



Northfield Mountain Station
99 Millers Falls Road
Northfield, MA 01360
Ph: (413) 422-5915
FAX: (413) 659-4459
E-mail: gus.bakas@gdfsuezna.com

Gus Bakas
Director – Massachusetts Hydro

VIA ELECTRONIC FILING

December 6, 2013

FERC0014o

Mr. Gerald Cross, P.E.,
Regional Engineer
Division of Dam Safety and Inspections
New York Regional Office
Federal Energy Regulatory Commission
19 West 34th Street, Suite 400
New York, NY 10001-3006

Northfield Mountain Project - FERC No. 2485-MA
Erosion Control Plan - 2013 Construction Report

Dear Mr. Cross:

Re: FERC Letter to John Howard, FirstLight received Nov 17, 2009 regarding erosion control measures in the Connecticut River\Turners Falls Impoundment

FirstLight Power Resources Services, LLC (FirstLight) herein submits a construction report for the erosion control work completed at the Bathory-Gallagher and Wallace-Watson riverbank erosion sites. This represents the major portion of construction work. Remaining is vegetative planting work, scheduled to take place in Spring 2014. There were no incidents or issues during construction.

Please contact the undersigned or Mr. Charles Momnie (413) 659-4472 if there are any questions regarding this matter.

Very truly yours,

FIRSTLIGHT HYDRO GENERATING COMPANY

A handwritten signature in black ink, appearing to read "Gus Bakas", is written over a horizontal line.

Gus Bakas
Director – Massachusetts Hydro



Construction Progress Report

For

Northfield Mountain Pumped Storage Project

FERC Project # 2485

Riverbank Restoration

**Bathory-Gallagher and
Wallace-Watson Sites**

Final

December 2013

Table of Contents

1.	Progress of Work.....	1
2.	Status of Construction	1
3.	Construction Schedule.....	2
4.	Construction Difficulties	2
5.	Contract Status.....	2
6.	Critical Events and Dates.....	3
7.	Reservoir Filling.....	3
8.	Foundations	3
9.	Sources of Major Construction Materials.....	3
10.	Materials Testing and Results.....	3
11.	Instrumentation.....	3
12.	Photographs	3
13.	Erosion Control and Other Environmental Measures.....	4
	Attachment 1 - Photographs.....	5
	Attachment 2 - Sediment and Erosion Control Monitoring - Weekly Report	6

1. Progress of Work

This Construction Progress Report summarizes the construction activities associated with the "Bathory-Gallagher and Wallace-Watson" riverbank erosion control sites in Northfield Mountain's Lower Reservoir\Connecticut River, for the 2013 year. Original plans were to complete the Bathory-Gallagher site in 2012 and the Wallace Watson site in 2013. FirstLight chose to work both sites in parallel, over the 2012 and 2013 construction seasons. The total length of both sites is 2400 ft.

Construction work on the lower bank and beach area, for both sites, was completed in November and December 2012 and a "bench" was created at that time to support the 2013 work. Construction work in 2013 consisted of the installation of 23 woody debris structures and several "root wads" along the base of eroded sections of riverbank. The purpose of the woody debris structures and root wads are to trap river debris and sediment and encourage stabilization of the riverbank.

The repair work is being accomplished in compliance with Commonwealth of Massachusetts, Town of Gill, and the Army Corps of Engineering permit conditions and requirements.

The proposed work is also being completed in accordance with FirstLight's commitments as outlined in The Northfield Mountain Project "Erosion Control Plan for the Turners Falls Pool of the Connecticut River".

There were no incidents, accidents or injuries during construction. FirstLight's intent is return in the spring of 2014 and complete the final task of vegetative planting installation and at that time.

2. Status of Construction

Physical stabilization work along the shoreline is complete. 23 woody debris structures and several dozen root wads were installed along the shoreline and base of the riverbank and anchored in place. The Contractor has removed the silt barrier, stabilized the construction site and removed all equipment from the site. An access ramp remains in place for monitoring and for potential future access.

Stabilization was accomplished using 1 large excavator to place the structures and root wads, one loader, and one dump truck to transfer material from a temporary storage area to the point of use. Work crew was typically 3 construction workers and 1 environmental monitor, working a 50 hr. work week.

