



City of Keene
New Hampshire

HERITAGE COMMISSION MEETING

AGENDA

Wednesday, September 13, 2017

4:00 PM

Trustee's Room, Keene Public Library

1. Call to Order / Roll Call
2. Minutes of July 12, 2017
3. Historic Preservation Workshop Series
 - a. Workshop Planning & Logistics
 - b. Historic Building Recognition Program
4. Comments on West Street Hydro Study Plan
5. Subcommittee Reports
 - a. Demolition Review Committee
 - b. Community Outreach Committee
 - c. Research Committee
6. Staff Updates
7. New or Other Business
8. Next Meeting – November 8, 2017
9. Adjourn

City of Keene
New Hampshire

HERITAGE COMMISSION MEETING MINUTES

Wednesday, July 12, 2017

4:00 PM

Trustee's Room, Library

Members Present:

Rose Carey, Chair
Susan D'Egidio, Vice-Chair
Louise Zerba
Robert O'Connor, Councilor

Staff Present:

Members Not Present:

Katherine Snow

1) Call to Order/Roll Call -

Chair Carey called the meeting to order at 4:00 PM with the roll call.

2) Approval of Minutes – May 31, 2017

Ms. Zerba made a motion to adopt the minutes of May 31, 2017 as submitted. Councilor O'Connor seconded the motion which carried unanimously.

3) City of Keene Commission/Board Survey – Those members who have not completed the survey will contact the City Clerk's Office.

4) Historic Preservation Workshop Series 2017 and 2018

a. Workshop Planning & Logistics – Chair Carey distributed copies of the draft postcard for discussion. Ms. Zerba noted the Hall at the Court House is now called Delegation Hall. Chair Carey pointed out the second page depicts a logo designed for the Heritage Commission. She would like to see the columns be more prominent. The designer is also working on a stylized font for the Commission. Chair Carey noted the City Seal has to be printed in color; therefore it will not be added to the postcard. The websites listed on the postcard need to be corrected. Ms. Kessler has half of the story maps loaded on the registration website which is up. Chair Carey is still working on taking photos and doing the necessary research in Concord. In response to Ms. D'Egidio, Chair Carey explained the story map concept noting this will be the basis for the presentation.

Summary of changes to postcard:

- Change County Hall to Delegation Hall
- Make the columns on the Commission logo more prominent
- The City Seal will not be included on the postcard
- Make corrections to the websites listed on the postcard
- Add times to the postcard: 7 PM to 9 PM
- Change award date from 2018 to 2017

Ms. Zerba motioned to approve the design of the draft postcard with the noted changes. Councilor O'Connor seconded the motion which carried unanimously.

Ms. Zerba reported she has a scheduling conflict on September 14; she had signed up to handle the food. She and Chair Carey agreed to take another look at this as it gets closer to the actual date.

Chair Carey moved onto the to-do list, noting most of it is done except for the advertising. A poster is needed specific to the first workshop. Ms. Kessler will take care of this. Chair Carey indicated she would like to take care of these assignments today so the Commission does not have to meet again in two weeks.

Advertising Assignments:

- Ms. Kessler will design the poster specific to the first workshop
- Chair Carey and Ms. D'Egidio will distribute posters
- City website posting is the responsibility of City staff
- Horatio Colony Museum and the Historical Society have advertising avenues they will utilize
- Chair Carey will write an article for the Sentinel and the Shopper. She will forward the drafts to Ms. Zerba and Ms. Carroll-Weldon.
- Chair Carey will prepare the press releases
- Chair Carey will forward the information to the New Hampshire Preservation Alliance
- The Commission will provide Ms. Carroll-Weldon with 240 postcards
- The postcard will go out in mid-August per Ms. Carroll-Weldon's request

Ms. Zerba asked about a listing for all the Heritage Commissions/Historic District Commissions in the County. Chair Carey will ask Ms. Kessler if she has this information. Councilor O'Connor mentioned the KSC Equinox, noting he would speak to Councilor Sapeta regarding a point of contact and report back to the Commission. Ms. Zerba suggested an ELF Magazine article on Jim Putnam's most recent house. Ms. Carroll-Weldon will provide Ms. Zerba the ELF Magazine contact information.

