of the inspection report. It is also important for you to read the Corrective Action Plan and Schedule because this is what I have identified as needing correcting to be in compliance with the regulations. There are dates set for correcting the "deficiencies." In some cases, I will assist with the corrective action, such as making signs.

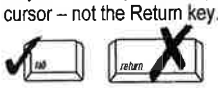
Please call or email me with questions. I can be reached at 772-2438 or fcswmd@crocker.com.

DEP Copy

Massachusetts Department of Environmental Protection
Bureau of Waste Prevention / Solid Waste Management

Third-Party Inspection Report – 310 CMR 19.018(8)
Operation & Maintenance

Important: When completing this form on a computer, use only the Tab key to move your cursor – not the Return key.



Instructions

Use this form to record and report the results of a Third-Party Operation and Maintenance Inspection conducted pursuant to 310 CMR 19.018. Be sure to obtain the most recent version of this form. All applicable sections of the submitted form must be completed to be accepted by MassDEP.

Pursuant to 310 CMR 19.018(8)(a), the third-party inspector and facility owner/operator must sign this Third-Party Inspection Report form and submit the completed report to the appropriate MassDEP regional office and one copy of each completed report to the board of health of the municipality in which the facility is located.

In the event that this inspection report contains a recommendation for corrective action(s), the owner/operator shall also submit the information required by 310 CMR 19.018(8)(c)2.

Forms and instructions are available online:
http://www.mass.gov/eea/agencies/massdep/recycle/approvals/solid-waste-applications-and-forms.html#8

Note: This form does not identify all of the requirements applicable to each solid waste management facility; other requirements and/or policies may apply to the operation, maintenance and monitoring for each facility.

MassDEP Use Only

Rec'd Date:

FMF #:

RO #:

Reviewer:

Comments:

I. Facility Information

Facility Type (check one):

☒ Transfer Station/Handling Facility ☐ C&D Waste Processor or C&D Waste Transfer Station ☐ Municipal Waste Combustor

☐ Active Landfill ☐ Closed Landfill ☐ Other: _____ Specify

Facility:

Montague Transfer Station
Facility Name

Turners Falls | MA | 01376
City/Town | State | ZIP Code

Telephone Number | 407357 | 39525
Regulated Object Account Number | FMF Number

Operator:

Montague DPW
Operator Name (Doing Business As/Company Name)

413-863-2054 | hwysupt@montague-ma.gov
Telephone Number | Email Address

128 Turners Falls Rd.
Mailing Address

Turners Falls | MA | 01376
City/Town | State | ZIP Code

Permittee:

Town of Montague
Permittee Name (Entity Identified on Facility Permit)

1 Avenue A
Mailing Address

Turners Falls | MA | 01376
City/Town | State | ZIP Code

Responsible Official for the Facility:

Richard Kuklewicz | townadmin@montague-ma.gov
Responsible Official Name (Individual) | Responsible Official Email Address

Montague Selectboard | 413-863-3200
Responsible Official Company Name | Responsible Official Telephone Number

Massachusetts Department of Environmental Protection
Bureau of Waste Prevention / Solid Waste Management

Third-Party Inspection Report – 310 CMR 19.018(8)
Operation & Maintenance

II. Third-Party Inspector

Jan Ameen Third-Party Inspector Name	FCSWMD Company Name
262075 MassDEP Third-Party Inspector Identification Number	05/09/2021 MassDEP Third-Party Inspector Expiration Date (MM/DD/YYYY)
413-772-2438 Telephone Number	fcswmd@crocker.com Email Address

117 Main St.
Mailing Address

Greenfield City/Town	MA State	01301 ZIP Code

Construction and Demolition Waste (C&D Waste) Processing Facility or C&D Waste Transfer Station Only:
Identify the qualified individual that conducted the observation of incoming waste loads and collection of samples of suspect asbestos-containing materials during the inspection [pursuant to 310 CMR 19.018(6)(f)]. If the entire inspection was conducted by the third-party inspector listed above, then check the box and enter only the Asbestos Inspector Certification Number.

☐ Same as above. **Provide Asbestos Certification Number ▶**

MA Dept. of Labor Standards Asbestos Inspector Certification Number

Asbestos Inspector Name	Company Name
Telephone Number	Email Address

Mailing Address

City/Town	State	ZIP Code

III. Inspection Details

A. FREQUENCY

Indicate the scheduled inspection frequency for this facility as required by 310 CMR 19.018(6)(b), or a more frequent schedule set forth in the Facility Permit/Other Approval:

☐ Bi-Monthly ☐ Quarterly ☐ Semi-Annual ☒ Annual ☐ Biennial
☐ Other (include permit/approval type and date of issuance):

B. DATE, TIME & PERSONNEL

Inspection Date (MM/DD/YYYY):	10/21/2020
Inspection Start Time:	1:45 ☐ AM ☒ PM
Facility Representatives in Attendance During Inspection: Dave (attendant)	

C. CONDITIONS

Air Temperature: *Approximately* 65 *degrees F.*

Weather: ☐ Clear ☒ Partly Cloudy ☐ Cloudy ☒ Dry ☐ Rain ☐ Snow

Wind Speed: ☐ Calm ☒ Breeze ☐ Moderate ☐ Strong

Wind Direction (direction from which the wind is blowing):

☐ NW	☐ N	☐ NE
☐ W	Wind	☐ E
☒ SW	☐ S	☐ SE

IV. Pre-Inspection Preparation

A. FACILITY-SPECIFIC O&M REQUIREMENTS

During each third-party inspection, the third-party inspector shall examine and evaluate the facility's solid waste activities, equipment, operations, practices, procedures, and records relevant to the type of third-party inspection being conducted in order to determine the facility's compliance with all applicable requirements as set forth in 310 CMR 19.018(6)(a)1.

Therefore, pursuant to 310 CMR 19.018(6)(a)1, prior to conducting a third-party facility operation and maintenance inspection, the third-party inspector shall, without limitation, complete all of the following:

☒ Review and become familiar with the regulations set forth at 310 CMR 19.000 – *Massachusetts Solid Waste Regulations.*

☒ Identify, review and become familiar with all solid waste permits, plans, approvals, and orders (or other enforcement documents issued to the facility by the Department), and the solid waste requirements applicable to the operation and maintenance of the facility.

Relevant requirements may include, without limitation, specific practices and procedures for the operation, maintenance and monitoring of the facility, waste acceptance/storage limits, and other requirements related to the facility's solid waste activities. Without limitation, these facility-specific requirements may be contained in the Facility Permit, Authorization to Construct, Authorization to Operate, Operation and Maintenance Plan, Closure/Post-Closure Plans and Approvals, Facility Modification Approvals, Beneficial Use Determinations, Administrative Consent Orders, and other determinations, authorizations or enforcement actions issued by the Department.

I, *Jan Ameen* , **have identified, reviewed and understand all of the aforementioned requirements that are applicable to this facility and the following are my observations and recommendations related to the facility-specific requirements.**

JA
Inspector Initials

B. SOLID WASTE PERMITS, PLANS, APPROVALS & ORDERS

List all relevant solid waste permits, plans, approvals, orders or other enforcement actions issued to the facility by the Department that contain specific practices, procedures and other requirements still in effect for the operation, maintenance and monitoring or closure/post-closure of the facility. Where applicable, provide the plan or issue date for each item. For enforcement actions, include the document number, effective date, and status of implementation by the facility.

Discussion: March 2016 Authorization to Operate; Waste Ban Plan certification form; Transfer Station Operations certification; certification modification for paper compactor

V. Performance Standards

Examine and evaluate the facility's solid waste activities, equipment, operations, practices, procedures and records relevant to the type of solid waste facility.

Using the tables below, identify all areas evaluated by the inspector during the inspection by checking the box in the first column. Describe all deviations noted during the inspection in the third column. Provide recommendations for corrective action to return to compliance with the applicable performance standard in the fourth column.

Facility Type	Performance Standards
Transfer Station/Handling Facility (Including C&D Facility)	Complete Section A. If C&D Handling/ Processing Facility, then also complete Section B.
Municipal Waste Combustor	Complete Section A.
Active Landfill	Complete Sections C. and F. If active ash landfill, then also complete Section D.
Closed Landfill	Complete Sections E. and F.

A. TRANSFER STATION, HANDLING FACILITY, OR MUNICIPAL WASTE COMBUSTOR (INCLUDING C&D FACILITY)

Evaluated	Performance Standard	Deviation(s)	Comments/Observations and Recommended Corrective Action(s)
☒	19.205(1) Storm Water Controls.		stormwater drains towards the leaf waste composting area
☒	19.205(2) Equipment.		
☒	19.205(3) Weighing Facilities.		All weights are measured on an out-going basis via weight slips.
☒	19.207(1) General.	Discuss in Section VI.	Discuss in Section VI.
☒	19.207(2) Supervision of Operation.		
☒	19.207(3) Access to Facilities.		there is a gate and fence
☒	19.207(4) Security.		
☒	19.207(5) Posting of Handling Facility.		all postings are met
☒	19.207(6) Unloading of Refuse.		
☒	19.207(7) Special Wastes.		none
☒	19.207(8) Banned/Restricted Wastes.	waste ban plan is not found on site	waste ban sign is posted
☒	19.207(9) Hazardous Waste.		none
☒	19.207(10) Household Hazardous Waste and Waste Oil Collections.	post spill contact information	other requirements are met
☒	19.207(11) Bulky Waste.		
☒	19.207(12) Liquid Wastes.		none

Evaluated	Performance Standard	Deviation(s)	Comments/Observations and Recommended Corrective Action(s)
☒	19.207(13) Bird Hazards.		none
☒	19.207(14) Dust Control.		none
☒	19.207(15) Vector Control.		none
☒	19.207(16) Control of Wind-blown Litter.		
☒	19.207(17) Staffing.		
☒	19.207(18) Employee Facilities.		
☒	19.207(19) Accident Prevention/Safety.		
☒	19.207(20) Fire Protection.		
☒	19.207(21) Recycling Operations.		
☒	19.207(22) Records for Operational and Plan Execution.		All weights are measured on an out-going basis via weight slips.
☒	19.207(23) Screening and/or Fencing.		none
☒	19.207(24) Open Burning.		none
☒	19.207(25) Inspections.		2019 actions met
☒	19.207(26) End-of-Life Mercury-added Products.		proper signage and labels

B. CONSTRUCTION AND DEMOLITION (C&D) WASTE PROCESSING FACILITY OR C&D WASTE TRANSFER STATION

Evaluated	Performance Standard	Deviation(s)	Comments/Observations and Recommended Corrective Action(s)
☐	19.206(1) Enclosed Operations.		
☐	19.206(2) Storage.		
☐	19.206(3) Contact Water.		
☐	Suspect Asbestos-Containing Material (ACM) Inspection and Management Protocol.		
☐	Sample collection of suspect ACM from incoming loads.	Discuss sample results: ► ☐ Attach analytical reports.	

VI. Inspection Observations

A. FACILITY CONDITION AND OPERATIONS

Examine and evaluate the facility condition and operations as observed during the inspection, including the following:

☒ Describe any evidence of the following conditions observed at the time of the inspection:
- Unpermitted discharges to air, water, land or other natural resources of the Commonwealth; and
- Dust, odors, litter, and/or other nuisance conditions.

☒ Document and discuss all deviations from any specific requirements for the facility that are not addressed in the previous section (*Section V. – Performance Standards*), including without limitation, the requirements set forth in the facility's operation and maintenance plan, orders or other enforcement documents, and other solid waste permits, approvals, and authorizations issued to the facility by MassDEP.

☒ List the types and estimated quantities of all waste and materials stored at the facility at the time of the inspection.

☒ Provide a narrative that describes the overall status of the general condition, operation and performance of the facility as observed at the time of the inspection.

⇨Attach photographs taken during the inspection that depict the general condition and operation of the facility. At a minimum, include photographs, as applicable, of the waste unloading (tipping) area, waste storage areas, recyclable material storage and, for transfer stations, the waste reloading activity.

Discussion: There is no evidence of unpermitted discharges or nuisance conditions. Quantities of waste on site during the inspection: trash - none collected on site; bulky waste 2 tons; scrap metal 500 lbs.; recyclable mixed paper <6 tons (compactor); recyclable mixed containers <3 tons; freon 60; electronics 1/2 full trailer; propane tanks 56 20-pound and 10 1-pound tanks; tires 130; lamps 1 drums, 2 boxes CFLs, 1 8' box; ballasts 1 pail; 10 cubic yards new yard waste; used motor oil; rechargeable batteries.

Propane tanks and tires need to be stored on pallets per facility permit.

B. RECORD REVIEW

Examine and evaluate the facility's record-keeping. Without limitation, document the status of the facility's compliance with, and any deviations from, the record-keeping required by 310 MCR 19.000; the facility's operation and maintenance plan; orders or other enforcement documents issued to the facility; and other solid waste permits, approvals, determinations and authorizations issued to the facility by the Department, including the following:

☐ Discuss the evaluation of the Facility's "daily log" such as, daily tonnage records.

☐ List and discuss any special incidents that have occurred since the previous inspection such as exceedances of the facility's permitted waste acceptance limits, nature and outcome of complaints reported to the facility operator (including the identity of the complainant, if known), fires, emergencies, or other disruptions to the routine operation of the facility.

Discussion:

VII. Summary and Recommendations

Pursuant to 310 CMR 19.018(6)(a)4., where a third-party inspector observes that the operation or maintenance of the facility deviates from the aforementioned applicable requirements, he or she shall document all such deviations and recommend corrective actions for the facility to take to return to compliance.

A. INSPECTION RESULTS

Based on the examinations and evaluations conducted in Sections V. and VI., please summarize the inspection results by checking one of the following determinations:

☐ **No deviations from the applicable performance standards or additional requirements listed at 310 CMR 19.018(6) were identified during this inspection.**
If no deviations were identified during the inspection, check this box and proceed to Section VII.B.

☒ **Deviations from the applicable performance standards or additional requirements listed at 310 CMR 19.018(6) were identified during this inspection and are discussed further in this report.**
If deviations were identified during the inspection, check this box and ensure that each deviation and the recommended corrective actions are discussed in the applicable section(s) below.

B. STATUS OF PREVIOUS RECOMMENDATIONS FOR CORRECTIVE ACTION

If a previous inspection report identified deviations with recommendations for corrective action, please describe the action(s) taken since the last inspection to return the facility to compliance with the applicable requirements.

Discussion: The following 2019 corrective actions were taken:waste ban sign posted on gate, plastic bags removed from yard waste composting area, lamp shed is orderly

C. RECOMMENDATIONS FOR CORRECTIVE ACTION

Based on the results of this inspection, please list all deviations noted during the inspection and provide recommendations for corrective action to return to compliance with the applicable requirement.

Recommendations: Place a copy of the waste ban plan in the attendant's shed. Post a sign with oil spill contact information.

D. ADDITIONAL COMMENTS

Comments: The retaining wall by scrap metal rolloff needs to be repaired.

VIII. Additional Information Checklist

Attach the following additional information, as applicable, to complete the inspection report.*

☒ Attach photographs taken during the inspection that depict the general condition and operation of the facility, as required in Section VI.A.

☐ For C&D Waste facilities only, attach the analytical results, as required in Section V.B.

**Note: Pursuant to 310 CMR 19.018(8), MassDEP may request additional information.*

Continue to Certification Statement on Next Page ►

IX. Certification – THIRD-PARTY INSPECTOR

"I attest under the pains and penalty of perjury that:

1. I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this certification statement;
2. Based on my inquiry of those persons responsible for obtaining the information, the information contained in this submittal is, to the best of my knowledge, true, accurate and complete;
3. I have been able to conduct the third-party inspection and prepare the third-party inspection report without being influenced by the facility owner or operator and, (if I am a municipal employee) without being influenced by my municipal employer, by any coworker or by any elected or appointed official of the municipality; and
4. I am aware that there are significant penalties, including, but not limited to, possible administrative and civil penalties for submitting false, inaccurate, or incomplete information and possible fines and imprisonment for knowingly submitting false, inaccurate, or incomplete information."

Jan Ameen
Signature of Third-Party Inspector

Jan Ameen
Print Full Name

FCSWMD
Company Name

11/18/2020
Date (MM/DD/YYYY)

X. Certification – FACILITY OWNER/OPERATOR

Does the facility maintain a Financial Assurance Mechanism (FAM) pursuant to 310 CMR 19.051? ☐ YES ☒ NO

If yes:
- Enter the amount of the current FAM: $
- Enter the date of the last revision of the FAM amount, pursuant to 310 CMR 19.051(6):

As a reminder, pursuant to 310 CMR 19.051(6), the estimate of the cost of closure and post-closure maintenance must be revised every year, and every second year shall be submitted to the Department.

"I certify under the penalty of law:

1. That I have personally examined and am familiar with the information submitted in this third-party inspection report, including but not limited to the statements above concerning the financial assurance mechanism in place in accordance with any facility permit and 310 CMR 19.051, and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties both civil and criminal for submitting false information including possible fines and imprisonment.
2. That, in the event that this inspection report contains a recommendation for corrective action(s), I have completed and attached to this report a Corrective Action Plan and Schedule*, pursuant to 310 CMR 19.018(8)(c)2."

**Note: The owner or operator may elect to correct deviations identified in the Third-Party Inspection Report in a manner that is different than that recommended by the Third-Party Inspector, so long as the facility is brought back into compliance with applicable requirements.*

Signature of Responsible Official

Richard Kuklewicz
Print Full Name

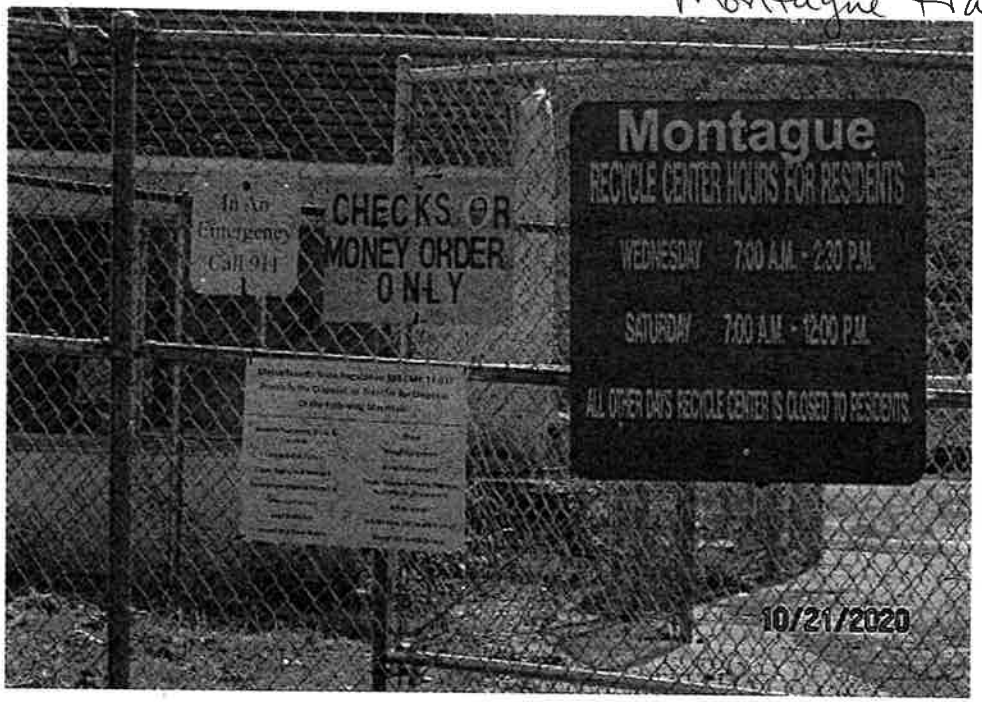
Chair, Selectboard
Title

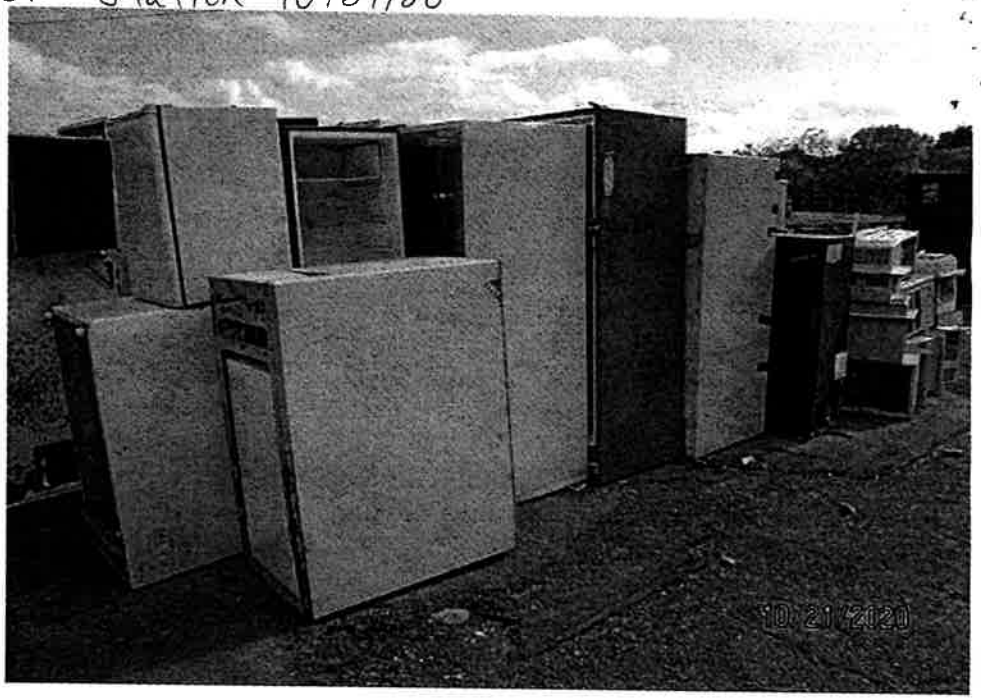
12/14/2020
Date (MM/DD/YYYY)