New England Environmental, Inc. (NEE) was responsible for the overall design of the bio-engineering repair. Doucet & Associates was a sub-contractor to NEE and provided civil and hydraulic engineering support. SumCo is the prime contractor performing the actual construction work.

3. Construction Schedule

	<u>Actual Start</u>	<u>Finish</u>
PRE-CONSTRUCTION ACTIVITIES		
Site Mobilization (2013 work)	10/28/13	10/30/13
Install Erosion Control Material (Silt Boom)	10/28/13	10/30/13
CONSTRUCTION ACTIVITIES		
Excavate for Access (2012)	11/7/12	11/7/12
Install Coir Log Breakwater (2012)	11/8/12	12/7/12
Install Root Wads (2012)	11/8/12	12/7/12
Install Woody Debris Structures	10/28/13	11/20/13
Install Anchors	10/28/13	11/20/13
Final Grade	10/28/13	11/20/13
Seed & Mulch (stabilize)	10/28/13	11/20/13
Demobilization	11/20/13	11/25/13
POST-CONSTRUCTION ACTIVITIES		
	(SCHEDULED)	
Install Dormant Woody Vegetation	Spring 2014	-
Install Wetland Vegetation	Spring 2014	-
PROJECT CLOSEOUT		
Project Completion	Spring 2014	-

4. Construction Difficulties

The changing water elevation of the river caused some construction difficulty. As surface elevations normally rise during the day, the lower riverbank occasionally became inundated, thereby slowing progress. The construction workers must then stop or work in wet conditions.

5. Contract Status

<u>Contractor / Subcontractor</u>	<u>Role</u>	<u>Special Expertise / Equipment</u>
FirstLight Power Resources Services, LLC Hartford, CT	Agents for Owner	Project management and oversight
New England Environmental Amherst, MA	Project design	Bio-engineering design
Doucet & Associates Northampton, MA	Consultant	Civil and hydraulic engineering support

SumCo Eco-Construction
Salem, MA

Project Contractor

Performing project construction
work

6. Critical Events and Dates

Date

Critical Task

10/28/13

Contractor began work along riverbank (2013 work)

11/25/13

Completed all work as scheduled, demobilized

7. Reservoir Filling

This item is not applicable to the project.

8. Foundations

This item is not applicable to the project.

9. Sources of Major Construction Materials

All gravel and fill material has been obtained from local borrow pits and quarries. All other construction has been obtained from a local distributor of building materials.

All vegetative materials shall be obtained either from local nurseries, or from offsite sources, previously planted specifically for this purpose.

10. Materials Testing and Results

No material testing is required on this project.

11. Instrumentation

No activity relative to this item.

12. Photographs

Digital images have been incorporated into this document within Attachment 1. Additional images are also included in Attachment 2, "Sediment and Erosion Control Monitoring".

13. Erosion Control and Other Environmental Measures

As the work is being performed within a riverine environment, there is potential impact to the environment. A turbidity curtain barrier has been installed between the riverbank restoration area and the river, along the shoreline. This barrier is monitored continuously and maintained as necessary. To date, the barrier is effective and there have been no issues, erosion conditions, or sediment releases to the environment.

Attachment 2 includes the “Sedimentation & Erosion Control Monitoring -Weekly Report”, submitted by the Environmental Site Monitor.

Attachment 1

Photographs



Showing construction from across river 11/13



Looking North at Woody debris structure and root wads
11/18/13

Attachment 2

Sediment and Erosion Control Monitoring – Weekly Report (includes photographs)



Sediment & Erosion Control Monitoring - Weekly Report

Project Name:	Bathory-Gallagher/Watson Wallace	Submitted To:	DEP, Western Region
Inspection Date & Time:	10-28 to 10-31-13	Address:	436 Dwight Street
NEE Project #:	12 4072	Town:	Springfield MA
DEP File No.:	162-0068	Zip:	01103
401 WQC	X227705	Next Inspection Date:	Week of November 4 - 8, 2013
Inspector(s)	Ryan Joyce, CPESC # 6976	Client:	FirstLight Power Resources LLC
Report # - Storm Event #:	Report 1	Photos Included:	Yes, Attached