Ms. Carroll-Weldon reported on an email she received from Sally Zimmerman. Addressing the "How to Research Your Old House" topic, the talking points to advertise would be 1) learn how to use documentary sources along with the architectural features to help you understand when it was built and how it has changed, 2) what historical resources you can locate online to help you learn when your house was built and who lived there, and 3) how to know what is worth preserving in your house.

Ms. Carroll-Weldon had also asked Ms. Zimmerman about the lecture she gives on historic paint color, which could be used for the section on restoring a house. Chair Carey clarified the Commission was thinking more along the line of do's and don'ts more than the historic paint color. Chair Carey indicated she would contact Ms. Zimmerman in this regard.

Ms. Carroll-Weldon commented Ms. Zimmerman's availability would probably be the same for both programs - February 3rd or 10th or March 3rd or 10, 2018. Chair Carey suggested moving the date to Saturday, March 3, 2018. Chair Carey will contact Ms. Zimmerman to confirm the March 3, 2018 date and copy Ms. Carroll-Weldon on this communication. She noted that she has already contacted the venue.

Commission members agreed there was no need to meet again in two weeks.

b. Historic Building Recognition Program – Chair Carey reported Ms. Kessler has passed the plaque information onto Rhett Lamb, an update will be forthcoming. Chair Carey noted the postcard indicates the award is for 2018.

After discussion Ms. Zerba motioned for the Heritage Commission to make its first award/plaque presentation on September 14, 2017 to Jim Putnam for his work on the Court Street property. Councilor O'Connor seconded the motion, which carried unanimously.

Commission members discussed future awards explaining future recipients will have to apply; only the first award recipient will be determined by the Commission without an application. The application will be loaded onto the website along with the criteria. Recipients will not pay for the award/plaque, this will be a Commission expense.

At this point Ms. Carroll-Weldon arrived and Chair Carey brought her up to date on the discussion thus far.

Ms. Zerba will contact Jim Putnam and let him know of the Commission's intent and to obtain information on the Court Street property for the article/award. Ms. Carroll-Weldon suggested having a photographer for the award presentation. Chair Carey will write an article for ELF Magazine and forward it to Ms. Carroll-Weldon. Ms. Carroll-Weldon also suggested an article in the Sentinel Community section.

With Ms. Carroll-Weldon's arrival, discussion returned to agenda item 4.a. for discussion regarding an email from Sally Zimmerman.

c. Scholarship Program – After discussion, Ms. Zerba suggested getting the first workshop out of the way and then discussing this for 2018. There was no opposition noted from any Commission members.

5) Subcommittee Reports –

- a. Demolition Review Committee – Nothing at this time.
- b. Community Outreach Committee – Discussed under agenda item 4.
- c. Research Committee – Discussed under agenda item 4.

6) Staff Updates –

Chair Carey and Ms. Kessler are rechecking the residency requirements for Commission members.

7) New or Other Business – Nothing at this time.

8) Next Meeting- August 9, 2017 at 4:00 PM

9) Adjourn – There being no further Commission business, Chair Carey adjourned the meeting at 4:36 PM.

Respectfully submitted by,
Mary Lou Sheats-Hall, Minute-taker
July 13, 2017

Reviewed and edited by,
Tara Kessler, Planner

WEST STREET HYDRO

August 7, 2017

Heritage Committee

Chairperson

3 Washington Street

Keene, NH03431

RE: Ashuelot River Dam Project, FERC No. P-14471

To Chairperson:

The Federal Energy Regulatory Commission will review the following small hydro project for a Licensing through the Traditional Licensing Process (TLP) for the nonprofit, West Street Hydro, Inc.

The project is located at the Ashuelot River Park, behind 281 West Street, Keene, NH. The coordinates are

Easting: 249192

Northing: 48346.8

The present primary use for this dam is to maintain the level of the Ashuelot River behind the impoundment which is estimated at approximately 34 square surface acres and 120 acre feet of storage at the spillway crest elevation of 472 ft. MSL. The Ashuelot River runs through Ashuelot Park, a public park that is the site of many community events and public use. Jogging trails and exercise routes run the length of the trail. The Ashuelot River is canoed above the dam and further below the dam.