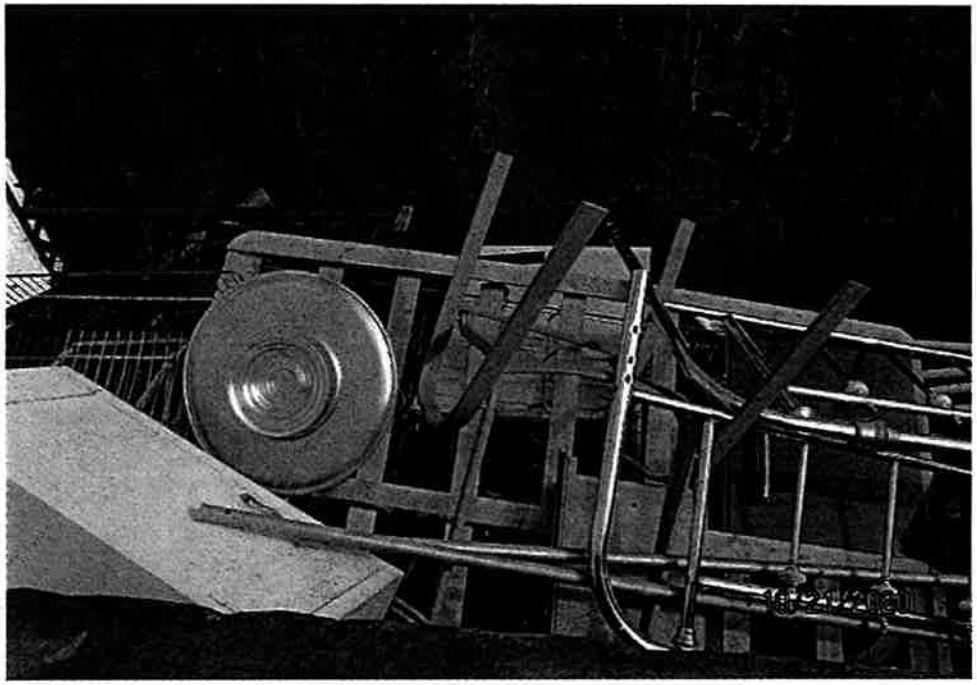
▶ Pursuant to 310 CMR 19.018(8)(c), a copy of each third-party inspection report shall be maintained at the facility in accordance with the requirements of 310 CMR 19.000. The owner and operator shall make third-party inspection reports available to personnel or authorized representatives of the Department for review at the facility upon request.

Within 30 days of the inspection date:	• Mail this completed form to the MassDEP Regional Office that serves the municipality in which the facility is located. (Attention: Solid Waste Management) • Send one copy to the local board of health for the municipality in which the facility is located.	A list of municipalities and MassDEP Regional Offices is available online at: http://www.mass.gov/eea/agencies/massdep/about/contacts/find-the-massdep-regional-office-for-your-city-or-town.html

Montague transfer station 10/21/20








10/21/2020


10/21/2020

DEP copy

Massachusetts Department of Environmental Protection
Bureau of Waste Prevention / Solid Waste Management
Third-Party Inspections – 310 CMR 19.018(8)
Corrective Action Plan & Schedule

Important: When completing this form on a computer, use only the Tab key to move your cursor – not the Return key.

Instructions

In the event that a third-party inspection report prepared in accordance with 310 CMR 19.018(8) contains a recommendation for corrective action(s) at a Solid Waste Management Facility, the owner or operator shall complete and sign **Section IV. Certification** of this form. Pursuant to 310 CMR 19.018(8)(c), the owner or operator shall submit the completed Corrective Action Plan and Schedule form, along with the third-party inspection report with attachments to the appropriate MassDEP Regional Office, and a copy of this form and each completed inspection report with attachments to the board of health of the municipality in which the facility is located. Be sure to obtain the most recent version of this form. All applicable sections of the submitted form must be completed to be accepted by MassDEP. Blank forms and additional instructions on using this form are available online:

http://www.mass.gov/eea/agencies/massdep/recycle/approvals/solid-waste-applications-and-forms.html#8

I. Facility Information

Identify the facility and responsible official.

A. Facility

Montague Transfer Station
Facility Name

Turners Falls
City/Town

MA
State

39525
FMF Number

B. Responsible Official

Richard Kuklewicz
Responsible Official Name (Individual)

townadmin@montague-ma.gov
Responsible Official Email Address

Montague Selectboard
Responsible Official Company Name

413-863-3200
Responsible Official Telephone Number

II. Third-Party Inspection

Enter the date of the third-party inspection and identify the inspector that conducted the inspection related to this corrective action plan.

10/21/2020
Inspection Date (MM/DD/YYYY)

Jan Ameen
Third-Party Inspector Name

Continue to Next Page ►

Massachusetts Department of Environmental Protection
Bureau of Waste Prevention / Solid Waste Management
Third-Party Inspections – 310 CMR 19.018(8)
Corrective Action Plan & Schedule

Important: When completing this form on a computer, use only the Tab key to move your cursor – not the Return key.

III. Plan & Schedule for Corrective Action

Pursuant to 310 CMR 19.018(8)(c)2., the owner or operator shall provide the following:

a. A written report documenting the completion of the corrective action(s) [recommended in the report];
b. Documentation or explanation why corrective action is not needed; or
c. A plan and schedule for completing the corrective action(s).

Note: The owner or operator may elect to correct deviations identified in the inspection report in a manner that is different than that recommended by the third-party inspector, so long as the facility is brought back into compliance with applicable requirements.

Discuss the status of the corrective actions recommended in the third-party inspection report. For each deviation documented in the inspection report, describe the corrective action(s) that have been taken, or that will be taken, by the owner or operator to return the facility to compliance with the applicable requirements. Provide the schedule for completing each corrective action, or, as applicable, provide the date the corrective action was completed. If the facility owner/operator intends to submit a permit application in order to complete the corrective action(s), please identify the permit type and anticipated submittal schedule. Contact MassDEP (Regional Office) if you are not sure the corrective action(s) will require a filing to MassDEP prior to implementation.

1. Place a copy of the waste ban plan in the attendant's shed. The FCSWMD will supply the plan. It will be placed in the attendant's shed no later than January 3, 2021.

2. Post the emergency contact information for an oil spill. The FCSWMD will provide the sign and the town will post no later than January 3, 2021.

Massachusetts Department of Environmental Protection
Bureau of Waste Prevention / Solid Waste Management

Third-Party Inspections – 310 CMR 19.018(8)
Corrective Action Plan & Schedule

Important: When completing this form on a computer, use only the Tab key to move your cursor – not the Return key.

IV. Certification

FACILITY OWNER/OPERATOR

"I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties both civil and criminal for submitting false information including possible fines and imprisonment."

Signature of Responsible Official

Richard Kuklewicz
Print Full Name

Chair, Selectboard
Title

12/14/2020
Date (MM/DD/YYYY)

The owner/operator of the facility shall submit this form along with the third-party inspection report to the Department with a copy to the board of health of the municipality in which the facility is located no later than 30 days following the date of the inspection. Pursuant to 310 CMR 19.018(8)(c), a copy of each third-party inspection report shall be maintained at the facility in accordance with the requirements of 310 CMR 19.000. The owner and operator shall make third-party inspection reports available to personnel or authorized representatives of the Department for review at the facility upon request.

Within 30 days of the inspection date:	• Mail this completed form to the MassDEP Regional Office that serves the municipality in which the facility is located. (Attention: Solid Waste Management) • Send one copy to the local board of health for the municipality in which the facility is located.	A list of municipalities and MassDEP Regional Offices is available online at: http://www.mass.gov/eea/agencies/massdep/about/contacts/find-the-massdep-regional-office-for-your-city-or-town.html

8A

ZONING BOARD OF APPEALS

Town of Montague
1 Avenue A
Turners Falls, MA 01376
(413) 863-3200 x114
FAX: (413) 863-3222

TO: The Board of Selectmen

FROM: The Board of Appeals

DATE: November 11, 2020

RE: Appointment of an Alternate Member to Full Member

The Board of Appeals is requesting the appointment of a Alternate Member to a full Member of the Zoning Board of Appeals.

The Board suggests the appointment of Joshua Lively of 194 Turnpike Rd., Turners Falls, MA as a Member of the Zoning Board of Appeals.

Sincerely,

John Burek

John Burek, Chairman
Zoning Board of Appeals

JB/kc

8B4

Airport Commission Opening
Statement of Interest
Joseph Mazeski

Town of Montague Selectboard-

I am sending this statement of interest to formally ask that you would consider me to fill the vacant seat on the airport commission for the term beginning immediately and concluding in June 2021. My intent would be to seek reappointment upon the conclusion of the remainder of the term. I reside and work in Turners Falls and have for quite some time. I have an extensive background with municipal budgeting, state and federal funded projects, and facilities maintenance. As a resident and taxpayer I feel that my appointment to the commission would allow me to represent the town and make sound decisions to secure the viability of the airport for years to come. It is my understanding that the airport is currently pursuing the potential purchase of additional property located along the Industrial Blvd to secure critical aviation related services. I feel that my experience in the construction trades and project management would be a tremendous asset as this project proceeds to keep it on track and financially successful. Although I have not served on the Airport Commission in the past I have worked with other members, both current and previous, as well as the current Airport Manager. This experience would allow for a smooth transition into the position if appointed. Thank you for your consideration for my appointment to the Airport Commission. I look forward to hearing from you.

Joe Mazeski

8B

December 3, 2020

Montague Selectboard
1 Avenue A
Turners Falls, MA 01351

Appointment to Airport Commission

To whom it may concern,

I understand the Town has an opening on the Turners Falls Airport Commission. By this letter I request that I be appointed to that position.

As you know, I am a life-long resident of Montague who has participated in numerous boards, committees, and commissions, where I maintained a high level of meeting attendance and participation. As a former member of the Airport Commission in the early 2000's, when we going through the lengthy and complicated process of replacing the runway, I already have a strong understanding of airport operation, funding and grant processes, and how the airport fits into the town government.

This is an exciting time for the airport, with the extensive infrastructure upgrades and especially the opportunity of acquiring the former Pioneer Aviation and incorporating it into the airport under Town ownership, and I look forward to again being a part of that effort and community.

Yours truly,

Mark Fairbrother

Montague, MA 01351

Board of Selectmen
Town of Montague
1 Avenue A
Turners Falls, MA 01376
(413) 863-3200 xt. 108
FAX: (413) 863-3231

REGISTRATION FOR ASSEMBLY, PUBLIC DEMONSTRATION, OR USE OF PUBLIC PROPERTY
(Not for Peskeompskut Park or Montague Center Common)

All information must be complete. This form must be returned to the Board of Selectmen within a minimum of 10 days prior to the assembly.

Name of applicant: Suzanne LoManto
Address of applicant: 1 Avenue A, Turners Falls
Phone # of applicant: 413-835-1390
Name of organization: River Culture
Name of legally responsible person: Town of Montague
Location of assembly: Montague - Parade
Date of assembly: Tuesday 22 / Rain date 12/23
Time of assembly: Begin: 6pm End: 7pm
Number of expected participants:
If a procession/parade:
Route: (Attached)
Number of people expected to participate:
Number of vehicles expected to participate: up to 3
Subject of demonstration: Santa tour of Montague

Attach a copy of your insurance policy or liability binder indicating a minimum policy of $1Million Individual/$3Million Group.

****

Signatures:

Police Chief: Date:
Comments/Conditions:

Board of Selectmen, Chairman: Date:
Comments/Conditions:

6pm START
Santa leaves Unity Park
From Second Street

Avenue A

left on Mineral Rd.

6:20pm
Santa arrives in Millers Falls
Circles around Franklin,
Newton and Bridge Streets

6:10pm
Santa arrives in Montague City
Turns left on Turnpike Road

6:35pm
Santa arrives in Lake Pleasant
Circles Around Rutters Park

Route 63

6:45pm
Santa arrives in Montague Center
Returns to Turners Falls

right on Center Street

SANTA TOUR OF MONTAGUE— Tuesday, December 22, 6-7pm

Raindate December 23. All times are approximate

Community poster

RiverCulture is working with Russ Brown (Santa) and the Tuners Falls Fire Department on a tour of the five villages of Montague on

Tuesday 12/22
Raindate 12/23

The tour is from 6-7pm and will follow this route:

START Unity Park to Second Street (Turners Falls) **6pm**

Avenue A to Turnpike Road (Montague City) **6:10pm**

Turnpike Rd. to Millers Falls Rd. to West Main to Franklin, Newton and Bridge Sts. (Millers Falls) **6:20pm**

Millers Falls Road (returning) to Mineral Rd. to Lake Pleasant Rd. to Broadway around Rutters Park (Lake Pleasant) **6:35pm**

Lake Pleasant Rd. to Route 63 south

Center Street to the Montague Common (Montague Center) **6:45pm**

Turners Falls Road back to the fire department **END**

The tour will be advertised through the Montague Reporter and through social media.

10

WendyB-Montague Board of Selectmen

From: Brian McHugh <bmchugh@fcrhra.org>
Sent: Thursday, December 10, 2020 11:08 AM
To: WendyB-Montague Board of Selectmen
Cc: Sharon Pleasant
Subject: Spinner Park Payment
Attachments: FY19 MONT Spinner Park ATD Berkshire Design #11.pdf; Spinner Park BDG Invoice # 11.pdf

Hi Wendy,

Can you put this on Monday's Agenda?

Approve payment of $550 to Berkshire Design Group for architectural services rendered for the Spinner Park Restoration Project.

Thanks.

Brian

Brian P. McHugh
Director of Community Development
Franklin County Regional Housing & Redevelopment Authority
241 Millers Falls Road, Turners Falls, MA 01376
(413) 223-5224

HRA
DEVELOPING BETTER COMMUNITIES

FRANKLIN COUNTY REGIONAL HOUSING & REDEVELOPMENT AUTHORITY
214 Millers Falls Road • Turners Falls, MA 01376
Telephone: (413) 863-9781

AUTHORIZATION TO DISBURSE No. 11
Invoice # 2019-135-13
TOWN OF MONTAGUE FY19 (6K)
SPINNER PARK RESTORATION PROJECT
Contractor: Berkshire Design Group. Inc.
4 Allen Street
Northampton, MA 01060

Date: December 10, 2020

Original Contract Amount:	11,000.00
Addenda	6,500.00
Total Contract	17,500.00
Total Paid to Date:	14,630.68
Balance:	2,869.32
This Invoice:	**550.00**
Balance:	2,319.32

Work Items Complete:

See attached invoice #2019-135-13 dated: December 2, 2020	**FY2019 CDBG**

I have reviewed this invoice on December 10, 2020 and found that the tasks have been completed, as noted. I recommend approval of this pay request for **$ 550.00**

Director of Community Development – HRA

I hereby authorize the above payment **TOWN of MONTAGUE**

Authorized signature
Chair, Selectboard

Authorized signature
Selectboard

Authorized signature
Selectboard

Berkshire Design Group
4 Allen Place, Northampton, MA 01060
413-582-7000 t • 413-582-7005 f

Town of Montague Planning Dept.
Attn: Mr. Brian Mchugh
241 Millers Falls Rd.
Turners Falls, MA 01376

INVOICE # 2019-135-13
December 2, 2020
Project No: 2019-135

Re: Spinner Park Bidding & Construction Administration

For professional landscape architectural, civil engineering and land surveying services listed below for the period November 1, 2020 to November 30, 2020:

Email Invoices To: bmchugh@fcrhra.org

Task	Fee	% Complete (to date)	% Complete (this period)	Amount Due (this Period)
Construction Documents	$11,000.00	75.00%	5.00%	$550.00
Additional Services - Electric	$3,500.00	100.00%	0.00%	$0.00
Additional Services - Electric II	$3,000.00	100.00%	0.00%	$0.00
	$17,500.00			
Subtotal Task Charges				**$550.00**
INVOICE TOTAL				**$550.00**

Please make check payable to: The Berkshire Design Group, Inc. Please note Project # on check.

Terms: Due upon receipt. A 1.5% late payment charge may be applied to the balance due, if payment in full is not received in 30 days. Thank You.

Statement of Accounts

Invoice	Invoice Date	0 - 30	31 - 60	61-90	Over 90	Balance
2019-135-5	4/10/2020	$0.00	$0.00	$0.00	($0.04)	($0.04)
Total Prior Billing		**$0.00**	**$0.00**	**$0.00**	**($0.04)**	**($0.04)**

Total Due **$549.96**

MONTAGUE PLANNING & CONSERVATION

ONE AVENUE A · TURNERS FALLS, MA 01376 ·
PHONE: 413-863-3200 EXT 207 - FAX: 413-863-3222

Initial Assessment of Firstlight's Amended Final Application

December 2020

On December, 4, 2020 Firstlight filed an amended license application. The Planning Department has reviewed the proposal in terms of recreational amenities. The proposal was reviewed against the April 2019 Recreational proposal developed by the Planning Department that was subsequently endorsed by the Selectboard. This memo is intended to distill relevant information from the voluminous application and provide some initial commentary that may be useful for when the time comes for the town to issue comments to FERC.

A. Cabot Camp

FirstLight proposes to create a 200-foot long, 10-foot wide formal path leading from the Cabot Camp parking area to an access point on the Millers River just upstream of the confluence with the Connecticut River. There is currently an informal path in this area. A sign (Project Name and FERC No.) and directional portage sign would be installed along the formal path leading the public from the parking lot directly to the 10-foot-wide gravel path leading to the water's edge. A portable toilet is proposed at the site. It is unclear if this will be universally accessible.

Project is to be constructed within 4 years of license. According to the Statement of Costs and Financing in Exhibit D, the capital cost is $30,000. Annual O&M cost of $7,000 ($329,000 over 47 years= $329,000. Note: Exhibit D costs differ from the cost of the executive summary ($665,000).

There was no commentary on the status or future use of the Cabot Camp building in the proposal. Under the Recreation Management Plan for the Northfield Mountain project Table 6.0-1, the buildings at the site are not identified as an amenity to which management and maintenance apply.

B. Unity Park

No improvements are proposed. This area is not included in Firstlight's Recreation Inventory. The Town may want to request that the parking lot at the terminus of the bike path and the field be included in the recreation management plan. A public canoe storage rack could be beneficial for residents. Brattleboro has similar feature on West River Trail.

C. Fishway/Canal District

FirstLight proposes to install a put-in just below the Turners Falls Dam to kayak/canoe/raft the bypass reach. The proposed 12' wide access would be provided via the existing "IP" bridge spanning the power canal. Once over the canal, a formal path would lead recreationists to the base of the dam, below the spillway ladder.

To be installed within 4 years of license. According to the Statement of Costs and Financing in Exhibit D, the capital cost is $183,000. Annual O&M cost of $10,000 ($329,000 over 47 years= $329,000). Note: Exhibit D costs differ from the cost of the executive summary ($1,304,000).

Initial Comments on submitted Design

- Clearly this falls short of the town's overall vision for this site, but it does provide the core essential functions that can be improved upon.
- Portions of this path are on Town of Montague Property (Indeck Site). Town will likely have to enter into discussion about the property.
- Unclear if this will be universally accessible
- Paddlers will need an option to put in downstream island/ rapids instead of only upstream
- Open foundations of old Cutlery building should be secured for public safety
- Picnic tables and interpretive sign at overlook (under the power lines). Secure people from slopes with an attractive fence

D. Cabot Woods Fishing Access/Rock Dam

Nothing is proposed and this a glaring omission. Despite the lack of formal access to rock dam, people continue to use the area for fishing, nature watching, and whitewater. It is reasonable to assume that usage will increase with the addition of boatable flows and increased flows. Public safety needs to be able to access this popular area in a safe an efficient manner. A stair system or other pathway should be provided to the Rock Dam as part of the Cabot Woods Fishing Access area.