Sediment and Erosion Control Monitoring Details:

Project Overview:	From October 28 to October 31, 2013, NEE conducted compliance monitoring associated with the Bank Restoration Project along the a stretch of the Connecticut River in Gill, MA. This site and project is referred to as Bathory-Gallagher/Watson Wallace. The project involves construction of woody debris structures and bank treatments. The entire aquatic bench was installed at this time last year. This is the first week of construction. Monitoring was conducted in accordance with special condition # 20 of the Order of Conditions and condition # 14 of the Water Quality Certification.
Site Description/Comments:	Work at the site started on October 28 . Work included the delivery and staging of construction related materials and start to deploy the turbidity curtain. October 29 - Work involved continuation of the turbidity curtain installation. Repair and install siltation fence. Construction started on October 30 . Work started with the installation of a temporary wetland - stream crossing over an existing farm road. Swamp mats were installed as to not to impede any flow within this area. There was no flow observed during the installation. Siltation fence was installed along both sides of the crossing. This area will be restored to existing conditions once construction is complete for the season. Construction of the woody debris structures was started. October 31 - Work on the woody debris structures continued. 2 structures have been completed thus far.
Turbidity Curtain:	Approximatley 2,500 feet curtain was installed this week. The curtain was anchored to the bank at both ends completely enclosing the active work area. The curtain is inspected periodically and adjusted throughout day. The curtain will be removed in sections as the project progresses down river, but the active work area will always remain enclosed.
Construction Entrance:	The construction entrance had been installed the previous year. The entrance will be monitored and improved as field conditions warrant.
Erosion Control Barrier:	Siltation fence has been installed as shown on the approved plan. Most of this fence existed from last season construction and was repaired or replaced as necessary. The barrier will be monitored and adjusted as necessary.
Additional Recommendations and suggestions:	Daily inspections of the BMP's including the the turbidity curtain and the erosion control barriers.
Actions taken on previous recommendations:	None. First week of construction.
Site photographs:	See attached photograph page


Copies submitted to:	Gill Conservation Commission, Charles Momnie - FirstLight, Travis Sumner - SumCo., Karen Hirschberg - DEP, Western Region	 Signed & Checked: Ryan Joyce, CPESC #6976
----------------------	---	--



Photo 1:

A view of the turbidity curtain
being installed.
(October 28-31, 2013)



Photo 2:

The first woody debris structure
being installed.
(October 28-31, 2013)





Photo 3:

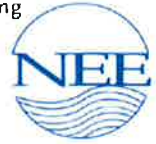
A view looking up river at the first structure. (October, 2013)



Photo 4:

A view of a woody debris structure being constructed. (October, 2013)