Existing conditions of the dam are below:

The dam is approximately 160 feet in total length and 16 feet in total height. The dam features a 134 foot sharp crested weir type overflow spillway along with a gate structure at the southerly abutment which is also made out of stone masonry. This outlet structure consists of a fore bay which feeds three sluiceways, each of which was once controlled by a vertical stem slide gate approximately 6.5 ft. H x 5 ft. W. The middle gate has been blocked with a steel plate and the remaining two gates also appear to be inoperable. The impoundment is also maintained by a dike structure, which extends approximately 1,750 feet upstream of the northerly abutment on the west side of the channel. The dam originally had flashboards which raised the head of the pond approximately 2 feet.

The following is a description of the project:

The Ashuelot River Dam Hydroelectric Project is potentially a 96 kilowatt project that could generate 360,000 kilowatt hours (KWH) annually. It is being proposed for study, and possibly development by West Street Hydro, Inc. at a dam owned by the City of Keene, NH. A gross head of 8.5 feet with a tail water effect of 4 feet was used in the applicant's estimation. The project would be located at the Ashuelot River Dam, also known as the Ashuelot Park Dam. The proposed powerhouse would be approximately 22 feet square. The reinforced concrete foundation and flume would be below grade. The brick superstructure would stand about 18 feet above grade at the peak of

WEST STREET HYDRO

the roof. The generating equipment would consist of two vertical shafts Francis turbines with approximate capacity of 43 kilowatts each. These turbines would be set in an open flume with vertical shafts extending to belt drives or gearboxes on the upper floor of the powerhouse (at grade level).

Please find the enclosed Study Plan. We welcome your agency's review and comments regarding the project. Once your agency has had the opportunity to review the project, we request a letter from your agency that has your comments and specific language requested from FERC.

Comments can be sent to:

West Street Hydro, Inc.
PO Box 323
Keene, NH 03431

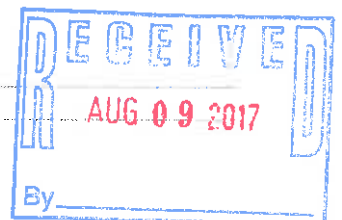
Upon your review of the project, please email or mail a copy of the letter to me. Also, please include any preliminary mandatory conditions. We hope to receive your project specific comments and letter within 30 days.

Sincerely,



Kenneth Stewart
Project Director
West Street Hydro
kstewart@mcmxi.com

20 CENTRAL SQUARE KEENE NH 03431



ASHUELOT RIVER HYDROELECTRIC PROJECT STUDY PLAN



West Street Hydro, Inc.
Project No. P-14471
Prepared by Kim Goddu, KEL Sustainability Group, LLC

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INTRODUCTION

West Street Hydro, Inc. (WSH) as an applicant for the Ashuelot Dam Hydroelectric Project (No. P-14471) is working with the Federal Energy Regulatory Commission (FERC), other public agencies and interested stakeholders in the Traditional Licensing Process (TLP). Our project offers an alternative to the City of Keene to reintroduce hydropower to the Ashuelot Dam and provide a renewable energy education demonstration.

It is important to understand the goals and objectives of each study and the sustainability of the project. Below are the summary points of the project.

1. This project is run of the river. The project will raise the water level one foot behind the dam; however, the project will not run during times of low flow.
2. Two small turbines will be housed in a powerhouse next to the Ashuelot Dam. This area houses the old hydropower infrastructure.
3. The project would generate approximately 370,000-kilowatt hours per year. The project would generate power at 480 volts, 3 phase. The connection would be stepped up to 34.5 kV to interconnect to the Eversource distribution lines, which run along West Street. The transmission line would run underground 1,000 feet or less to make this interconnection.
4. The project is subject to New Hampshire Department of Environmental Services Wetlands and shoreland regulations and bound by rules that protect water and other resources.
5. The project is a public/private partnership between WSH and the City of Keene. A Memorandum of Agreement will be drafted between the City of Keene and WSH for the operation, maintenance, and power distribution. WSH has a good working relationship with local, state and federal agencies and has engaged heavily with resident stakeholders. We believe our framework will allow all parties concerned to come to an agreement on the scope of the project.

PROJECT HISTORY

The proposed Project is located at Ashuelot River Park on the Ashuelot River in the City of Keene, New Hampshire in Cheshire County. The City of Keene is currently under a Letter of Deficiency (LOD) from the New Hampshire Dam Bureau for the Ashuelot Park Dam. Discussions of the deficiency consummated in the City initiating a series of public meetings to deliberate the cost of dam repair and maintenance versus removal. WSH was formed as a non-profit entity; the WSH Board of Directors approached the City of Keene to offer a third option that included restoring hydropower to the dam.