E. Poplar Street Access

FirstLight proposes to create a formal access trail and stairs for a take-out at Poplar Street, which is currently a non-Project recreation site. There is an existing take-out at Poplar Street; however, it is extremely steep. FirstLight has limited options due to steep topography and land ownership at this site. FirstLight proposes to use the existing gravel parking lot leading to 20' timber stairs with a boat slide railing leading to a concrete landing/abutment. A gangway would be anchored to the concrete abutment and lead to a floating dock in the Connecticut River to accommodate fluctuations in the river elevation. The land necessary for the site will be included within the proposed Turners Falls Project boundary.

To be installed within 4 years of license. According to the Statement of Costs and Financing in Exhibit D, the capital cost is $286,000. Annual O&M cost of $7,000 (over 47 years= $329,000). Note: Exhibit D costs differ from the cost of the executive summary ($1,573,000).

Comments on plan

- No public restroom or changing station is proposed. (However one is proposed at Cabot Camp)
- This proposal should demonstrate that it can accommodate the projected traffic/usage impacts, especially during scheduled releases.
- It is unclear at this point if the parking will be adequate and if the location can accommodate commercial raft trailers and transports.
- Firstlight should consider acquiring adjacent private property that is a more natural landing/access area.

F. Scheduled Boatable Releases

An annual regime of 8 scheduled releases for recreational boating are proposed. These will occur on Saturdays between July and October for 4 hour periods. These will supplement natural spillage events and provides a predictable schedule, assuming flows are provided from upstream sources.

FirstLight also proposes to establish a weblink that would report the forecasted Turners Falls Dam discharge each day during the daylight hours from July 1 to October 15 to benefit whitewater boaters. FirstLight is not proposing to post the Turners Falls Dam discharge from April 1 to June 30 because it is a period when the federally endangered Short-nosed sturgeon could be utilizing the bypass reach for spawning and incubation which could be disturbed by whitewater boaters. FirstLight will provide an annual schedule of releases, on its website, for the period July 1 to October 31 by May 31 of each year.

Note: the scheduled releases will not commence until start until after the physical access improvements in the license have been completed (Year 4).

The town may wish to consider obtaining expert help to assess the costs and benefits of the proposed boating regime. It is clear that there will be both commercial interests as well as individual users. The town may have limited ability to regulate the latter. The town/ fire district may need additional water technical rescue support. The takeout at Poplar Street could have capacity issues on release days. The town may want to consider personal flotation device law and review open container bylaws.

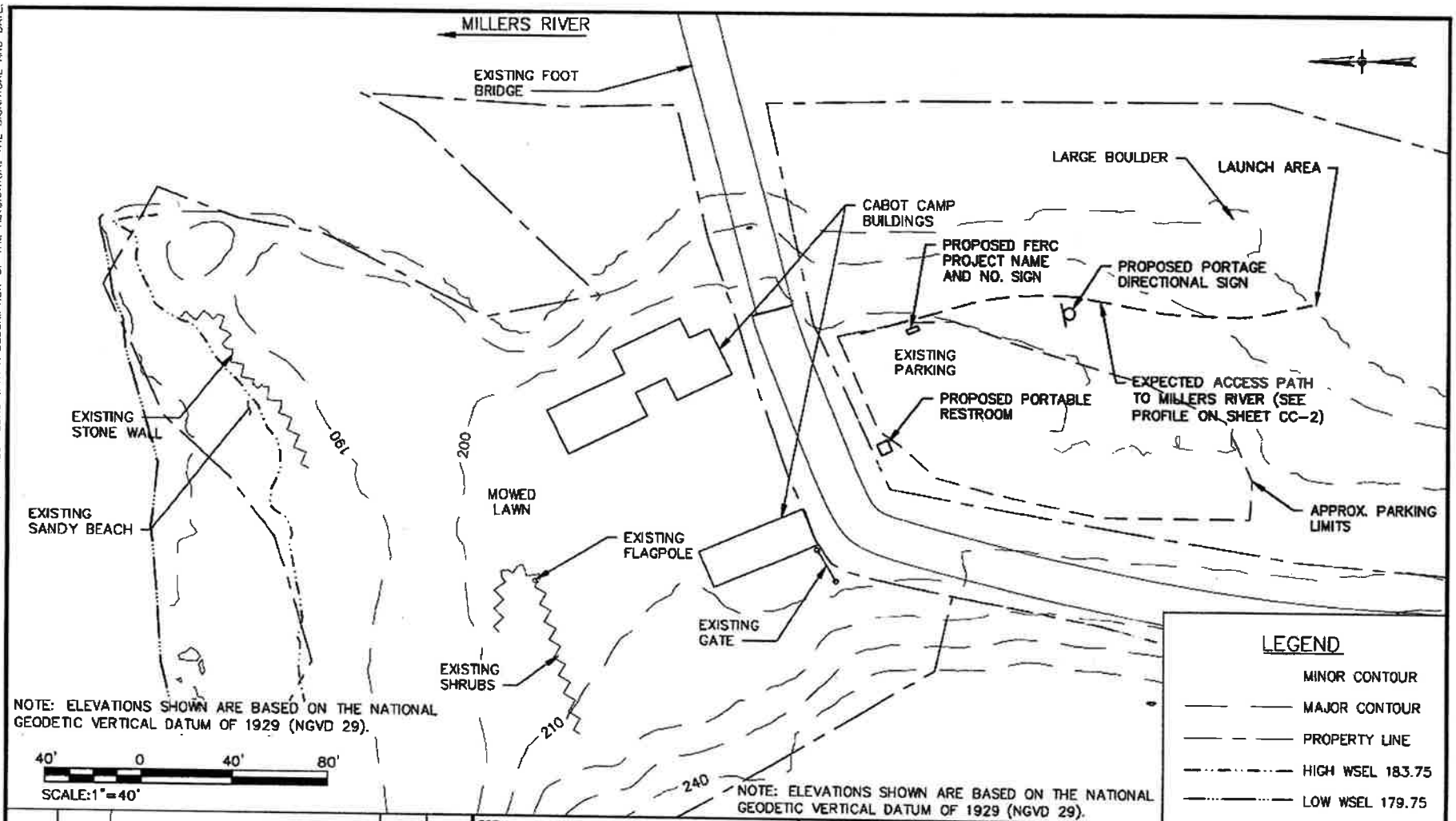
CONCLUSION

Firstlight is offering $499,000 worth of capital investment over the first 4 years of the license to formalize river access improvements at Cabot Camp, Turners Falls Dam, and Poplar Street. These three improvements are generally consistent with the Town's recreational requests, subject to some initial comments and questions identified in this report.

Firstlight's proposal falls short in several requests

- Does not restore formal access to the rock dam in the Cabot Woods
- Does not provide a management plan for the Cabot Camp Buildings
- Does not provide a management plan for the Unity Park area (from parking lot at bike path terminus, northward)

Lastly, Now that a flow regime is proposed which includes scheduled releases, the time is ripe for the town to fully and objectively plan for the projected impacts of the whitewater/boating. The town has at least 3 years to prepare for scheduled flows.



NO.	DATE	DESCRIPTION	BY	APP

FOR: FirstLight

BY: GOMEZ AND SULLIVAN ENGINEERS
Willsonville, NY • Utica, NY • Albany, NY • Hemsler, NH
www.gomezandsullivan.com

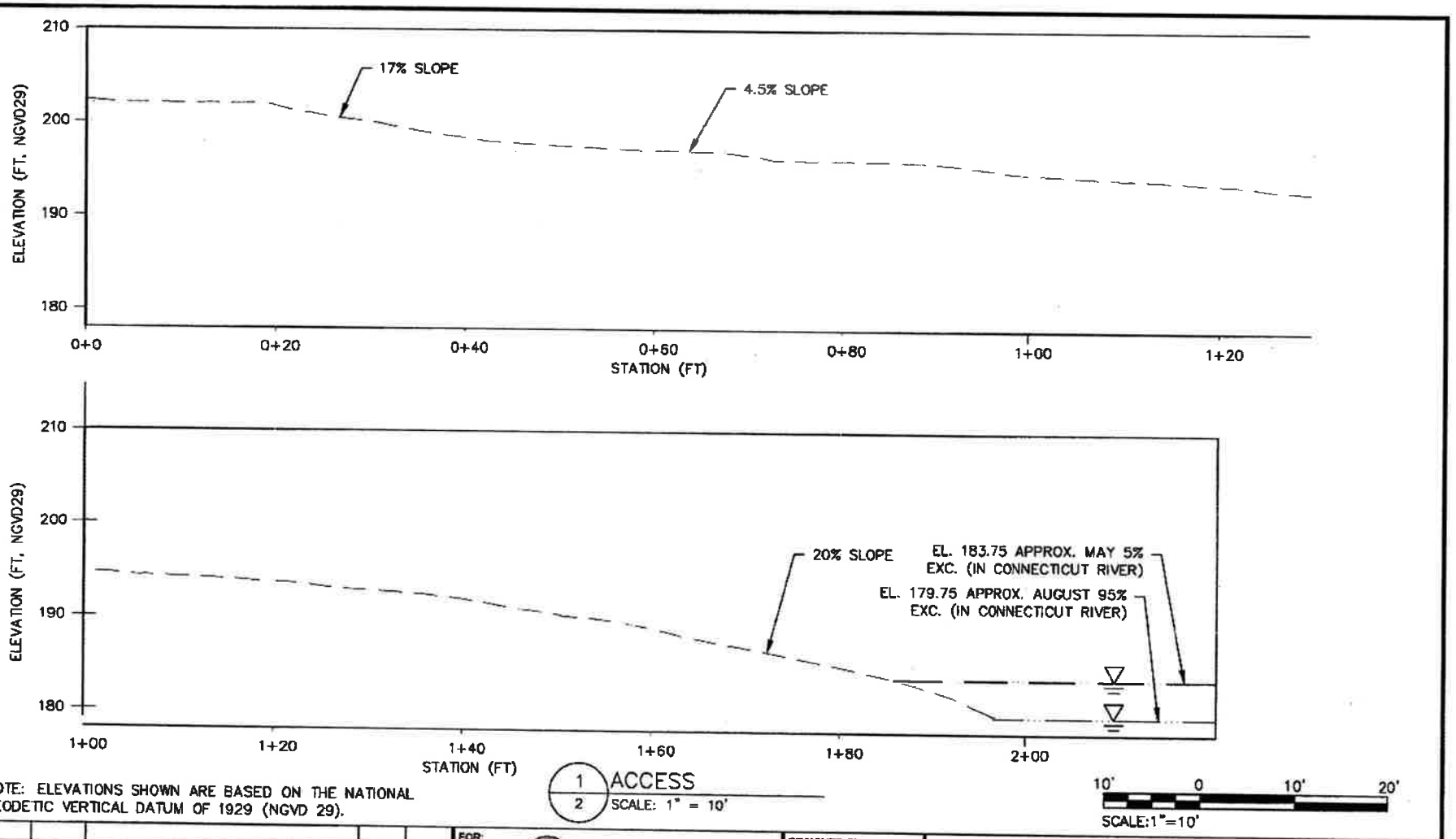
DESIGNED BY:	KJC
DRAWN BY:	JSC
CHECKED BY:	RLS
APPROVED BY:	-
PROJECT NO.:	1490
DATE:	2-19-20

AMENDED FINAL LICENSE APPLICATION

CABOT CAMP - CARRY-IN LAUNCH PATH - PLAN

SCALE: 1" = 40'

DRAWING NO.: CC-1



NOTE: ELEVATIONS SHOWN ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29).

1/2 ACCESS
SCALE: 1" = 10'

10' 0 10' 20'
SCALE:1"=10'

NO.	DATE	DESCRIPTION	BY	APP

FOR: FirstLight

BY: GOMEZ AND SULLIVAN ENGINEERS
Williamsville, NY • Utica, NY • Albany, NY • Henniker, NH
www.gomezandsullivan.com

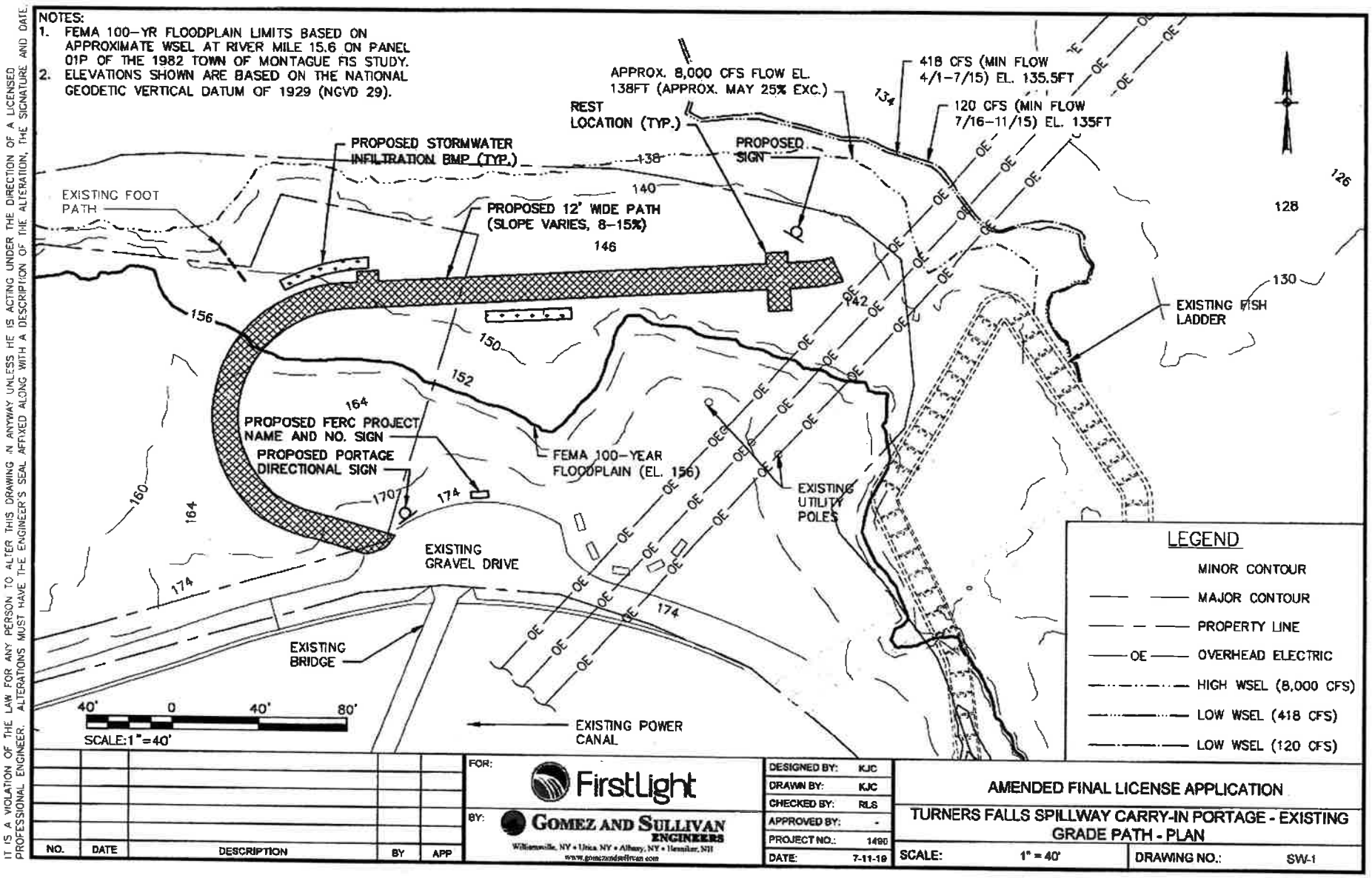
DESIGNED BY:	KJC
DRAWN BY:	JSC
CHECKED BY:	RLS
APPROVED BY:	-
PROJECT NO.:	1480
DATE:	2-19-20

AMENDED FINAL LICENSE APPLICATION

CABOT CAMP - CARRY-IN LAUNCH PATH - PROFILE

SCALE: 1" = 10'

DRAWING NO.: CC-2



IT IS A VIOLATION OF THE LAW FOR ANY PERSON TO ALTER THIS DRAWING IN ANYWAY UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER. ALTERATIONS MUST HAVE THE ENGINEER'S SEAL AFFIXED ALONG WITH A DESCRIPTION OF THE ALTERATION, THE SIGNATURE AND DATE.

NO.	DATE	DESCRIPTION	BY	APP

FOR: FirstLight

BY: GOMEZ AND SULLIVAN ENGINEERS
Williamsville, NY • Utica, NY • Albany, NY • Hamilton, NH
www.gomezandsullivan.com

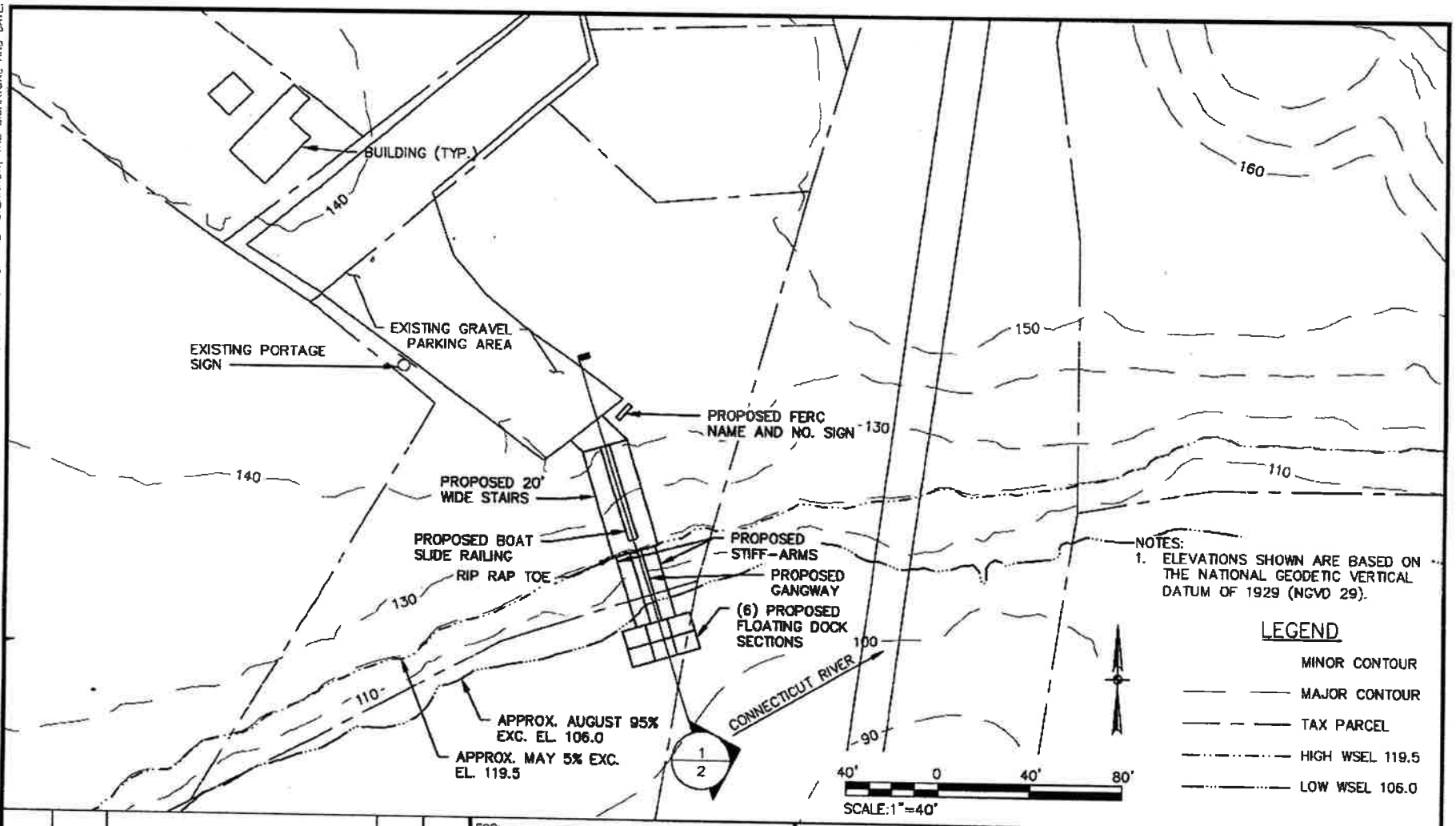
DESIGNED BY:	KJC
DRAWN BY:	KJC
CHECKED BY:	RLS
APPROVED BY:	-
PROJECT NO.:	1490
DATE:	7-11-19