Sediment & Erosion Control Monitoring - Weekly Report


Project Name:	Bathory-Gallagher/Watson Wallace	Submitted To:	DEP, Western Region		
Inspection Date & Time:	11-4 to 11-8-13	Address:	436 Dwight Street		
NEE Project #:	12 4255	Town:	Springfield	MA	
DEP File No.:	162-0068	Zip:	01103		
401 WQC	X227705	Next Inspection Date:	Week of November 11 - 15, 2013		
Inspector(s)	Ryan Joyce, CPESC # 6976	Client:	FirstLight Power Resources LLC		
Report # - Storm Event #:	Report 2	Photos Included:	Yes, Attached		
Sediment and Erosion Control Monitoring Details:					
Project Overview:	From November 4 to November 8, 2013, NEE conducted compliance monitoring associated with the Bank Restoration Project along the a stretch of the Connecticut River in Gill, MA. This site and project is referred to as Bathory-Gallagher/Watson Wallace. The project involves construction of woody debris structures and bank stabilization treatments. The entire aquatic bench was installed at this time last year. This is the <u>second</u> week of construction. Monitoring was conducted in accordance with special condition # 20 of the Order of Conditions and condition # 14 of the Water Quality Certification.				
Site Description/Comments:	Work continued at the site started on November 4 . Installed one structure and stabilized or dressed bench as they moved downstream; fixed farm access road (added material to ruts and added straw wattles to both sides of the swamp mats); added approximately two loads of material to fix ruts on the bench; 300 feet of turbidity curtain was removed. November 5 - Work involved continuation of the woody debris structures. November 6 - Woody debris structure building continued. November 7 - Work on the woody debris structures continued. Bank treatments were started. November 8 - Work on the bank treatments and structures continued. Approximately 13 structures have been completed thus far. The bench is dressed out or stabilized between structures as work moves down river. (See photos)				
Turbidity Curtain:	The curtain has been completely deployed. The curtain was anchored to the bank at both ends completely enclosing the active work area. The curtain is inspected periodically and adjusted throughout day. The curtain will either be removed in sections as the project progresses down river or left in place and removed when construction is complete. The active work area will always remain enclosed.				
Construction Entrance:	The construction entrance had been installed the previous year. The entrance will be monitored and improved as field conditions warrant. Straw wattles are placed a cross the entrance at the end of each day as an added BMP.				
Erosion Control Barrier:	Siltation fence has been installed as shown on the approved plan. Most of this fence existed from last seasons construction and was repaired or replaced as necessary. The barrier will be monitored and adjusted as necessary. .				
Additional Recommendations and suggestions:	Daily inspections of the BMP's including the turbidity curtain and the erosion control barriers.				
Actions taken on previous recommendations:	Daily inspections of the BMP's including the turbidity curtain and the erosion control barriers.				
Site photographs:	See attached photograph page				
Copies submitted to:	Gill Conservation Commission, Charles Momnie - FirstLight, Travis Sumner - SumCo., Karen Hirschberg - DEP, Western Region		 Signed & Checked: Ryan Joyce, CPESC #6976		



Photo 1:

A view of a woody debris structure being installed.
(November 4-8, 2013)



Photo 2:

A view between structures of the
“dressed out” bench.
(November 4-8, 2013)





Photo 3:

A view of a bank treatment being installed.
(November 4-8, 2013)



Photo 4:

A view of the farm road crossing.
(November 4-8, 2013)





Sediment & Erosion Control Monitoring - Weekly Report

Project Name:	Bathory-Gallagher/Watson Wallace	Submitted To:	DEP, Western Region
Inspection Date & Time:	November 11 - Nov. 15, 2013	Address:	436 Dwight Street
NEE Project #:	12 4255	Town:	Springfield MA
DEP File No.:	162-0068	Zip:	01103
401 WQC	X227705	Next Inspection Date:	Week of November 18 - 22, 2013
Inspector(s)	Ryan Joyce, CPESC # 6976	Client:	FirstLight Power Resources LLC
Report # - Storm Event #:	Report 3	Photos Included:	Yes, Attached

Sediment and Erosion Control Monitoring Details:


Project Overview:	From November 11 to November 15, 2013, NEE conducted compliance monitoring associated with the Bank Restoration Project along the a stretch of the Connecticut River in Gill, MA. This site and project is referred to as Bathory-Gallagher/Watson Wallace. The project involves construction of woody debris structures and bank stabilization treatments. The entire aquatic bench was installed at this time last year. This is the <u>third</u> week of construction. Monitoring was conducted in accordance with special condition # 20 of the Order of Conditions and condition # 14 of the Water Quality Certification.		
Site Description/Comments:	Work continued at the site starting on November 11 . Work on the bank treatments and structures continued. November 12 - Installed three bank treatments and one structure on Tuesday. November 13 - Construction continued on the structures. The crew constructed one bank treatment using five stumps. November 14 - Work on the bank treatments and structures continued. The bench is dressed out or stabilized between structures as work moves down river. November 15 - All but 300 feet of the turbidity curtain was removed on Friday the 15th.		
Turbidity Curtain:	All but 300 feet has been removed. The remaining curtain was anchored to the bank at both ends completely enclosing the active work area. The curtain is inspected periodically and adjusted throughout day.		
Construction Entrance:	The construction entrance had been installed the previous year. The entrance will be monitored and improved as field conditions warrant. Straw wattles are placed a cross the entrance at the end of each day as an added BMP.		
Erosion Control Barrier:	Siltation fence has been installed as shown on the approved plan. Most of this fence existed from last seasons construction and was repaired or replaced as necessary. The barrier will be monitored and adjusted as necessary.		
Additional Recommendations and suggestions:	Daily inspections of the BMP's including the turbidity curtain and the erosion control barriers.		
Actions taken on previous recommendations:	Daily inspections of the BMP's including the turbidity curtain and the erosion control barriers.		
Site photographs:	See attached photograph page		
Copies submitted to:	Gill Conservation Commission, Charles Momnie - FirstLight, Travis Sumner - SumCo., Karen Hirschberg - DEP, Western Region	 Signed & Checked: Ryan Joyce, CPESC #6976	