Since 2012, WSH has pursued licensing for the project known as the Ashuelot Dam Hydro Project. As determined by the Federal Power Act, the Federal Energy Regulatory Commission (FERC) administers hydroelectric licensing. On April 24, 2013, FERC issued WSH a 3-year Preliminary Permit for the proposed Project. Since that time, WSH participated in a wildlife study and hydraulic and natural resource study in conjunction with the City of Keene, help a Joint Agency Meeting and received permission to use a Traditional Licensing Process (TLP) in May 2015.

Throughout the process, WSH has maintained a value of transparency and inclusion. WSH routinely engages local individuals and organizations around the dam which have reduced the level of controversy surrounding the project. The environmental stewards at WSH see the benefits of an environmentally friendly, renewable energy supply and an alternative to fossil fuels.

An application for operation will be submitted to FERC in April 2018.

PROJECT BOUNDARIES

The project is small with limited boundaries. There is existing historical power infrastructure. Therefore, the project is limited only to the new development.

1. Ashuelot Park Dam: specifically the existing patio and sluice gates.
2. Proposed powerhouse: the open area directly west of the existing vaults.
3. Powerline: The area the buried power line would connect to the existing Eversource transmission line.
4. Tailrace: 50 feet of excavation to accommodate new powerhouse and retaining wall.
5. Construction staging area: The area directly next to the historical infrastructure, currently used as a footpath and seating area for park users.
6. Top of the Dam: The addition of one-foot flashboards across the spillway and an eel ladder.

It is our goal to use the existing infrastructure to preserve the historical nature in and around the dam area. The City of Keene and other group are for creating a powerhouse using materials similar to those of the surrounding architecture to maintain the façade of the area. Additionally, WSH recognizes the importance of collaborating with agencies, organizations and local stakeholders on wildlife impacts, flow impacts, and recreational purposes.

PROPOSED STUDY PLANS AND JUSTIFICATION TO STAKEHOLDER STUDY REQUESTS

West Street Hydro, Inc. (applicant) submits the proposed study plan for the Ashuelot Dam Hydro Project (P-14471) to the Federal Energy Regulatory Commission. The study plan reviews the proposed studies from agencies and local stakeholders and organizations. The plan is divided into three sections: proposed studies, studies completed and studies in progress. Appendix A includes all of the methodologies and necessary information for the hydraulic and natural resource study currently underway.

PROPOSED STUDY PLANS

The studies in this section respond to the study request from the preliminary permit issued by a resource agency or FERC. The proposed study plans are structured to collect and provide the data for the original study request but provide certain modifications based on the project size.

Studies Proposed:

- a. Water Quality Study
- b. Section 7 Endangered Species Analysis

- c. Rare Plant Survey
- d. Historical Resource Evaluation

STUDIES COMPLETED

Since the project inception, four studies are complete based on the initial concerns from the community, agencies and the Board of Directors.

STUDY REQUEST, METHODOLOGY, AND COST

STUDY PLAN 1: WATER QUALITY ASSESSMENT

GOALS AND OBJECTIVES

The purpose of this study is to determine if the Ashuelot Park Dam under current conditions (without flashboards) is causing or contributing to water quality standard violations. This baseline data can then be compared with post-construction monitoring to determine the impact of the proposed project on water quality. The objective of the study will be to collect water temperature, dissolved oxygen (DO), pH, nutrients and chlorophyll-a data under low flow, high temperature conditions downstream of the impoundment, within the impoundment and in the upstream riverine section and to compare those measurements with state water quality thresholds and criteria for Class B surface waters.

RELEVANT RESOURCE MANAGEMENT GOALS

WSH's goal is for the Ashuelot River Hydroelectric Project is to meet all state water quality standards in the Project impoundment. The USFWS and NHDES have similar goals in that they want to reduce or eliminate any project related water quality, or quantity, impacts to aquatic resources associated with the Project impoundment. The Ashuelot River Hydroelectric Project affects are limited to the impoundment through the Project turbine. WSH will manage releases to meet state water quality standards of 4.0 mg/l dissolved oxygen in the turbine release. These goals are relevant in protecting the public resources associated with the Project.