AMENDED FINAL LICENSE APPLICATION

TURNERS FALLS SPILLWAY CARRY-IN PORTAGE - EXISTING GRADE PATH - PLAN

SCALE: 1" = 40'

DRAWING NO.: SW-1



NO.	DATE	DESCRIPTION	BY	APP

FOR: FirstLight

BY: GOMEZ AND SULLIVAN ENGINEERS
Williamsville, NY • Ithaca, NY • Albany, NY • Henniker, NH
www.gomezandsullivan.com

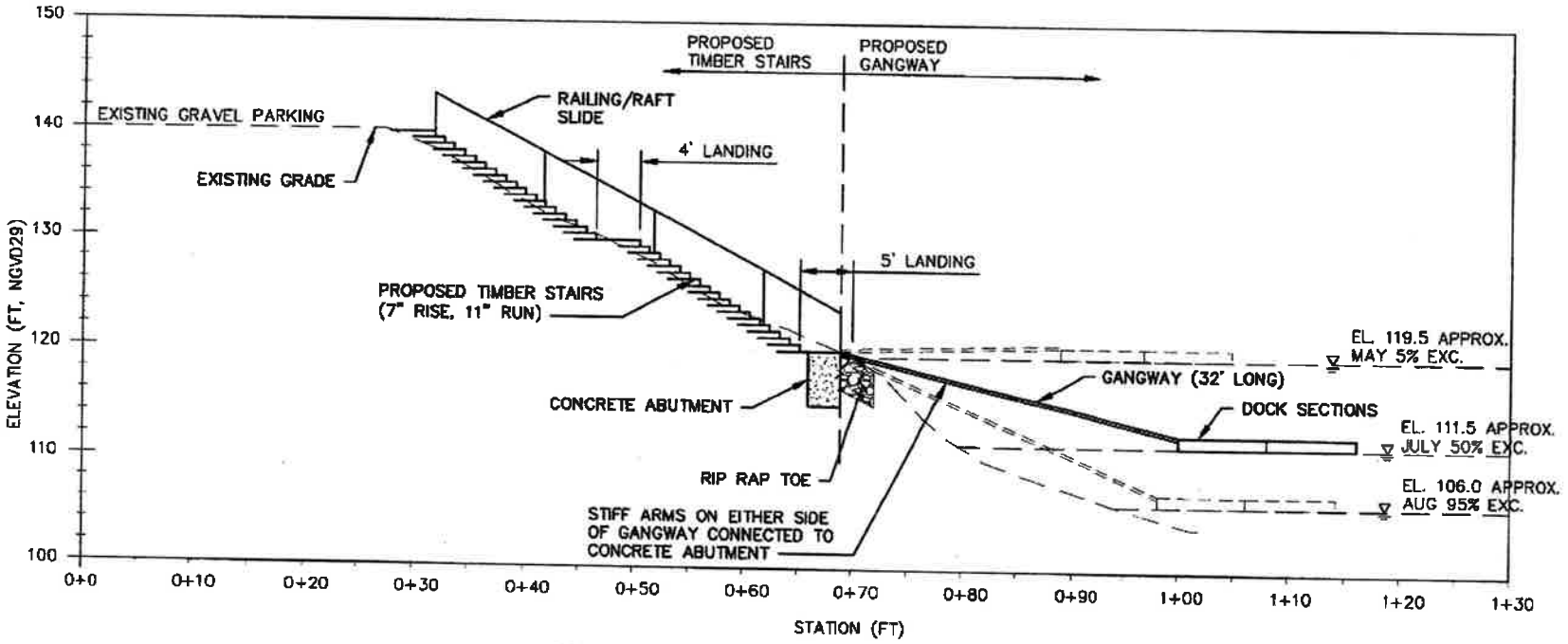
DESIGNED BY: KJC	
DRAWN BY: KJC	
CHECKED BY: RLS	
APPROVED BY:	-
PROJECT NO.:	1490
DATE:	4-8-20

AMENDED FINAL LICENSE APPLICATION

POPLAR STREET - TAKE-OUT - PLAN

SCALE: 1" = 40'

DRAWING NO.: PS-1



NOTES:
1. ELEVATIONS SHOWN ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29).

1 STAIR PROFILE
2 SCALE: 1" = 10'

10' 0 10' 20'
SCALE:1"=10'

NO.	DATE	DESCRIPTION	BY	APP

FOR: FirstLight

BY: GOMEZ AND SULLIVAN ENGINEERS
Williamsville, NY • Utica, NY • Albany, NY • Hermitage, NH
www.gomezandsullivan.com

DESIGNED BY: KJC	
DRAWN BY: KJC	
CHECKED BY: RLS	
APPROVED BY:	-
PROJECT NO.:	1490
DATE:	4-9-20

AMENDED FINAL LICENSE APPLICATION

POPLAR STREET - TAKE-OUT - PROFILE

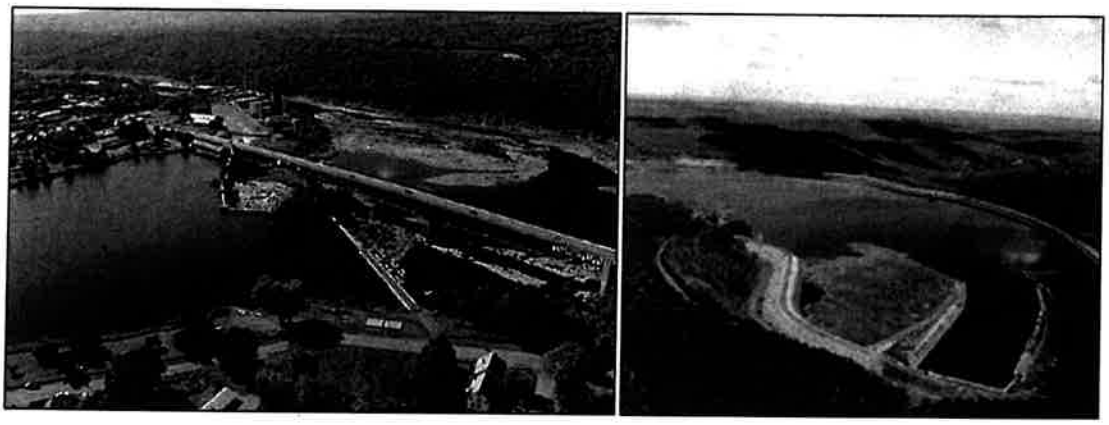
SCALE: 1" = 10'

DRAWING NO.: PS-2

Before the Federal Energy Regulatory Commission

Amended Final Application for New License for Major Water Power Project – Existing Dam

Turners Falls Hydroelectric Project (FERC Project Number 1889)
Northfield Mountain Project (FERC Number 2485)



FirstLight

EXECUTIVE SUMMARY

DECEMBER 2020

EXECUTIVE SUMMARY

1. Introduction

FirstLight Power (FirstLight) is a leading clean power producer and energy storage company in New England with a portfolio that includes 1.4 gigawatts (GW) of pumped-hydro storage, battery storage, hydroelectric generation, and solar generation. FirstLight submits this Executive Summary in support of its Amended Final License Application (AFLA) to the Federal Energy Regulatory Commission (FERC) for the Turners Falls Hydroelectric Project (Turners Falls Project, FERC No. 1889), and the Northfield Mountain Pumped Storage Project (Northfield Mountain Project FERC No. 2485).

The 67.709 megawatt (MW) Turners Falls Project (Figure ES-1) and 1,166.80 MW Northfield Mountain Project (Figure ES-2) are located on the Connecticut River in the Commonwealth of Massachusetts (MA) and the states of New Hampshire and Vermont. The Turners Falls Project is composed of the 62.016 MW Cabot Station and the 5.693 MW Station No. 1.

Cabot Station is the fourth largest conventional hydroelectric station in New England and the largest in MA. Cabot Station is operated to meet peak demand, as well as to provide voltage control, and reserve capacity while producing an average of 332,351[1] megawatt hours (MWh) per year of renewable carbon-free energy. To put this quantity in context, this is enough renewable energy to completely power approximately 37,000[2] Massachusetts homes each year. Station No. 1 is operated primarily when flows in the Connecticut River are either below the hydraulic capacity of a single Cabot Station unit or above the maximum hydraulic capacity of Cabot Station. The hydraulic capacity of Cabot Station and Station No.1 are approximately 13,728 cfs and 2,210 cfs, respectively (total of 15,938 cfs).

The Northfield Mountain Project is the region's largest energy storage project. Built initially to store excess nuclear energy during nighttime hours, Northfield is now the perfect complement to the continuing transformation of New England's electric supply towards intermittent renewables such as solar and offshore wind to meet regional carbon and greenhouse gas emission targets. Northfield's ability to store 8,729 MWhs[3] of energy, its large MW capacity, and its ability to ramp up electric production rapidly make it the most valuable tool the Independent System Operator-New England (ISO-NE) has to continuously maintain New England's load and supply balance both now and into the future with the continued penetration of renewable energy. For example, on the recent summer peak day of July 27, 2020, Northfield generated approximately 5,500 MWhs of energy, displacing substantial additional generation by fossil fuel-fired peaking units that would have been needed, if not for Northfield. And looking forward, Northfield is an emissions-free source of energy storage that supports MA's goal of decarbonizing the energy grid to meet its climate target of net zero emissions by 2050.[4] The energy grid cannot be fully "green", and maintain reliability, without on demand large-scale zero-emissions energy storage like the Northfield Mountain Project.

The Turners Falls and Northfield Mountain Projects are also important contributors to the local economy. In 2019, FirstLight paid over $15,049,000 in local property taxes. The towns of Erving, Montague, Gill and Northfield each receive significant tax revenue from FirstLight. Relative to the total town property

---

[1] Average generation for the period 2011-2019.
[2] Assumes 750 kWh per month consumption per home.
[3] Note that FirstLight is proposing to expand the operating limits of the Upper Reservoir from the licensed 1000.5 to 938 feet to 1004.5 to 920 feet. With these expanded operating limits there would be 10,779 MWhs of stored energy.
[4] On April 22, 2020 the Commonwealth of Massachusetts set a goal of reducing carbon emissions by 100% below 1990 levels by 2050 pursuant to authority under the Global Warming Solutions Act of 2008.

taxes in 2019, FirstLight paid approximately 85%, 23%, 11% and 19% of the Erving, Montague, Gill and Northfield total tax base[5], respectively. In addition, FirstLight is one of the top employers in Franklin County, contributing to the overall health of the economy and local rates of employment in Western MA.

The submission of this AFLA is an important milestone in relicensing these two facilities. The AFLA proposes important environmental and recreational improvements to the Projects while also allowing the Projects to continue to serve their essential roles in powering the regional electricity grid, accelerating carbon and air pollution reductions, and supporting their host communities.

This AFLA culminates an 11-year process in which FirstLight has conducted an extensive public scoping process and completed over 40 scientific studies and numerous supplemental information filings, which included state of science hydraulic, erosion causation, and fish passage analyses. The completion of these extensive scientific studies advances the state of knowledge of the environmental, recreational, and cultural resources at the Projects' sites and in the Connecticut River watershed. These studies will benefit this license application review by federal and state resource protection agencies and other stakeholders, and they serve as the foundation for this comprehensive licensing proposal.

2. FirstLight's Proposal

FirstLight's proposal includes significant new Protection, Mitigation and Enhancement (PM&E) measures relative to operations (flows and water elevations), fish passage, and recreation that will deliver extensive new environmental benefits to the Connecticut River ecosystem. FirstLight's operational proposal is summarized in Table ES-1. Table ES-1 includes the specific PM&E measures proposed as well as a description of the benefits of the proposal and the estimated costs over the proposed 50-year license term. All costs discussed herein are based on nominal dollars[6] over a 50-year new license term. The operational proposal includes maintaining considerably higher seasonal flows in the Connecticut River between the Turners Falls Dam and the Cabot Station tailrace (the Turners Falls Project bypass) and for Cabot Station, the proposal includes higher seasonal minimum flows, maximum seasonal flow restrictions and seasonal up- and down-ramping restrictions. Details of the operational proposal are included in Table ES-2a (proposed operations in license Years 1-3) and Table ES-2b (proposed operations starting in Year 4-50). In addition, FirstLight's proposal includes several PM&E measures for upstream and downstream fish passage and recreation as outlined in Table ES-1.

Together, FirstLight's proposed PM&E package represents a comprehensive suite of environmental and recreation enhancements totaling over $238,339,000[7] in new capital investment, periodic costs and operations and maintenance (O&M) costs and energy revenue losses over a 50-year new license term. Of these costs, $193,158,000 and $45,182,000 will be spent at the Turners Falls Project and Northfield Mountain Project, respectively. In addition, the provision of increased flows to the Turners Falls Project bypass and the other operational changes described in Table ES-2a and Table ES-2b will result in an average annual energy loss of 33,512[8] MWh/year which is equivalent to 11.3% of the energy currently produced by the Turners Falls Project.

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[5] The bulk of the Northfield Mountain Project taxes are paid to the towns of Northfield and Erving (~$10,515,000 total) and the bulk of the Turners Falls Project taxes are paid to the towns of Montague and Gill (~$4,507,000 total).

[6] Note that the nominal dollars shown in this Executive Summary differ from those shown in the Turners Falls and Northfield Mountain Project Exhibit Ds. As required by the FERC, the cost information in the Exhibit Ds are based on 2019 dollars and have not been adjusted for inflation over a 50-year license term.

[7] Note that the total nominal costs does not include the cost associated with dredging the Upper Reservoir intake channel to reduce sediment discharges to the Connecticut River. The nominal cost of the dredge over a 50-year license term is $102,631,000.

[8] This is enough energy to fully power 3,700 homes for a year.

FirstLight also proposes to increase the allowed usable storage of the Northfield Mountain Project's Upper Reservoir from the current 1000.5 to 938 feet to 1004.5 to 920 feet which will provide regional reliability benefits by incrementally expanding Northfield's ability to store large quantities of energy and enhancing its ability to deliver long-duration and flexible capacity when it is most needed. Northfield Mountain is ISO-NE's best tool in continually maintaining the load and generation balance throughout New England. When large generation sources, including the region's nuclear generators and transmission lines with neighboring systems, shut down unexpectedly, Northfield Mountain is able to fill the generation void without the need to start an equivalent amount of oil and natural gas fueled generators, supporting system reliability while reducing the carbon footprint of the region. In recognition of these reliability benefits, FERC has approved temporary amendments in the past to operate between 1004.5 and 920 feet when needed to support system needs.[9]

While on many days, the additional storage capability would likely not change the extent of pumped storage generation which is limited by system energy economics, on some other days, the system relies very heavily on pumped storage capability. As an example, on May 29, 2020, following forced outages at a nuclear facility and the Phase II HVDC line from Quebec, Northfield quickly replaced the lost generation and supplied that load support through the day's peak hours depleting much of its stored energy. Had the requested additional storage flexibility existed on that day, Northfield could have provided further support without recharge and thus reduced the extent to which ISO-NE had to commit additional fossil-fired resources to maintain reliability in the late evening hours of May 29 and early morning hours of May 30.[10] As shown by this recent example, the additional storage that is being requested will further enhance this capability and provide a reliability and environmental benefit for New England without altering the Project's impact on the local environment.

[9] FERC has previously approved temporary license amendments in 2001, 2005, 2006, 2014, 2015, 2017, in each instance to address "projected shortages in energy" (2001 and 2005), "projected energy shortages" (2006), "address reliability challenges" (2014), "address winter reliability" (2015), and "in anticipation of potential reliability challenges" (2017).

[10] ISO-NE August 24, 2020 presentation entitled "ISO New England Information Session: Recent Operational Contingencies and Pricing" at slide 28.

Table ES-1. FirstLight's Proposed Protection, Mitigation & Enhancement Measures

PM&E Measure	[1]Total Cost	Benefits
Operational Proposal		
Seasonally varying Turners Falls Project bypass flows	The proposed operational regime described herein results in a net loss of 33,512 MWh/yr of power from the Turners Falls Project compared to baseline conditions. This equates to a revenue loss of approximately $107,168,000 over a 50-year license term.	• Spawning habitat for the federally endangered Shortnose Sturgeon (SNS) will increase by 3-fold between the Turners Fall Dam and Rawson Island and by 2.6-fold between Rawson Island and the Montague Bridge compared to existing conditions. • Spawning habitat for American Shad will increase by more than 3-fold in the reach between Turners Falls Dam and Rawson Island and by 2-fold between Rawson Island and Cabot Station compared to existing conditions. • SNS rearing habitat (egg/larvae) is also substantially increased compared to existing conditions. • Establishing increased bypass flows allows migratory fish to follow the natural route of the Connecticut River to the Spillway Lift.
Seasonally varying minimum flows below Cabot Station		• Baseloading a Cabot Station unit provides a substantial increase in American Shad spawning habitat of 76.5 – 81.5% compared to existing conditions. • Baseloading a Cabot Station unit would also maintain 30% more habitat for SNS larvae, a critical life stage that drifts below Cabot Station from spawning locations near and above Cabot Station.
Seasonally varying maximum flow release restrictions at Cabot Station		• Proposed Cabot Station maximum flow restrictions will reduce potential impact on the federally endangered Puritan Tiger Beetle (PTB) located downstream at Rainbow Beach.
Seasonally varying up- and down-ramping restrictions at Cabot Station		• Proposed Cabot Station up- and down-ramping restrictions will protect SNS in spawning areas close to Cabot Station. • Proposed Cabot Station up-ramping restrictions are designed to protect state-endangered dragonflies during the eclosure process.
Seasonal Turners Falls Impoundment (TFI) rate of rise restrictions		• The rate of rise in the TFI, as measured at the Turners Falls Dam, are designed to protect dragonflies during the eclosure process.
Whitewater Releases at Turners Falls Dam		• Supplements natural spillage events and provides a predictable schedule, assuming flows are provided from upstream sources, for boating use of the Turners Falls Project bypass.
Fish Passage		
Spillway Lift	$46,203,000	• This proposal allows Shad to follow the natural route of the Connecticut River where they can utilize additional spawning habitat and follow their natural route of passage to Great Falls. Further, this proposal avoids the inefficiencies of the Cabot Station and gatehouse ladders and addresses the migratory delay in the power canal.
Ultrasound Array in Cabot Station Tailrace	$11,620,000	• The ultrasound array will divert American Shad away from the Cabot tailrace to continue migration up the bypass reach.

PM&E Measure	[1]Total Cost	Benefits
Eelway near Spillway	$1,681,000	• The eelway will provide formalized upstream passage where none existed previously. Temporary eel ramp studies showed that the vast majority of eels use the Turners Falls Dam spillway area for upstream passage.
Barrier net in the Northfield Tailrace/Intake	$42,453,000	• Installation of the barrier net eliminates entrainment and mortality of downstream migrating juvenile American Shad and adult American Eel.
Plunge Pool below Bascule Gate No. 1	$12,467,000	• The plunge pool provides for a safe passage route for juvenile and adult American Shad and adult American eel at the Turners Falls Dam during their downstream migration.
Station No. 1 Rack Structure	$6,124,000	• The rack structure precludes juvenile and adult American Shad and adult American Eel from being entrained at Station No. 1.
Recreation Measures		
Formal Access Trail and Put-In just below Turners Falls Dam	$1,304,000	• Provides a put-in just below the Turners Falls Dam for kayakers, canoeists and other boaters wishing to run the bypass reach.
Formal Access Trail and Stairs for Take-out at Poplar Street	$1,573,000	• Provides an upgraded take-out and/or put-in for kayakers, canoeists and other boaters.
Relocation of the Boat Tour Dock at Riverview	$1,191,000	• The relocation is necessary as the proposed barrier net encloses the existing boat dock.
Create a New Access Trail with Stairs for a Put-In at Riverview	$873,000	• Provides another access location for those wishing to launch car-top boats.
Formal Access Trail and Put-In at Cabot Camp	$665,000	• Provides a formal access location for anglers.
Project Modifications needed to implement FirstLight's Operational Proposal		
Upgrades to Station No. 1 to pass a portion of the proposed bypass flow	$3,526,000	• Allows for variable operation of Station No. 1 so that FirstLight can better follow inflow conditions and adhere to the split in Turners Falls Project bypass flows between spillage and Station No. 1 generation (details of the "flow split" are included in Table ES-2a).
Heating of Bascule Gate No. 1 to pass proposed winter bypass flows	$1,492,000	• Allows for Bascule Gate operation to provide winter minimum flows to the Turners Falls Project bypass.
Total over 50 year license term, including energy revenue loss and all PM&E measures	**$238,339,000[11]**	

[1]Total cost includes energy revenue loss, capital cost, periodic costs, and operation and maintenance costs over a 50-year duration.