Photo 1:

A view of a woody debris structure.
(November 11 – 15, 2013)



Photo 2:

A view of a bank treatment.
(November 11 – 15, 2013)





Photo 3:

A view of a bank treatment.
(November 11 – 15, 2013)



Photo 4:

A view of the turbidity curtain
removal.
(November 11 – 15, 2013)





Sediment & Erosion Control Monitoring - Weekly Report

Project Name:	Bathory-Gallagher/Watson Wallace	Submitted To:	DEP, Western Region
Inspection Date & Time:	November 18 - Nov. 20, 2013	Address:	436 Dwight Street
NEE Project #:	12 4255	Town:	Springfield MA
DEP File No.:	162-0068	Zip:	01103
401 WQC	X227705	Next Inspection Date:	Final Report
Inspector(s)	Ryan Joyce, CPESC # 6976	Client:	FirstLight Power Resources LLC
Report # - Storm Event #:	Report 4	Photos Included:	Yes, Attached

Sediment and Erosion Control Monitoring Details:


Project Overview:	From November 18 to November 20, 2013, NEE conducted compliance monitoring associated with the Bank Restoration Project along the a stretch of the Connecticut River in Gill, MA. This site and project is referred to as Bathory-Gallagher/Watson Wallace. The project involves construction of woody debris structures and bank stabilization treatments. The entire aquatic bench was installed at this time last year. This is the fourth and final week of construction. Monitoring was conducted in accordance with special condition # 20 of the Order of Conditions and condition # 14 of the Water Quality Certification.		
Site Description/Comments:	This was the last week of construction conducted at the site for this season. Activities included completion the large woody debris structures, bank structures and stabilization to the construction access ramp, removal of the remaining turbidity curtain and clean up of the site. November 18 - The construction of the last 2 large woody debris (LWD) structures continued. November 19 - The last structure was completed. Stabilization of the construction access was started. The remaining 300 feet of the turbidity curtain was removed. November 20 - Stabilization of the construction access ramp was completed. (see photos). The swamp mats were removed from the farm access road and the area was restored. Final close out of the site was conducted. This was last day of activities at the site.		
Turbidity Curtain:	The last 300 feet of curtain was removed. The bench and area adjacent to access ramp was left in stable condition.		
Construction Entrance:	Final stabilization of the construction access was conducted on Wednesday. This included a row of stumps anchored at the bottom of the ramp. Gravel was placed behind the stumps. This should protect the entrance and adjacent banks from scour and erosion. A silt fence check dam were installed mid way up the ramp. An application of Winter Rye seed followed by a layer of straw mulch was placed on the exposed soil. A root wad was placed at the top of the ramp to prohibit access. A dune fence was installed around the entrance as well. The DEP file sign will remain in place. The entrance should be monitored for the next few months for storm damage.		
Erosion Control Barrier:	The existing siltation fence will remain in place for now.		
Additional Recommendations and suggestions:	Monitor the construction access ramp after storm events.		
Actions taken on previous recommendations:	Daily inspections of the BMP's including the turbidity curtain and the erosion control barriers.		
Site photographs:	See attached photograph page		
Copies submitted to:	Gill Conservation Commission, Charles Momnie - FirstLight, Travis Sumner - SumCo., Karen Hirschberg - DEP, Western Region	 Signed & Checked: Ryan Joyce, CPESC #6976	



Photo 1:

A view of the last woody debris structure, bench and the construction access ramp.
(November 18 – 20, 2013)



Photo 2:

A view of the stabilization to the end of the construction access.
(November 18 – 20, 2013)





Photo 3:

A view of mulch and silt fence
check dam on the access.
(November 18 – 20, 2013)



Photo 4:

A view of the closed off access
ramp.
(November 18 – 20, 2013)