BACKGROUND AND EXISTING INFORMATION

A fairly extensive amount of water quality data exists for the Project. These data have been collected primarily by WSH. Much of the data are summarized in the Preliminary Application Document.

PROPOSED METHODOLOGY

WSH will consolidate baseline water quality information for the Project turbine releases to the impoundment and present that data in a report of information. WSH will also provide the necessary data to validate the current method of estimating tailrace dissolved oxygen concentrations at the Project.

LEVEL OF EFFORT AND COST

The level of effort is medium. Additional training is required for the report analysis. NHDES staff is training KEL Sustainability Group, LLC on the methodology and reporting requirements. The cost of the analysis is low at \$5,000.

STUDY PLAN 2: SECTION 7 ENDANGERED SPECIES ANALYSIS

GOALS AND OBJECTIVES

The purpose of this study is to complete Section 7 Endangered Species Analysis permitting, including assistance with preparing a Biological Assessment (BA), review of the issued Biological Opinion (BO), and other state or federal consultation related to the federally endangered Dwarf Wedgemussel (*Alasmidonta heterodon*).

RELEVANT RESOURCE MANAGEMENT GOAL

WSH's goal is for the Ashuelot River Hydroelectric Project is to meet all Dwarf wedgemussel standards in the Project impoundment.

BACKGROUND AND EXISTING INFORMATION

There are some historical and recent studies of the Dwarf wedgemussel in and around the impoundment of the Ashuelot River Dam. One was recently completed by the City of Keene Conservation Commission.

PROPOSED METHODOLOGY

The methodology will follow the study requires in the Section 7 requirements.

LEVEL OF EFFORT AND COST

The level of effort is medium. The total cost of the Section 7 Analysis will be \$3,000. It is unclear if long term monitoring will be required which could increase the cost significantly.

STUDY PLAN 3: RARE PLANT SURVEY

GOALS AND OBJECTIVES

The purpose of this study is to conduct a field survey for the Canada shore quillwort (*Isoetes riparia* var. *canadensis*) within a portion of the West Street Dam impoundment. Based on previous project documentation, historical plant records for this species are present in or adjacent to the project area. Natural Heritage Bureau has requested survey of the project area to better determine true presence or absence of this plant species.

RELEVANT RESOURCE MANAGEMENT GOALS

WSH's goal is for the Ashuelot River Hydroelectric Project is to identify and document Canada shore quillwort plants in the Project impoundment.

BACKGROUND AND EXISTING INFORMATION

Quillworts are inconspicuous, spore-bearing plants in the Isoetaceae family. They are obligate wetland species, occurring in aquatic or semi-aquatic environments such as the slow-moving Ashuelot River. Quillwort leaves are hollow and quill-like, arising from a central corm. Canada shore quillwort (*Isoetes riparia*) can be found in rivers, creeks, and tidal mud flats in southern Quebec and southeastern Ontario, south to eastern New York. The plant has 5 to 35 long, erect bright green to yellow-green leaves, which are 6 to 35 centimeters long. Canada shore quillwort is listed as endangered by the State of NH. Historical plant records for this species are present in or adjacent to the project area. NHNH reports one record for the study area, consisting of one observation in 1971 near Court Street with no apparent observations since.

PROPOSED METHODOLOGY

Plant identification will be based on information supplied by Natural Heritage Bureau using GPS mapping and typical diagnostic field and reference guides.

LEVEL OF EFFORT AND COST

The cost of this study is low. The rare plant survey will cost \$5,400.

STUDY PLAN 4: HISTORICAL RESOURCES

GOALS AND OBJECTIVES

The goal of this study is to assess the site for any historical significance of native populations.

BACKGROUND AND EXISTING INFORMATION

The building site is directly adjacent to the Ashuelot River Dam. The property is located within the Ashuelot River Park complex. The site is maintained by the City of Keene as a pedestrian area with viewing, biking, and play space.

PROPOSED METHODOLOGY

West Street Hydro will hire Monadnock Architects to perform the historical analysis.

LEVEL OF EFFORT AND COST

The level of effort for this study is minimal with a cost of approximately \$700.

STUDIES COMPLETED

Dwarf wedgemussel

Fish Analysis and Assemblage

Energy Generation Analysis

Hydraulic Modeling and Natural Resource Assessment