[11] The total nominal cost over a 50-year license term, including the sediment dredge of the Upper Reservoir, is $340,970,000.

3. General Environmental Setting

The Turners Falls and Northfield Mountain Projects are located on the Connecticut River at river mile 122 and 127, respectively. They are located between Great River Hydro's (GRH) Vernon Project upstream and Holyoke Gas and Electric's (HG&E) Holyoke Project downstream.

The Vernon Project is one of three GRH projects also undergoing relicensing in parallel to the Turners Falls and Northfield Mountain Projects. The other two projects are the Bellows Falls and Wilder Projects which are located immediately upstream of the Vernon Project. All three GRH facilities are used to meet peak demand and, thus, control the inflows to the Turners Falls and Northfield Mountain Projects. Upstream of the Wilder Project is the Fifteen Mile Falls Project including the Moore, Comerford and McIndoes Developments which are also owned by GRH and were licensed in April 2002. These developments have significant storage capacity, are peaking facilities, and through their operations influence flows to the Wilder Project and eventually to the Turners Falls and Northfield Mountain Projects. As discussed below, both the provision of appropriate flows from the Vernon Project and adequate advance reporting of flow management by GRH will be key to the success of FirstLight's proposed PM&E operational measures.

4. Proposed Protection, Mitigation, and Enhancement Measures

FirstLight's proposed PM&E measures address the following resources: a.) fish passage, b.) fish and wildlife habitat, c.) recreation, and d.) cultural/historic. FirstLight's operating proposal is included as Table ES-2a and Table ES-2b.

Fish Passage and Restoration

FirstLight supports the state and federal fisheries agencies in their efforts to restore populations of American Shad and American Eel to the Connecticut River Basin. For American Shad this has been an ongoing effort for 40+ years while efforts for American Eel are more recent (20+ years). Accordingly, FirstLight is proposing extensive improvements in both upstream and downstream fish passage to aid in these efforts.

The Turners Falls Project is near the natural upstream extent of the migration route of American Shad seeking spawning locations in the Connecticut River and its tributaries. The Great Falls, upon which the Turners Falls Dam sits, was historically a formidable barrier to upstream migration for shad that swam upstream 122 miles from the mouth of the Connecticut River without feeding. Within the context of this historic use, FirstLight's fish passage proposal for American Shad has focused on a.) safe, timely, and effective upstream passage of adult shad at Turners Falls Dam, b.) safe, timely, and effective downstream passage of adult and juvenile shad at the Turners Falls Project, and c.) habitat restoration in the bypass reach and the Connecticut River downstream of Cabot Station. In addition, FirstLight has also focused on the safe passage of shad and adult American Eel at the Northfield Mountain Project tailrace/intake.

The existing Turners Falls Project has upstream fish passage ladders located at a.) Cabot Station which moves shad from the Cabot Station tailrace into the power canal, b.) the gatehouse which moves shad from the power canal to the TFI, and c.) the Spillway which moves shad from the base of the Turners Falls Dam to the TFI via part of the gatehouse ladder. When these ladders were built, the primary target species was Atlantic Salmon. After a 45-year attempt to restore extirpated Atlantic Salmon to the Connecticut River, the number of returns remained low and the program was discontinued in 2012. The existing ladders are now used exclusively for shad but despite years of effort by the agencies, FirstLight, and predecessor companies, the ladders, which were designed to pass Atlantic Salmon, do not work as well in passing American Shad. This is because of the differences in swimming abilities between salmon (strong swimmers) and shad (weaker swimmers). In addition, fish passing through the Cabot ladder to the power

canal can experience excessive delay or may be unable to traverse the 2.1-mile-long power canal which has a variety of hydraulic challenges for a migrating fish.

Given the challenges with the existing upstream passage system for shad, FirstLight is proposing an alternative approach. Specifically, FirstLight is proposing to move all upstream fish passage to the Turners Falls Dam with the construction of a state-of-the-art Spillway Lift. With much higher proposed bypass flows, this alternative follows the natural route through the bypass, avoids the inefficiencies of the Cabot Station ladder and addresses the risk of excessive delay or failure in the power canal. The proposed fish passage configuration will have its own challenges including moving fish past false attraction at the Cabot Station tailrace. FirstLight proposes mitigating for false attraction at Cabot Station by installing an ultrasound array system designed to repulse shad from the tailrace and direct them up the bypass to the Spillway Lift. Initial testing of this system revealed that the ultrasound array encouraged timely passage of shad beyond Cabot Station and into the bypass reach. FirstLight proposes to close the Cabot ladder to prevent shad from entering the power canal once the ultrasound array and Spillway Lift are operational.

In addition to the improved upstream passage of American Shad, FirstLight is proposing to install an upstream passage facility for American Eel. FirstLight conducted eel ramp siting studies as part of its licensing study efforts and based on these studies is proposing that a new eel ramp be constructed in the vicinity of the new Spillway Lift.

Having passed upstream of the Turners Falls and Northfield Mountain Projects, post-spawned shad and their progeny (juveniles) as well as adult silver phase eels will also have to pass downstream to complete their life cycle. FirstLight is proposing to install a barrier net across the Northfield Mountain Project intake/tailrace from August 1 to November 15 of each year to preclude entrainment of adult migrating American Eels and juvenile shad. [12]

Downstream shad and eel migrants encountering the Turners Falls Project have two passage routes under FirstLight's proposal. These routes include spilling via Bascule Gate No. 1 located immediately adjacent to the Turners Falls gatehouse where flows on the order of 1,000 to 1,510 cfs will be passed or via the power canal. The 1,000 to 1,510 cfs spillage is equivalent to 6.3-9.5% of the combined hydraulic capacity of Station No. 1 and Cabot Station and above the 5% attraction flow recommended for downstream passage attraction flow by the United States Fish and Wildlife Service (USFWS). Migrants passing over the crest of Bascule Gate No. 1 will land in a newly constructed plunge pool that is deep enough to provide a safe landing zone for downstream migrating fish.

Although spillage from the Bascule Gate No. 1 should reduce the number of fish migrating down the power canal, any fish that do will be precluded from entering Station No. 1 by the installation of a new barrier rack with ¾-inch clear opening placed across the entrance to the branch canal. This rack will reduce fish mortality at Station No. 1 caused by the high revolutions per minute (rpm) of these smaller units.

Finally, fish migrating down the power canal to Cabot Station are already protected by an existing 31-foot high rack structure. The top 11 feet of the upper racks have clear bar spacing of 0.94 inches (15/16-inch), and the bottom 7 feet of the upper racks have clear bar spacing of 5 inches. The entire 13 feet of the lower racks have clear bar spacing of 5 inches. Cabot Station is already outfitted with a downstream fish passage facility with a state of the science uniform flow acceleration weir and an attraction flow varying between 110 and 253 cfs depending on the power canal elevation.

[12] Based on the studies, entrainment of adult shad did not occur at the Northfield Mountain Project intake during upstream or downstream migratory efforts.

The downstream passage facilities at Cabot Station have been the subject of considerable discussion between FirstLight and the fishery agencies during relicensing. This discussion has focused on turbine mortality for juvenile and adult American Shad as well as silver phase adult eels. Studies have shown good survival for juvenile shad and silver phase adult eels (95% 1-hour survival for juvenile shad/no 48-hour survival available; and 96% 48-hour survival for adult silver phase eel passing through the turbines). Immediate survival of post-spawned adult shad either passing through Cabot Station or the bypass sluices was high (100%). Survival for adult shad was 89.2% (48-hour) for fish passing the log sluice/uniform acceleration weir and 65% (48 hour) survival for adult shad passing through the turbines. Any downstream fish passage structure at Cabot Station would have its own challenges relative to inducing fish movement and assuring survival. Given the high survival rates, FirstLight's proposed plunge pool below Bascule Gate No. 1 and the significant cost of a new rack, bypass system and receiving pool (estimated at approximately $10,000,000[13]), FirstLight is not proposing any additional measures for downstream passage at Cabot Station.

Fish and Wildlife Habitat

Habitat issues associated with the Projects include aquatic habitat in the bypass reach of the Connecticut River between Turners Falls Dam and Cabot Station, aquatic and terrestrial habitat in the Connecticut River downstream of Cabot Station and aquatic habitat in the TFI.

FirstLight is proposing substantial increases in minimum streamflows for fish habitat and fish passage in the Connecticut River. As illustrated in Table ES-3 and Table ES-4, FirstLight's minimum flow proposal for the 2.5-mile long bypass and the reach downstream of Cabot Station will increase potential American Shad spawning habitat from 8.5 million square feet to 16 million square feet. Based on information provided in the Connecticut River Atlantic Salmon Commission (CRASC) American Shad Management Plan, this increase in habitat could result in increased production of shad, with more than 14,000 additional shad returning to the basin as adults.

Bypass Reach

FirstLight is proposing to greatly enhance fish habitat in the bypass reach for various species and life stages of fish and provide significantly higher bypass flows in the spring to provide a route of passage for migratory fish to the proposed Spillway Lift. FirstLight is proposing spring flows of 6,500 cfs (April 1 – May 31), 4,500 cfs (June 1 – June 15), and 3,500 cfs (June 16-June 30) in this reach which will substantially increase American Shad and SNS spawning habitat compared to the current license minimum flow requirements. Spawning is a critical life stage for these species and increasing spawning habitat is expected to result in population increases. Table ES-3 compares the habitat during the spring under existing (baseline) conditions and FirstLight's proposal for the reach upstream of Rawson Island. Table ES-4 shows similar information for the reach between Rawson Island and the Montague Bridge below Cabot Station. As these tables show, spawning habitat for SNS increases more than 3-fold between Turners Falls Dam and Rawson Island and more than 2.6-fold between Rawson Island and the Montague Bridge when comparing proposed minimum flows to existing minimum flows. Rearing habitat (egg/larvae) for SNS is also substantially improved by the proposed minimum flows. PM&E measures for SNS also include up- and down-ramping of no more than 2,300 cfs/hr (approximately one of the six Cabot generating units) from April 1 – May 31, 24 hours/day, so as not to potentially affect SNS at spawning areas close to Cabot Station. Also, spawning habitat for American Shad, a key management species, increases by more than 3-fold in the reach between Turners Falls Dam and Rawson Island and 2-fold between Rawson Island and Cabot Station.

[13] This estimate reflects a one-time capital cost and does not include periodic or annual O&M.

Downstream of Cabot Station

Downstream of Cabot Station, habitat availability is a function of continuous minimum flows, seasonal up- and down-ramping rates, and the timing of Cabot Station maximum generation as well as discharges from the Deerfield River. Also, in the reach below Cabot Station are both aquatic and terrestrial state and federally listed species that can be influenced by Cabot Station discharges and HG&E's Holyoke Dam impoundment level management.

In the nine-mile reach from Cabot Station to the Route 116 Bridge in Sunderland, the proposed springtime bypass minimum flows of 6,500 cfs (April 1 – May 31), 4,500 cfs (June 1 – June 15), and 3,500 cfs (June 16-June 30) combined with an additional 2,300 cfs (June 1-30) by baseloading one Cabot Station unit provide a substantial increase in American Shad spawning habitat as illustrated in Table ES-5 (76.5 – 81.5% increase) compared to current minimum flow requirements. Proposed minimum flows would also maintain 30% more habitat for SNS larvae, which is a critical life stage that drifts into this area of the river from spawning locations near and above Cabot Station. This represents approximately 98% of the total potential SNS larval habitat within this river reach.

A key issue raised during relicensing was the effect of rising water levels below Cabot Station on dragonflies. Dragonflies live most of their lives in the water. Female adult dragonflies deposit fertilized eggs in the water during the spring and summer months. At maturity, nymphs emerge from the water, climbing onto exposed rocks, woody debris, or emergent vegetation to then emerge from their larval casings, dry their wings, and take flight. Until they take flight, this is a vulnerable time for dragonflies, and rising water levels could inundate them during this process. State-listed dragonflies have been found in the reach below Cabot Station, including the state-endangered Riverine Clubtail, the state-threatened Skillet Clubtail, and the Spine-Crowned Clubtail (listed as Special Concern). FirstLight is proposing to implement an up-ramping rate of 2,300 cfs/hour at Cabot Station from June 1 – August 15 between 8:00 am and 2:00 pm to limit the effects on dragonflies as they are emerging from the water. This is expected to protect a high percentage of state-listed dragonflies in downstream areas, along with species that are not state listed.

Finally, there is a population of the state and federally listed Puritan Tiger Beetle (PTB) located at Rainbow Beach which is approximately 25 miles downstream of Cabot Station and 8.8 miles upstream of the Holyoke Dam. PTB use of Rainbow Beach habitat is influenced by Holyoke Dam water level operations and recreation use. Rainbow Beach is co-owned by the Commonwealth of Massachusetts and the City of Northampton, MA. In the summer, when PTB activity is the greatest, boats are often beached at Rainbow Beach and the area is heavily used for various recreation activities (see inset photo). In addition to these factors, the operation of the Cabot Station to meet peak demand in concert with fluctuating Holyoke Impoundment levels could also impact adult PTBs foraging behavior occurring at the land/water interface. Figure ES-3 illustrates water surface elevation (WSEL) patterns (15-min water level data) at the Montague United States Geological Survey Gage (immediately downstream of Cabot Station), Route 116 Bridge (nine miles downstream of Cabot Station) and Rainbow Beach from July 8 – 22, 2012. As can be seen, the peak WSEL differential between Montague and Rainbow Beach is decreased as the water moves downstream such that it is minor at Rainbow Beach. However, since adult PTB use the land/water interface during the day, FirstLight is proposing measures to further ensure Cabot Station operation does not significantly contribute to WSEL fluctuations during those hours at Rainbow Beach and during the season that adults would occupy

the site. Taking these factors into account and the lag and attenuation of Cabot Station discharges to Rainbow Beach, FirstLight is proposing to restrict Cabot Station discharges to no more than 4,600 cfs of additional flow (approximately 2 Cabot units) from July 1 to August 31 from 1:00 am – 2:00 pm. These restrictions will reduce the impact of Cabot Station discharges on PTB.

FirstLight's proposed operating regime described above is complex and is summarized in Table ES-2a and Table ES-2b. All minimum bypass flows, Cabot Station baseloading in June, and whitewater flows (described later) are on an or-inflow, whichever is less, basis. Inflow is defined as the Naturally Routed Flow (NRF) which includes the Vernon Project discharge plus flows on the Ashuelot and Millers Rivers[14] both of which empty into the TFI. Establishing minimum flows on an or-inflow basis is standard practice for similar projects licensed by FERC. The key to success of this flow regime is for FERC and other agencies with regulatory authority to ensure that FirstLight has adequate inflows from the Vernon Project to meet the intent of FirstLight's proposed flow-related PM&E measures in Table ES-2a and Table ES-2b. FERC has indicated it will develop a single, comprehensive environmental review of both the FirstLight and GRH projects (Vernon, Bellows Falls, and Wilder Projects), and has directed GRH to file its applications with FERC at the same time the applications are filed by FirstLight. Thus, FERC has a significant opportunity to align the minimum flow regimes.

Similarly, FirstLight's ability to meet its proposed Cabot Station ramping rates and Cabot Station maximum flow restriction depends on accurate and timely updates of the real-time and projected operation of the Vernon Project so that FirstLight can schedule appropriate operation of its facilities to meet demand and its proposed PM&E operational measures. FirstLight believes it is essential for FERC to require GRH in any new license issued for the Vernon Project to provide the following information to FirstLight River Operations Personnel[15] on a daily basis:

1. Day ahead hourly projections of total Vernon Project outflow (generation flows and spillage) provided by 8:00 am each day to FirstLight River Operations Personnel;
2. Day ahead hourly total Vernon Project outflow projections will be updated once the day ahead power bidding market closes and ISO-NE issues the day ahead schedule;
3. If ISO-NE updates the day ahead hourly total Vernon Project outflow schedule, then that schedule will be provided to FirstLight within two (2) hours of GRH receiving an update from ISO-NE;
4. In same day operations, GRH will supply FirstLight with deviations in the total Vernon Project outflow schedule in real time as well as an updated hourly projection for the remainder of the day. GRH will provide this information each time its outflow deviates from the last hourly projection.

Having the information outlined above will greatly assist FirstLight in meeting its proposed Cabot Station ramping rates and Cabot Station maximum flow restrictions. However, even with this, there will be times when the ISO-NE calls upon GRH and/or FirstLight to run their facilities to meet electrical demand. These times could include fast start needs such that FirstLight's Cabot Station up- and down-ramping requirements or Cabot Station maximum discharge restrictions for PTBs could not be met. As such, FirstLight proposes certain exceptions from its proposed Cabot Station up- and down-ramping requirements and Cabot Station maximum discharge restrictions when called upon by ISO-NE or when unanticipated flows from the Vernon Project would result in unnecessary spillage or fluctuations in the TFI such that it

[14] Both rivers are equipped with United States Geological Survey (USGS) gages.

[15] FirstLight agrees that the information provided to it shall be used solely for the purpose of operating its downstream hydroelectric licenses in accordance with the conditions established by FERC. Accordingly, it will agree to conditions that will restrict information provided pursuant to this request shall not be provided, either directly or indirectly, to any of its employees, consultants, agents or any other representative that are engaged in FirstLight's merchant activities, including but not limited to such activities as submitting bids to ISO-NE in connection with the dispatch of any of its generating units.

would significantly impact both power and/or nonpower resources. FirstLight is proposing to track and cap this use at no more than 10% of the time the limitations apply during the period April 1 to August 31.

Turners Falls Impoundment

Similar to the effect of rising water levels below Cabot Station on dragonflies, the same issue was raised relative to the rate of rise in the TFI water levels. Given this concern, FirstLight's proposal includes limiting the rate of increase of the TFI water level, as measured at the Turners Falls Dam, to no more than 0.9 feet/hour from May 15 to August 15 between 8:00 am and 2:00 pm which would protect a high percentage of dragonflies known to reside in the Barton Cove area of the TFI from operational effects.

Erosion causation and the need for mitigation was an issue raised in the licensing proceeding. A causation analysis was conducted as part of the licensing process using the state of the science Bank Stability and Toe Erosion Model (BSTEM). This analysis found that the major cause of erosion in the TFI was attributed to either naturally high flows or boat waves. Project operations are not a major cause of erosion anywhere in the TFI but were found to be a contributing factor to erosion at only two sites. The first of these sites was affected by existing operations and has already been remediated under the existing license.[16] The second detailed study site where the cumulative effects (e.g. minimum flows, ramping, etc.) of the proposed operating regime were found to be a contributing cause of erosion has a moderate rate of erosion. Of this, the proposed operating regime contributes to 8% of the erosion processes, which is a negligible amount of erosion attributed to the proposed operations. Given this negligible effect, FirstLight is not proposing any additional erosion remediation measures.

FirstLight Proposed Management Plans

In addition to the PM&E measures proposed for aquatic species, FirstLight is also proposing the following management plans for the Turners Falls Project and Northfield Mountain Project:

- Invasive Plant Species Management Plan
- Bald Eagle Management Plan

FirstLight is also proposing measures to protect the federally-endangered Northern Long-eared Bat. FirstLight proposes to avoid cutting trees greater than three inches in diameter within each Project's Boundary from April 1 to October 31, unless they pose an immediate threat to human life or property.

Impacts to Clean Energy Generation due to FirstLight's Operating Proposal

FirstLight evaluated the impact on generation resulting from its proposed operating regime in Table ES-2a and Table ES-2b using its operations model. Under the proposed operational regime to protect bypass habitat, the Turners Falls Project will lose approximately 33,512 MWh/year of renewable, carbon free electric generation. This is a loss of 11.3% of the energy production of Massachusetts' largest hydroelectric facility and translates to approximately $107,168,000 of associated revenue over a 50-year term. [17]

[16] FirstLight remediated 10.7 miles of TFI shoreline under the existing license at a cost of $8,735,000 regardless of causation.

[17] As described more fully in the Turners Falls and Northfield Mountain Project Exhibit Ds, there is considerable uncertainty in the value of future energy sales. However, the loss of greater than ten percent of the generation of zero-emissions electricity at Cabot Station represents a significant impact to Massachusetts' existing baseline of installed hydroelectric energy, which comprised 4% of Massachusetts' generation in 2019 (per the U.S. Energy Information Agency: https://www.eia.gov/state/?sid=MA).

FirstLight proposes to increase the allowed usable storage of the Northfield Mountain Project's Upper Reservoir from the current 1000.5 to 938 feet to 1004.5 to 920 feet.[18] This increased use of storage in the Upper Reservoir will allow Northfield to increase its maximum energy storage from 8,729 MWhs to 10,779 MWhs which, as described above, provides significant regional reliability benefits in the form of longer-duration energy storage.

Recreation

As part of FirstLight's commitment to environmental awareness and sustainability, and to support outdoor recreational opportunities for the residents of our host communities, FirstLight maintains and operates nature trails and recreation and environmental programs at our facilities in Massachusetts and Connecticut. The Turners Falls and Northfield Mountain Projects include several existing Project Recreation Facilities as described in Table ES-6. In addition to these facilities, there are several informal recreation facilities as well as formal recreation facilities owned and operated by others.

Recreation-related studies conducted by FirstLight as part of the relicensing process demonstrate that the existing Project recreation sites, combined with other public recreation sites and facilities, as well as informal access areas, provide the public with a diversity of recreation opportunities, and an abundance of options for accessing and utilizing Project lands and waters for recreation. Given this, the continued operation and maintenance of the existing Project Recreation Facilities is supportive of current recreation use and demand levels.

FirstLight proposes to implement a project-specific Recreation Management Plan (RMP) for each Project during the term of the new licenses, which will provide for the O&M of Project Recreation Sites.

In addition, and notwithstanding the fact that the existing recreation facilities were judged to be in excellent condition and more than adequate to meet forecasted demand, FirstLight is proposing several enhancements to existing Project Recreation Sites and to provide several new or modified recreation sites. These sites include:

1. At the Turners Falls Project, FirstLight proposes to install a put-in just below the Turners Falls Dam to kayak/canoe/raft the bypass reach. The proposed access would be provided via the existing "IP" bridge spanning the power canal. Once over the canal, a formal path would lead recreationists to the base of the dam.
2. At the Turners Falls Project, FirstLight proposes to create a formal access trail and stairs for a take-out at Poplar Street, which is currently a non-Project recreation site. There is an existing take-out at Poplar Street; however, it is extremely steep. FirstLight has limited options due to steep topography and land ownership at this site. FirstLight proposes to use the existing gravel parking lot leading to timber stairs with a boat slide railing leading to a concrete landing/abutment. A gangway would be anchored to the concrete abutment and lead to a floating dock in the Connecticut River to accommodate fluctuations in the river elevation. The land necessary for the site will be included within the proposed Turners Falls Project boundary.
3. At the Northfield Mountain Project, FirstLight proposes to relocate the boat tour dock at Riverview further upstream of its current location and extend the existing road further north. The relocation is necessary because the proposed barrier net would enclose the existing boat dock from August 1 to November 15.

[18] FERC has approved temporary amendments in the past to operate between 1004.5 and 920 feet.

4. FirstLight proposes to create a new access trail with stairs for a put-in at Riverview located off of Pine Meadow Road, where Fourmile Brook discharges into the TFI. Pine Meadow Road would be widened to add approximately seven (7) parking spots.
5. At the Northfield Mountain Project, FirstLight proposes to create a formal path leading from the Cabot Camp parking area to an access point on the Millers River just upstream of the confluence with the Connecticut River. There is currently an informal path in this area.

In addition to FirstLight's operating proposal in Table ES-2a and Table ES-2b FirstLight proposes to provide whitewater releases to benefit whitewater boaters at the Turners Falls Dam per the table below.

Date	Turners Falls Dam Magnitude of Discharge	Turners Falls Dam Release Duration
1 Saturday in July	2,500 cfs or the NRF, whichever is less	4 hours
1 Saturday in August	2,500 cfs or the NRF, whichever is less	4 hours
3 Saturdays in September	3,500 cfs or the NRF, whichever is less	4 hours
1 Saturday in October	3,500 cfs or the NRF, whichever is less	4 hours
2 Saturdays in October	5,000 cfs or the NRF, whichever is less	4 hours

FirstLight also proposes to establish a weblink that would report the forecasted Turners Falls Dam discharge each day during the daylight hours from July 1 to October 15 to benefit whitewater boaters. FirstLight is not proposing to post the Turners Falls Dam discharge from April 1 to June 30 because it is a period when the federally endangered SNS could be utilizing the bypass reach for spawning and incubation which could be disturbed by whitewater boaters. FirstLight will provide an annual schedule of releases, on its website, for the period July 1 to October 31 by May 31 of each year.

Cultural/Historical Resources

To date, FirstLight has completed Phase 1A, Phase 1B (on over 15 miles of shoreline), and Phase 2 (17 sites) archaeological investigations as well as a study of project structures for the National Register of Historic Places (NRHP). The results of the studies determined that six archaeological sites and 13 structures within the Project's Area of Potential Effect (APE) are eligible for the NRHP.

To protect eligible cultural resources over the term of a new license, FirstLight developed a Draft Historic Properties Management Plan (HPMP) for each Project, which was filed with FERC and sent to the MA, New Hampshire and Vermont State Historic Preservation Offices and Tribes as non-public. The purpose of the HPMP is to set forth specific actions and processes to manage historic properties within the Project APE. It is intended to serve as a guide for FirstLight's operating personnel when performing necessary activities and to prescribe site treatments designed to address ongoing and future effects to historic properties. The HPMP also describes a process of consultation with state and federal agencies. Measures included in the HPMP are identification surveys and site NRHP evaluations, site management measures; training of staff; routine monitoring of known cultural resources; and periodic review and revision of the HPMP. A Final HPMP for each Project is being filed with FERC as non-public with this AFLA. Although the total cost of HPMP implementation is unknown at this time FirstLight is estimating a cost of approximately $5,000,000 over the life of the license.

5. Conclusion

Building upon years of extensive study and stakeholder outreach, FirstLight has crafted a robust relicensing proposal that will provide substantial benefits to habitat and species, and to the Western Massachusetts economy, while balancing the need to preserve clean energy production from the largest hydroelectric

facility in Massachusetts (Turners Falls), and the largest zero-emissions energy storage facility in New England (Northfield Mountain).

As noted above, this proposal is based on sound data and scientific reasoning to expand habitat for both state and federally listed species, as well as restrict operations to produce flow regimes that will protect species during critical time periods. Importantly, the changes offered herein create a balance that will sufficiently protect species while simultaneously enabling Massachusetts to continue to leverage the flexibility of these clean energy resources to achieve the Commonwealth's climate change targets. To achieve this, FirstLight is proposing PM&E measures including energy revenue losses, capital costs, periodic costs and O&M costs of $238,339,000 over a 50-year license term. Of these costs $193,158,000 and $45,182,000 will be spent at the Turners Falls Project and Northfield Mountain Project, respectively.

The proposal will also retain the ability of Northfield and Turners Falls to support significant contributions to the tax base in the Western Massachusetts communities of Erving, Montague, Gill and Northfield, and to maintain its status as a significant employer in Franklin County.

And of importance, the Turners Falls and Northfield Mountain Projects will continue to displace fossil-fuel emitting energy sources to meet peak energy demands, while moving the Commonwealth of Massachusetts closer to its goal of zero-carbon emissions by 2050. FirstLight's proposal provides for the continued production of approximately 1,188,684[19] MWh of emissions-free energy production and provides for those same resources to both store energy from other more intermittent renewables such as wind and solar and to continue acting as a critical tool for reliability of the New England electric grid as it transitions to a low or zero carbon future state. Together, the carbon reduction and air pollution benefits of these Projects are clearly significant on a state and regional scale.

In conclusion, the proposal included in FirstLight's comprehensive AFLA submission demonstrates that the Projects will provide enormous environmental and economic benefits to Massachusetts and New England-- today and for the next 50 years.

[19] The average annual generation from 2011-2019 at the Turners Falls Project and Northfield Mountain Project are 332,351 MWh and 889,845 MWh, respectively, for a total of 1,222,196 MWh. After losing 33,512 MWhs of Turners Falls Project generation, the total will be 1,188,684 MWhs going forward.

Table ES-2a. Proposed Turners Falls Bypass Flows (Year 1-3 of License)

Date	Total Bypass Flow[2]	Turners Falls Dam	[3]Station No. 1
01/01-03/31	1,500 cfs or the Naturally Routed Flow (NRF), whichever is less	300 cfs	1,200 cfs[4]
04/01-05-31[1]	6,500 cfs or the NRF, whichever is less	4,290 cfs	2,210 cfs[4]
06/01-06/15[1]	4,500 cfs or the NRF, whichever is less	2,990 cfs	1,510 cfs[4]
06/16-06/30[1]	3,500 cfs or the NRF, whichever is less	2,280 cfs	1,220 cfs[4]
07/01-08/31	1,800 cfs or the NRF, whichever is less	670 cfs	1,130 cfs[4]
09/01-11/30	1,500 cfs or the NRF, whichever is less	500 cfs	1,000 cfs[4]
12/01-12/31	1,500 cfs or the NRF, whichever is less	300 cfs	1,200 cfs[4]

[1]The flow split during these periods is approximately 67% from the Turners Falls Dam and 33% from Station No. 1. If FirstLight conducts further testing, in consultation with the National Marine Fisheries Service (NMFS), U.S. Fish and Wildlife Service (USFWS) and Massachusetts Department of Fish and Wildlife (MADFW), and determines that migratory fish are not delayed by passing a greater percentage of the bypass flow via Station No. 1, it may increase the percentage through Station No. 1 upon written concurrence of those agencies.

[2]If the NRF is less than 6,500 cfs (04/01-05/31), 4,500 cfs (06/01-06/15) or 3,500 cfs (06/16-06/30) the flow split will still be set at approximately 67% of the NRF from the Turners Falls Dam and 33% of the NRF from Station No. 1. If the NRF is less than 1,800 cfs (7/1-8/31), 1,500 cfs (9/1-11/30), or 1,500 cfs (12/1-3/31), the Licensee shall maintain the Turners Falls Dam discharges at 670 cfs, 500, cfs, and 300 cfs, respectively.

[3]To maintain the flow split, Station No. 1 must be automated, which will not occur until Year 3 of the license. FirstLight proposes to maintain the flow split such that the Turners Falls Dam discharge will be as shown above, or higher flows will be spilled, in cases where the additional flow cannot be passed through Station No. 1.

[4]The Turners Falls Hydro (TFH) project (FERC No. 2622) and Milton Hilton, LLC project (unlicensed) are located on the power canal and discharge into the bypass reach upstream of Station No. 1. The hydraulic capacity of the TFH project and Milton Hilton, LLC project is 289 and 113 cfs, respectively. If the TFH project is operating, FirstLight will reduce its Station No. 1 discharge by 289 cfs. If the Milton Hilton, LLC project is operating, FirstLight will reduce its Station No. 1 discharge by 113 cfs.

Table ES-2b. Proposed Turners Falls Bypass Flows and Downstream Reach Operations (Years 4-50 of License)

Date	Total Bypass Flow[2,3]	Minimum Flow below Cabot Station (Bypass Flow + Cabot Discharge)	Maximum Flow below Cabot Station to Protect Puritan Tiger Beetles	Cabot Down-Ramping Rate to Protect Shortnose Sturgeon	Cabot Up-Ramping Rate to Protect Shortnose Sturgeon (4/1-5/31) and Odonates (6/1-8/15)
01/01-03/31	1,500 cfs or the Naturally Routed Flow (NRF), whichever is less	1,500 cfs or the NRF, whichever is less			
[1]04/01-05/31	6,500 cfs or the NRF, whichever is less	6,500 cfs or the NRF, whichever is less		Down to 2,300 cfs/hour	Up to 2,300 cfs/hour
[1]06/01-06/15	4,500 cfs or the NRF, whichever is less	6,800 cfs or the NRF, whichever is less			Up to 2,300 cfs/hr from 8:00 am to 2:00 pm
[1]06/16-06/30	3,500 cfs or the NRF, whichever is less	5,800 cfs or the NRF, whichever is less			Up to 2,300 cfs/hr from 8:00 am to 2:00 pm
07/01-08/15	1,800 cfs or the NRF, whichever is less	1,800 cfs or the NRF, whichever is less	Add no more than 4,600 cfs additional flow from Cabot Station from 1 am to 2 pm		Up to 2,300 cfs/hr from 8:00 am to 2:00 pm
08/16-08/31	1,800 cfs or the NRF, whichever is less	1,800 cfs or the NRF, whichever is less	Add no more than 4,600 cfs additional flow from Cabot Station from 1 am to 2 pm		
09/01-11/30	1,500 cfs or the NRF, whichever is less	1,500 cfs or the NRF, whichever is less			
12/01-12/31	1,500 cfs or the NRF, whichever is less	1,500 cfs or the NRF, whichever is less			

[1]The flow split during these periods is approximately 67% from the Turners Falls Dam and 33% from Station No. 1. If FirstLight conducts further testing, in consultation with the National Marine Fisheries Service (NMFS), U.S. Fish and Wildlife Service (USFWS) and Massachusetts Department of Fish and Wildlife (MADFW), and determines that migratory fish are not delayed by passing a greater percentage of the bypass flow via Station No. 1, it may increase the percentage through Station No. 1 upon written concurrence of those agencies.

[2]If the NRF is less than 6,500 cfs (04/01-05/31), 4,500 cfs (06/01-06/15) or 3,500 cfs (06/16-06/30) the flow split will still be set as approximately 67% of the NRF from the Turners Falls Dam and 33% of the NRF from Station No. 1. If the NRF is less than 1,800 cfs (7/1-8/31), 1,500 cfs (9/1-11/30), or 1,500 cfs (12/1-3/31), the Licensee shall maintain the Turners Falls Dam discharges at 670 cfs, 500, cfs, and 300 cfs, respectively.

[3]The Turners Falls Hydro (TFH) project (FERC No. 2622) and Milton Hilton, LLC project (unlicensed) are located on the power canal and discharge into the bypass reach upstream of Station No. 1. The hydraulic capacity of the TFH project and Milton Hilton, LLC project is 289 and 113 cfs, respectively. If the TFH project is operating, FirstLight will reduce its Station No. 1 discharge by 289 cfs. If the Milton Hilton, LLC project is operating, FirstLight will reduce its Station No. 1 discharge by 113 cfs.

Table ES-3: Amount of Suitable Habitat for Spring Spawning Fish Species in the River Reach Upstream of Rawson Island

Species	Lifestage	Months Present	Amount of Suitable Habitat at Minimum Flows (square feet)					
			Existing Operations			Proposed Operations		
			April	May 1 to Passage Season*	Passage Season*	April-May	June 1-15	June 16-30
Shortnose Sturgeon	Spawning	April-May	-	255,439	419,106	1,305,646	-	-
Shortnose Sturgeon	Egg/Embryo	April-June	-	923,087	1,232,100	3,377,958	3,349,794	3,312,290
American Shad	Spawning/Incu	May-June	-	-	489,293	2,034,085	1,755,374	1,528,867
American Shad	Adult	May-June	-	-	462,866	1,594,864	1,305,009	1,109,372
Fallfish	Spawn/Incu	May-June	-	18,742	18,685	26,523	39,116	43,561
Fallfish	Fry	May-June	-	98,462	104,430	39,467	60,207	80,216
Walleye	Spawning/Incu	April-May	-	60,745	109,930	598,732	-	-
Walleye	Fry	April-May	-	15,682	17,284	10,928	-	-
White Sucker	Spawn/Incu	April-May	-	1,201	1,540	6,646	-	-
White Sucker	Fry	May-June	-	1,066,876	1,130,971	144,251	267,442	514,838
Sea Lamprey	Spawning	May-June	-	-	142,700	221,785	253,167	257,610

Note: Habitat amounts are approximate, based on models nearest to the actual flow rates, and averaged models for certain flow rates, from Study No. 3.3.1.For baseline operations, there are currently no minimum flows in April. Zero flow in the bypass reach was not modeled as part of relicensing studies. Habitat increases for the proposed condition are depicted in blue.

**The Connecticut River Atlantic Salmon Commission establishes an annual schedule for the operation of upstream fish passage facilities at the Connecticut River dams. Therefore, the exact dates of the "Passage Season" may vary from year-to-year but would typically start in May.*

Table ES-4. Amount of Suitable Habitat for Spring Spawning Fish Species between Rawson Island and the Montague Bridge

Species	Life Stage	Months Present	Minimum Amount of Suitable Habitat Given Minimum Flows (square feet)					
			Existing Operations			Proposed Operations		
			April	May 1 to Passage Season*	Passage Season*	April-May	June 1-15	June 16-30
Shortnose Sturgeon	Spawning	April-May	-	42,978	54,406	143,820	-	-
Shortnose Sturgeon	Egg/Embryo	April-June	-	132,194	144,436	228,194	232,809	229,583
American Shad	Spawning/Incu	May-June	-	-	902,050	1,981,674	1,925,569	1,767,126
American Shad	Adult	May-June	-	-	1,302,531	2,300,221	2,307,139	2,139,341
Fallfish	Spawn/Incu	May-June	-	220,742	231,305	104,886	147,397	179,481
Fallfish	Fry	May-June	-	316,767	326,356	162,598	199,993	227,006
Walleye	Spawning/Incu	April-May	-	277,669	332,559	572,221	-	-
Walleye	Fry	April-May	-	140,889	128,886	120,472	-	-
White Sucker	Spawn/Incu	April-May	-	11,420	14,815	25,131	-	-
White Sucker	Fry	May-June	-	1,946,281	1,849,393	994,909	11,180,965	1,204,539
Sea Lamprey	Spawning	May-June	-	-	270,872	1,108,106	975,092	840,598

Note: Habitat amounts are approximate, based on models nearest to the actual flow rates, and averaged models for certain flow rates, from Study No. 3.3.1.For baseline operations, there are currently no minimum flows in April. Zero flow in the bypass reach was not modeled as part of relicensing studies. Habitat increases for the proposed condition are depicted in blue. Habitat amounts are the minimum amount that would be available at the potential range of Cabot Station generation flows.

**The Connecticut River Atlantic Salmon Commission establishes an annual schedule for the operation of upstream fish passage facilities at the Connecticut River dams. Therefore, the exact dates of the "Passage Season" may vary from year-to-year but would typically start in May.*

Table ES-5. Amount of Suitable Habitat for Fish Species between Montague and Sunderland (~9 miles of river below Cabot Station)

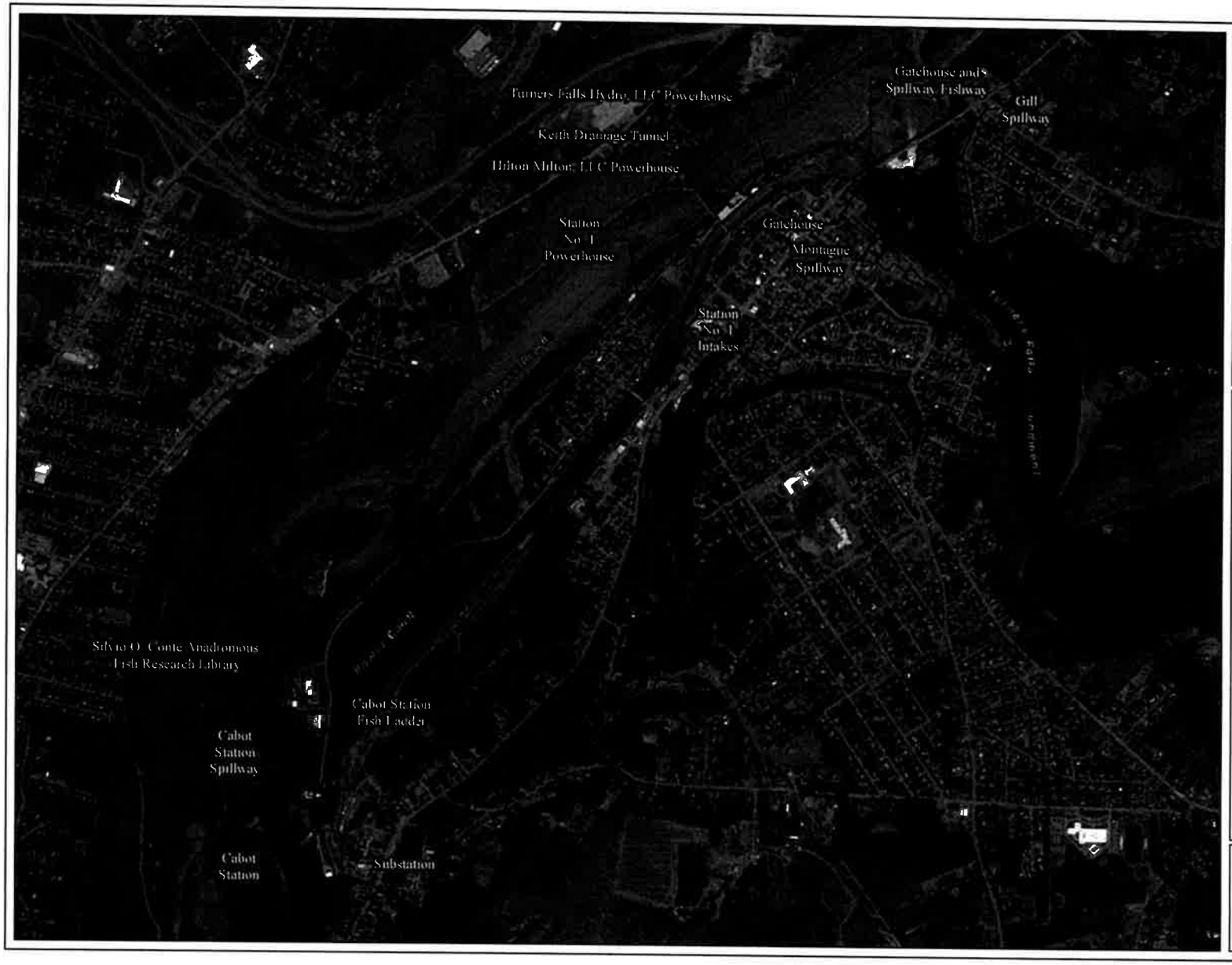
Species	Life Stage	Months Present	Amount of Suitable Habitat at Minimum Flows (square feet)			
			Existing	Proposed		
			Minimum Flow	April-May	June 1-15	June 16-30
Shortnose Sturgeon	Fry	May-June	12,314,447	16,128,365	16,056,977	16,257,214
American Shad	Spawning/Incu	May-June	7,169,286	12,879,109	13,013,709	12,595,627
American Shad	Adult	May-June	14,884,729	24,336,843	24,569,327	23,822,383
Fallfish	Spawn/Incu	May-June	4,230,052	1,508,510	1,388,633	1,767,075
Fallfish	Fry	May-June	6,682,346	1,938,259	1,832,162	2,171,864
White Sucker	Spawn/Incu	April-May	647,509	65,312	-	-
White Sucker	Fry	May-June	15,488,036	6,432,174	6,308,923	6,658,176
Walleye	Spawning/Incu	April-May	1,634,274	2,394,329	-	-
Walleye	Fry	April-May	781,469	849,060	-	-
Sea Lamprey	Spawning	May-June	5,561,317	4,446,423	4,189,692	4,725,831

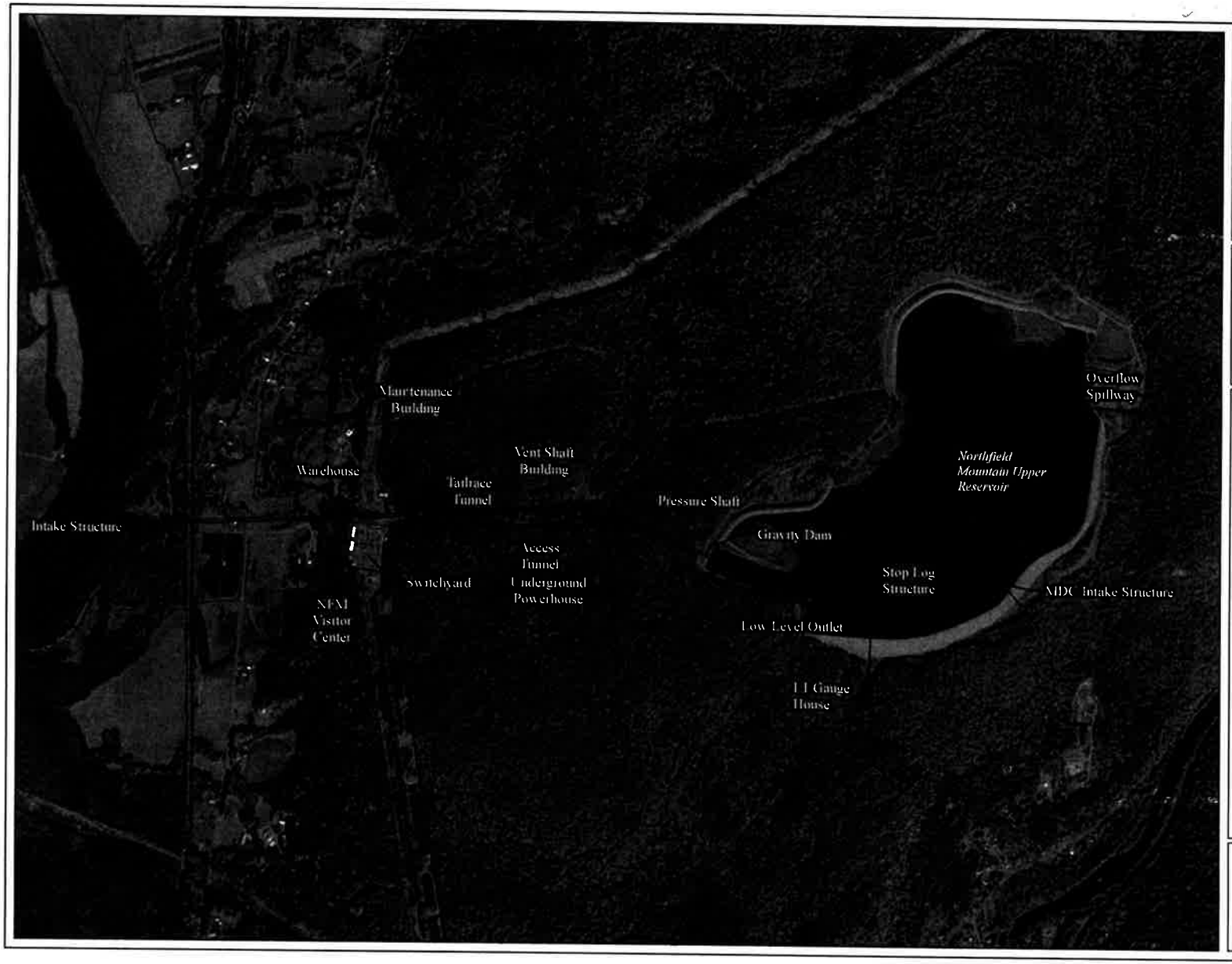
Note: Habitat amounts are approximate, based on models nearest to the actual flow rates, and averaged models for certain flow rates, from Study No. 3.3.1. Habitat increases for the proposed condition are depicted in blue. Shortnose Sturgeon spawning and rearing are not known to occur in this reach, but sturgeon fry is a critical life stage that drifts into this reach from areas near and above Cabot Station.

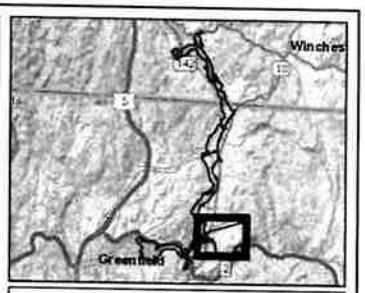
Table ES-6. FERC Approved Recreation Facilities at the Turners Falls and Northfield Mountain Projects

Recreation Site Name	Recreation Facilities/Amenities
Turners Falls Project	
Gatehouse Fishway Viewing Area	• parking area (approximately 27 single vehicle spaces; 2 ADA spaces) • picnic area (approximately 6 tables) • bike rack • trail • fishway viewing visitor center (ADA accessible) • restrooms (ADA accessible) • interpretive sign
Turners Falls Branch Canal Area	• overlook (approximately 4 benches)
Cabot Woods Fishing Access	• parking areas (approximately 17 single vehicle spaces; 2 ADA spaces) • picnic area (approximately 3 tables)
Turners Falls Canoe Portage	• canoe portage take-out (at Barton Cove Canoe & Kayak Rental area) • canoe portage put-in (at Poplar Street Access Site) • On-call vehicular canoe & kayak transport service
Northfield Mountain Project	
Bennett Meadow Wildlife Management Area	• hunting area
Munn's Ferry Boat Camping Recreation Area	• water access only campsites (approximately 4 Tent platform sites and 1 shelter site) • pedestrian foot bridge • restrooms • picnic area (1 table) • dock
Boat Tour and Riverview Picnic Area	• parking area (approximately 54 single vehicle spaces; 2 ADA) • restroom (ADA compliant) • picnic area (approximately 12 tables) • pedestrian foot bridge • picnic pavilion (approximately 8 tables) • interpretive boat tour • dock
Northfield Mountain Tour and Trail Center	• parking area (approximately 50 single vehicle spaces; 3 ADA) • restroom • picnic area (approximately 7 tables) • overlook • visitor center and interpretive displays • winter area • trail system
Barton Cove Nature Area and Campground	• nature area parking area (approximately 26 single vehicle spaces) • campground parking (approximately 28 single vehicle spaces) • showers • restroom facilities (2 facilities; ADA compliant) • picnic area (approximately 15 tables) • overlook • interpretive sign • walk-in campground (2 group sites; 28 campsites; 1 ADA campsite) • nature trail • dock
Barton Cove Canoe and Kayak Rental Area	• parking area (approximately 28 single vehicle spaces) • picnic area (approximately 6 tables)

Recreation Site Name	Recreation Facilities/Amenities
	• seasonal restroom • paddlecraft rental service • canoe put-in and take-out (serves as portage take-out) • on-call vehicular canoe & kayak transport service







Northfield Mountain Pumped Storage Project No. 2485
Turners Falls Hydroelectric Project No. 1889

Amended Final License Application
Executive Summary

Figure ES-2:
Northfield Mountain Pumped Storage Project Features

Legend

Project Boundary

N

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P,

0 600 1,200 2,400 Feet

1 inch = 1,200 feet

FirstLight

Path: W:\gis\maps\amended_fin\figure_ES-2.mxd

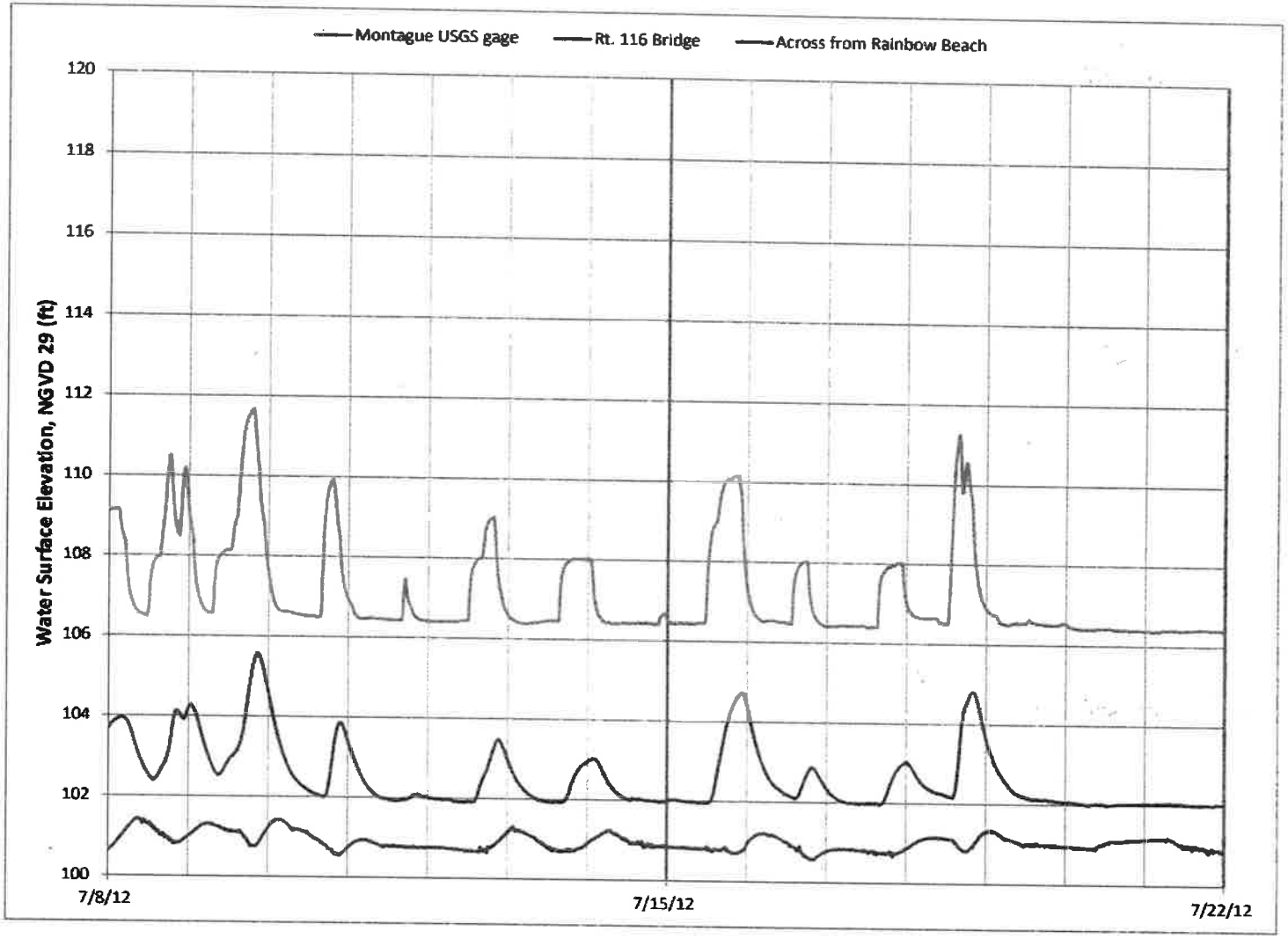


Figure ES-3. Hourly Observed Water Surface Elevations at Montague USGS Gage, Route 116 Bridge, and across from Rainbow Beach in July 2012

12A

WendyB-Montague Board of Selectmen

From: Walter Ramsey - Montague Planner
Sent: Tuesday, December 08, 2020 5:36 PM
To: StevenE - Montague Town Administrator
Cc: WendyB-Montague Board of Selectmen
Subject: 12/14 SB agenda
Attachments: Montague Millers Falls Rd Embankment Agency Notice.pdf

-Execute Regulatory Agency correspondence regarding Millers Falls Road Embankment repair project

This is being required by Firstlight because their property was affected. The Conservation Commission is reviewing on Thurday eve and will advise the Selectboard., so this may change slightly for Monday.

Walter Ramsey, AICP | Montague Town Planner | (413) 863-3200 x 112 |

Montague Selectboard
1 Avenue A
Turners Falls, MA 01376
(413) 863-3200 xt. 108

December 14, 2020

To: MassDEP Western Region,
Natural Heritage and Endangered Species Program
EPA Region 1
Army Corps of Engineers

RE: Agency notification of embankment collapse affecting Connecticut River off Millers Falls Road, near 89 Millers Falls Road- Lat 42.594141, Lon -72.545924

The Town of Montague is writing to notify relevant state and federal environmental agencies of an embankment failure on the Connecticut River that occurred through March 2020. The collapse of this 100+ foot high embankment is believed to be the result of a failed storm water conveyance system installed by the Town of Montague in the 1980's. Sediment from the bank erosion has contributed to an outwash delta into the Connecticut River on property owned by Firstlight Power Resources, Inc. MassGIS orthographic images note that a delta has been forming in this location since at least 2001 (Image 4). The Town has stabilized the embankment and re-installed the storwmwater outfall pipe although the town's response was delayed by the winter season and the subsequent Covid emergency. In June and July 2020 the Montague DPW stabilized the erosion with 10,500 tons of stone and dirt to cover a re-installed stormwater pipe.

While that stabilization work occurred outside what is believed to be the 200' Riverfront Area and NHESP priority habitat boundary, sediment from the preceding bank failure did settle in the jurisdictional resource areas. The volume of that material can be estimated to be up to 10,500 tons. In May, 2020 an Emergency Certificate was issued by the Montague Conservation Commission to allow the bank and stormwater outfall repair. The Town completed repairs in compliance with the Emergency Certificate. The town is now implementing an ongoing operation and maintenance plan. Due to the inaccessibility of the site and the volume of material, it is the opinion of the Montague Conservation Commission that the environmental impacts of removing the sediment would greatly exceed the benefits of restoring the area to its pre-existing state.

Next actions include conducting an as-built survey of the area to document current conditions and implementing ongoing annual monitoring of the outwash delta for the next three years. The Conservation Commission will prepare an annual monitoring report to be filed at Montague Town Hall and with Firstlight. The intention of the Conservation Commission is to allow the affected area to revegetate naturally. If an invasive plant species is found to be establishing, remedial action will be taken at that time in order to allow for native vegetation to establish. The Department of Public Works is responsible to monitor the integrity of the repaired embankment and stormwater system. The Town also intends to pursue an inventory and assessment of storm water outfalls with support from the Massachusetts Vulnerabilities

Preparedness Program, in an effort to proactively identify other potentially problematic sites along the sandy banks of the Connecticut River.

Please do not hesitate to contact Montague Conservation Agent Walter Ramsey at 413.863.3200 x112 if you have any questions or concerns. Thank you.

FOR THE MONTAGUE SELECTBOARD

Richard Kuklewicz, Chair

Cc: Beth Bazler, Firstlight Power Resources

Image 1: Site Locus- near 89 Millers Falls Road

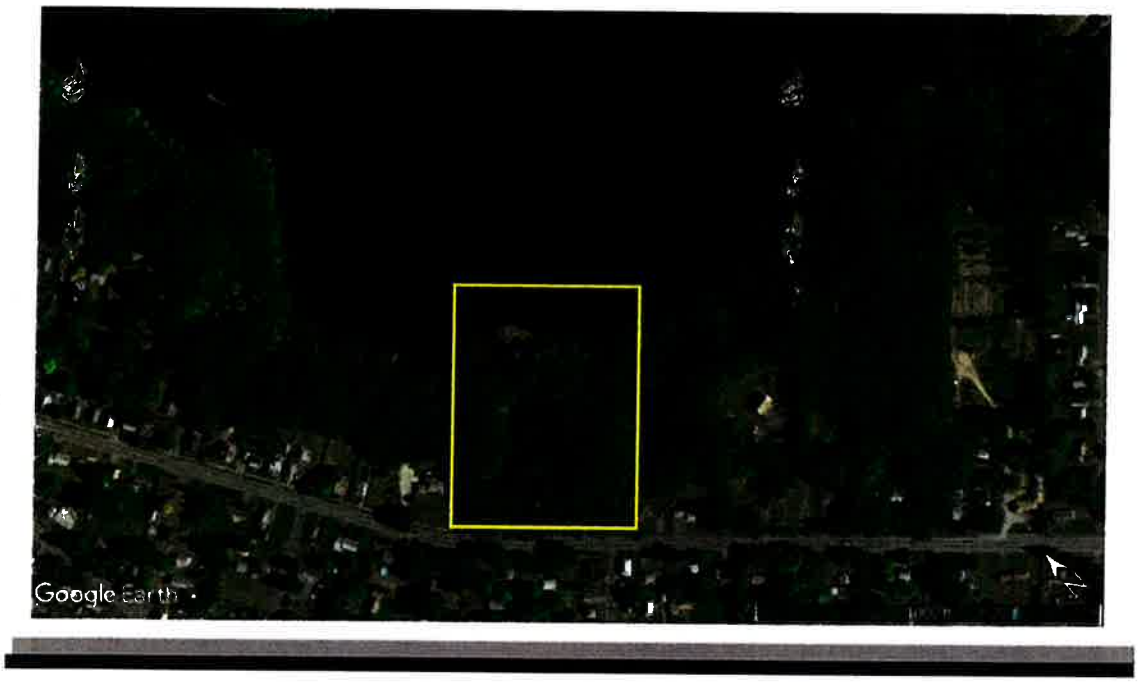


Image 2: Project area with 3 meter contours. Blue line is approximate storm water conveyance pipe.

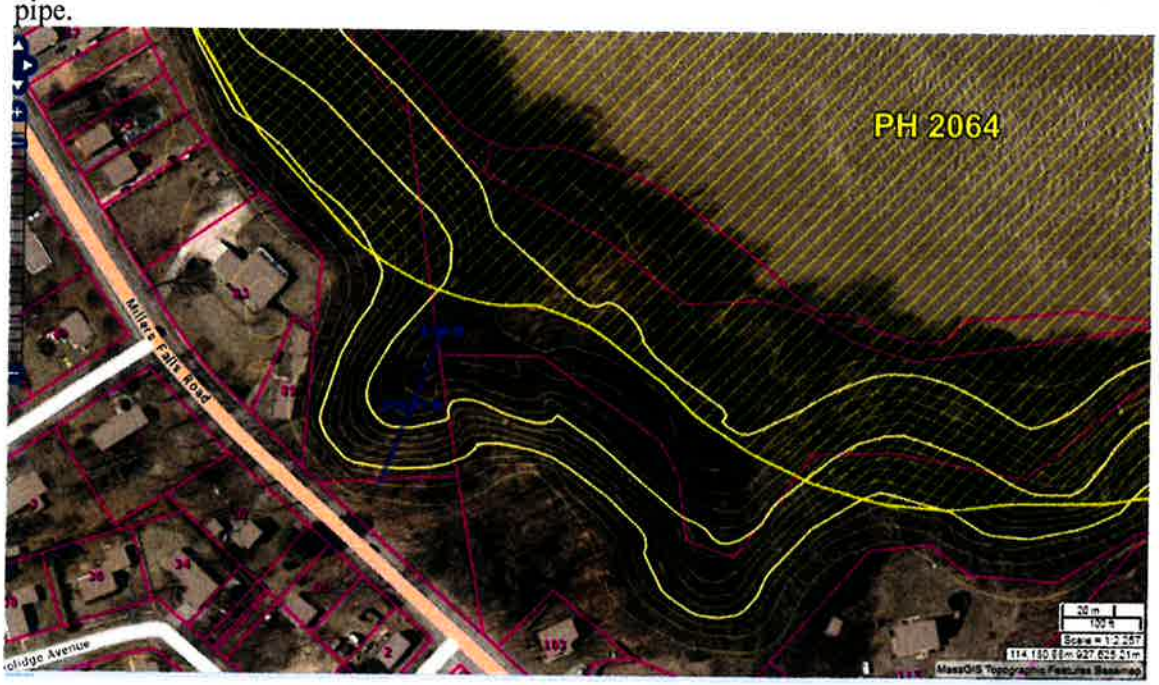


Image 3: 2001 Ortho-imagery from MassGIS. Note washout delta present at that time.

Image 4: Embankment collapse area 11/6/2019. Note stormwater conveyance pipe

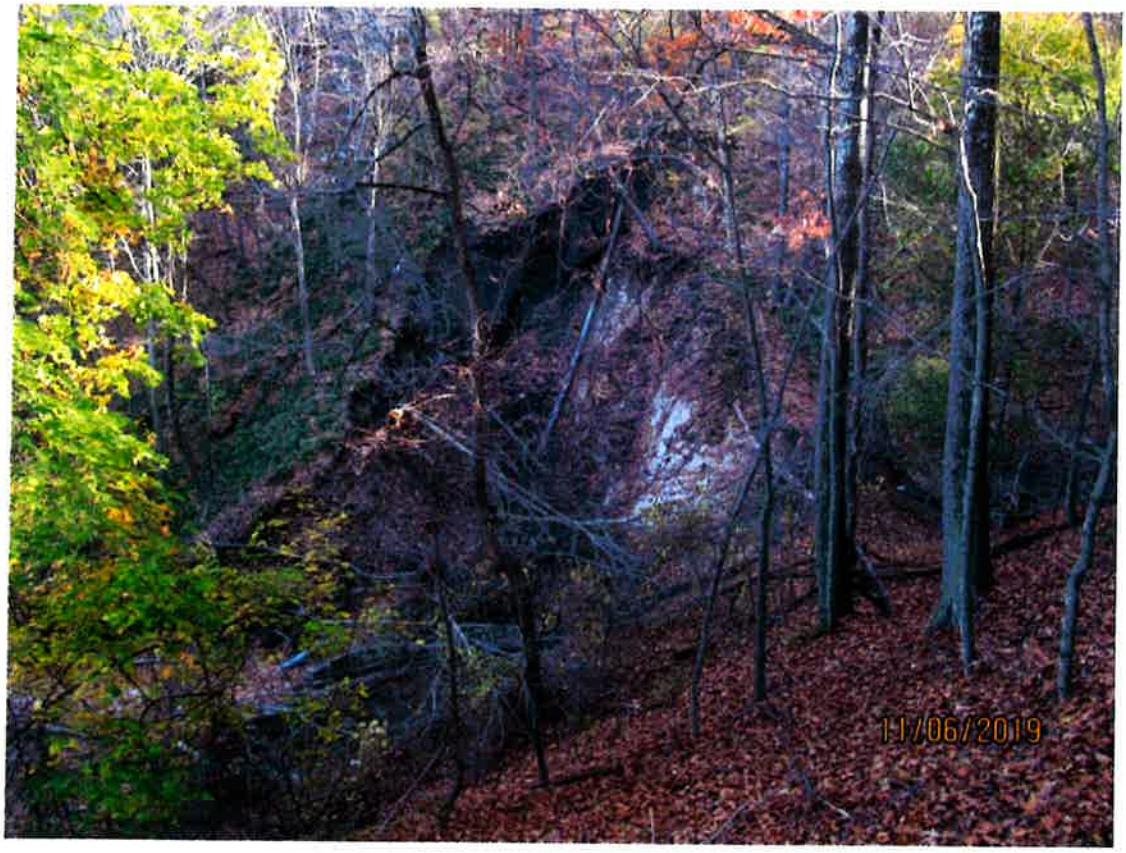


Image 5: Repaired embankment. 11/12/2020

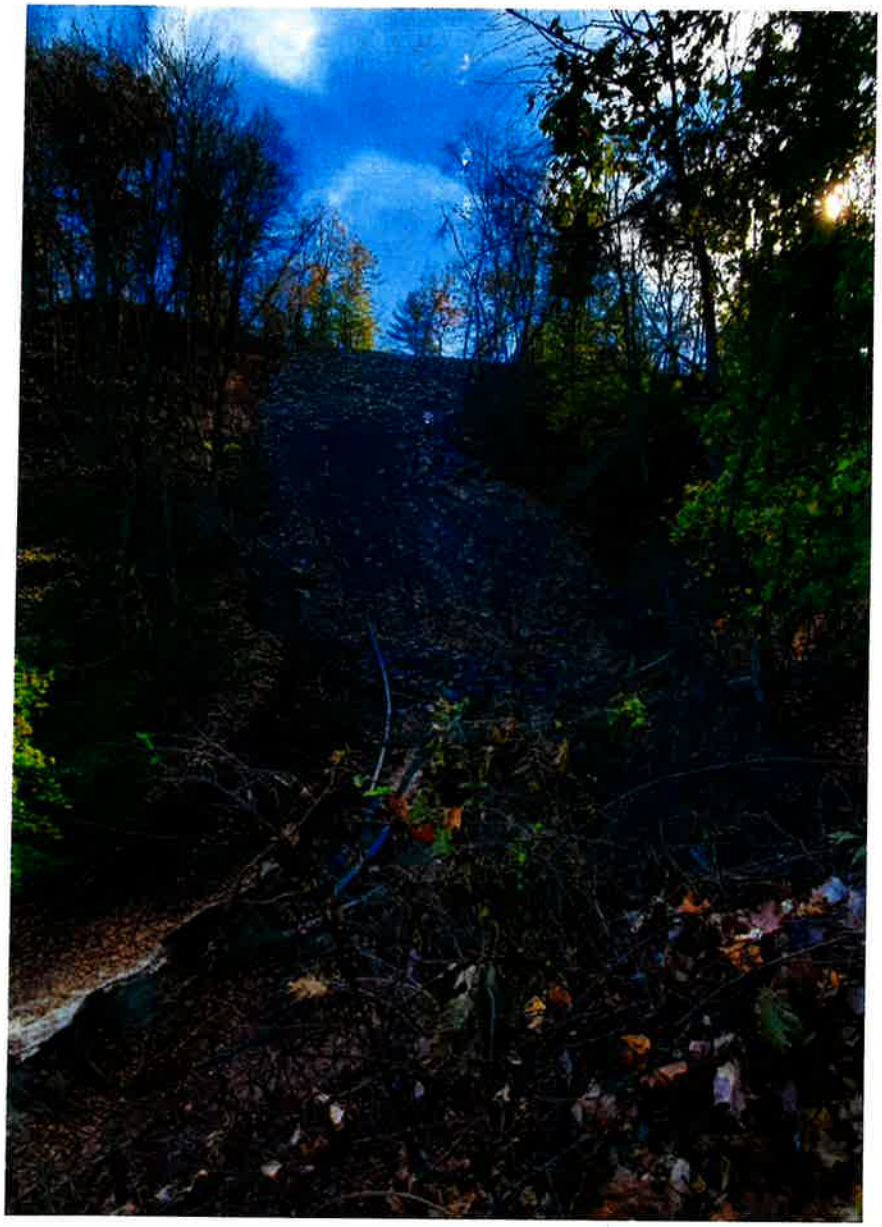
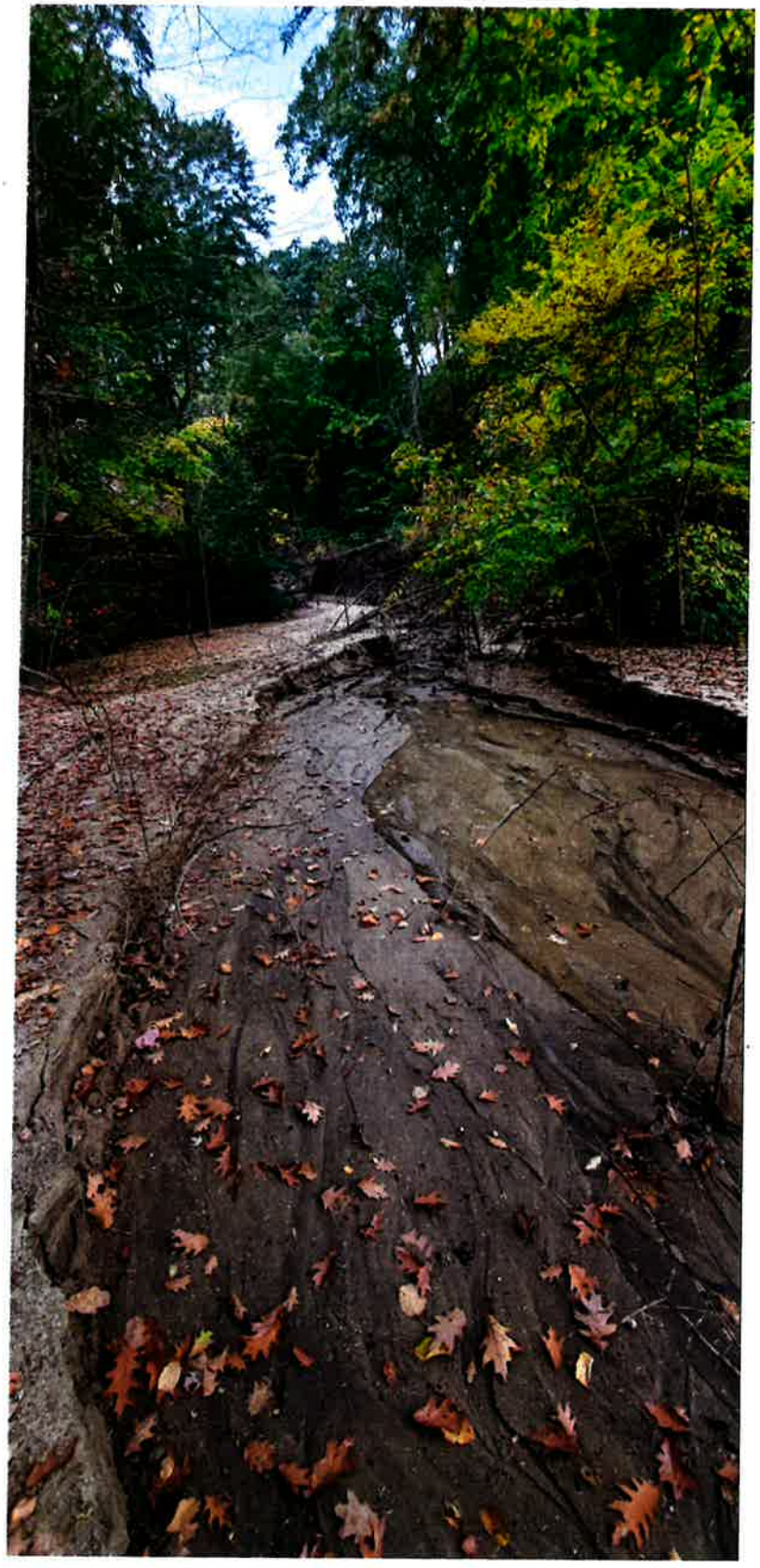


Image 6: Washout delta November 2020

Image 7: Bottom of stabilized slope



12B

WendyB-Montague Board of Selectmen

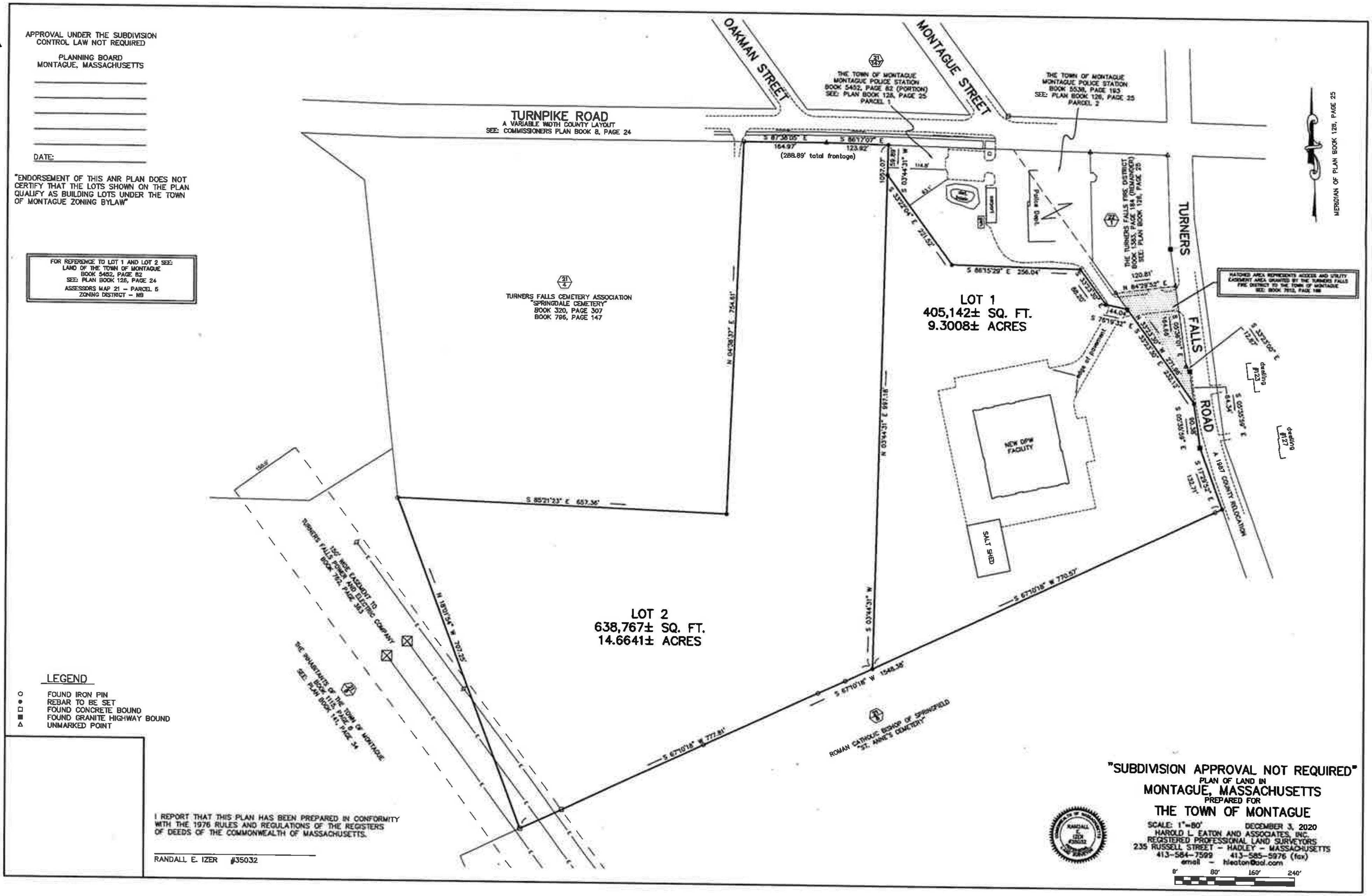
From: Walter Ramsey - Montague Planner
Sent: Wednesday, December 09, 2020 3:18 PM
To: WendyB-Montague Board of Selectmen; StevenE - Montague Town Administrator
Subject: 12/14 SB Agenda (part 3)

Wendy, I have third timely item for Monday. I don't have any background material, but will discuss it with the board.

- Authorize request for technical assistance from the Local Rapid Recovery Planning Program to develop a COVID recovery strategy for downtown Turners Falls

Walter Ramsey, AICP | Montague Town Planner | (413) 863-3200 x 112 | planner@montague-ma.gov

13A



APPROVAL UNDER THE SUBDIVISION CONTROL LAW NOT REQUIRED
PLANNING BOARD
MONTAGUE, MASSACHUSETTS
DATE:
"ENDORSEMENT OF THIS ANR PLAN DOES NOT CERTIFY THAT THE LOTS SHOWN ON THE PLAN QUALIFY AS BUILDING LOTS UNDER THE TOWN OF MONTAGUE ZONING BYLAW"
FOR REFERENCE TO LOT 1 AND LOT 2 SEE: LAND OF THE TOWN OF MONTAGUE BOOK 5452, PAGE 82 SEE: PLAN BOOK 126, PAGE 24 ASSESSORS MAP 21 – PARCEL 5 ZONING DISTRICT – NB
TURNPIKE ROAD
A VARIABLE WIDTH COUNTY LAYOUT
SEE: COMMISSIONERS PLAN BOOK 8, PAGE 24
OAKMAN STREET
MONTAGUE STREET
TURNERS FALLS ROAD
THE TOWN OF MONTAGUE MONTAGUE POLICE STATION BOOK 5452, PAGE 82 (PORTION) SEE: PLAN BOOK 128, PAGE 25 PARCEL 1
THE TOWN OF MONTAGUE MONTAGUE POLICE STATION BOOK 5538, PAGE 193 SEE: PLAN BOOK 128, PAGE 25 PARCEL 2
THE TURNERS FALLS FIRE DISTRICT BOOK 1383, PAGE 184 (REMAINDER) SEE: PLAN BOOK 128, PAGE 25
TURNERS FALLS CEMETERY ASSOCIATION "SPRINGDALE CEMETERY" BOOK 320, PAGE 307 BOOK 786, PAGE 147
LOT 1
405,142± SQ. FT.
9.3008± ACRES
LOT 2
638,767± SQ. FT.
14.6641± ACRES
Police Dept.
NEW DPW FACILITY
SALT SHED
edge of pavement
S 87°38'05" E 164.97'
S 86°17'07" E 123.92'
(288.89' total frontage)
1057.07'
S 03°44'31" W 59.89'
S 33°22'04" E 221.52'
S 86°15'29" E 256.04'
N 84°29'32" E 120.81'
S 75°19'32" E 144.04'
S 00°38'01" E 164.89'
S 00°35'59" E 60.38'
S 17°26'32" E 132.71'
S 00°35'59" E 64.34'
S 33°23'00" E 12.87'
N 04°38'37" E 754.61'
S 85°21'23" E 657.36'
N 03°44'31" E 997.18'
S 03°44'31" W
S 67°10'18" W 770.57'
S 67°10'18" W 1548.38'
S 67°10'18" W 777.81'
N 18°01'54" W 707.25'
A 1987 COUNTY RELOCATION
dwelling #123
dwelling #127
150' WIDE EASEMENT TO TURNERS FALLS POWER AND ELECTRIC COMPANY BOOK 762, PAGE 383
THE INHABITANTS OF THE TOWN OF MONTAGUE BOOK 1115, PAGE 9 SEE: PLAN BOOK 141, PAGE 34
ROMAN CATHOLIC BISHOP OF SPRINGFIELD "ST. ANNE'S CEMETERY"
HATCHED AREA REPRESENTS ACCESS AND UTILITY EASEMENT AREA GRANTED BY THE TURNERS FALLS FIRE DISTRICT TO THE TOWN OF MONTAGUE
MERIDIAN OF PLAN BOOK 128, PAGE 25
LEGEND
FOUND IRON PIN
REBAR TO BE SET
FOUND CONCRETE BOUND
FOUND GRANITE HIGHWAY BOUND
UNMARKED POINT
I REPORT THAT THIS PLAN HAS BEEN PREPARED IN CONFORMITY WITH THE 1976 RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.
RANDALL E. IZER #35032
"SUBDIVISION APPROVAL NOT REQUIRED"
PLAN OF LAND IN
MONTAGUE, MASSACHUSETTS
PREPARED FOR
THE TOWN OF MONTAGUE
SCALE: 1"=80'
DECEMBER 3, 2020
HAROLD L. EATON AND ASSOCIATES, INC.
REGISTERED PROFESSIONAL LAND SURVEYORS
235 RUSSELL STREET – HADLEY – MASSACHUSETTS
413-584-7599 413-585-5976 (fax)
email – hleaton@aol.com
0' 80' 160' 240'