Special Workshop of
The City Council
and
Conservation Commission
December 8, 2015
Agenda

6:00 P.M. Workshop

A. Barker Mill Dam, Little Androscoggin and River Recreation – Mayor LaBonté (60 minutes)

After each workshop item is presented, the public will be given an opportunity to comment.

Examining Recreation Potential of the Little Androscoggin River through the FERC Relicensing of the Lower Barker Dam in Auburn, Maine

ENVR 417 - Community Engaged Research

Bates College

Nina Doonan, Max Millslagle, Sarah Stanley, William Hilton

Fall 2015

Acknowledgements:

We would like to thank our professors Jane Costlow and Tom Wenzel for providing clear and thoughtful suggestions throughout the duration of this project. We also express our gratitude to Mayor Jonathan Labonte and Eric Cousens, our community partners, for their vision and commitment to improving the community's rivers and recreation opportunities.

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I. Executive Summary

Advocating for increased river rights and opportunities is something that occurs in towns across the country each year as the Federal Energy Regulatory Committee (FERC) re-licenses dams. This report focuses on the Lower Barker Dam, located on the Little Androscoggin River in Auburn, Maine (see chapter XI). Our aim was to determine how best to increase community awareness in the area and how best to increase access to recreation possibilities on the river, just below the dam. Through our extensive research, we have learned that there is limited literature pertaining to the topic of dam relicensing in relatively small communities with low-energy producing dams. Our semester-long portion of this project is just one piece in the 5-year process of relicensing the Lower Barker Dam. With the final meeting between interested stakeholders and the owners of the dam, KEI, Inc., coming in Mid-2016, recommendations on how to best approach dam relicensing from a community-involvement standpoint, as well as how the City of Auburn should prepare for the relicensing of other dams coming in the area in the next five-to-ten years are offered below.

This report offers the following recommendations to the City of Auburn:

- Create, identify, and cultivate a steering committee comprised of local stakeholders to pursue increased recreational opportunities through the upcoming dam relicensing in Lewiston and Auburn.
- With the assistance of local stakeholders, put pressure on KEI Inc. to release a comprehensive and involved recreation plan for the Lower Barker Dam.
- Increase involvement and representation from both Auburn and Lewiston in the dam relicensing process.
- Establish a plan of action for stakeholders in Auburn and Lewiston to become involved in relicensing projects before they begin.

II. Summary of FERC Process

The Federal Energy Regulatory Commission (FERC) relicensing process is a government program meant to ensure and enhance stakeholder involvement in granting licenses for hydropower projects that use public resources, such as rivers, for private financial gain. In order to use a river to generate electricity, a power company must possess a license to operate their dam. All privately owned hydroelectric dams in the U.S. must go through the relicensing process every 30-50 years. The process takes place over a period of five years, with frequent meetings in between specific relicensing benchmarks.

Opportunities during relicensing

As of 1986, dam owners must give "equal consideration to energy conservation, the protection, mitigation of, damage to, and enhancement of fish and wildlife (including related spawning grounds and habitat), the protection of recreational opportunities, and the preservation of other aspects of environmental quality."[1] The process is best described as a mediation between the demands of the community, the specific needs of the environment, and the wishes of the power company that owns the dam. The mediator in question is FERC itself, whose job involves attempting to balance all parties' wishes and develop a cohesive licensing plan.

Due to the lengthy periods between license renewals, the process is a once- in- a-generation opportunity to fundamentally change the nature of a dam project and the use of the waterway in question. Stakeholders in these situations usually have an environmental focus and often aim for increased fish passage and/or protection of endangered species. Often underrepresented, but no less important, are the recreational needs of a community. In the case of the Lower Barker Dam project, recreation is a key area of focus for the Auburn community and its neighbors.

It is important to note that this relicensing process is not meant to be a confrontation with a company. Rivers are public resources and both the community as well as the company have rights that must be protected. FERC provides a platform for these rights to be debated in a way that tries to prevent conflict between government, civil society, and business sectors. FERC acknowledges that being a conscious dam owner and operator involves maintaining a certain level of environmental stewardship, and could at times result in replacing some energy production with a less easily-quantified level of environmental conservation.

[1] Creedon, Corey, Crimm, Naomi and David Cutler. "A guide to the FERC Hydro Relicensing Process and Stakeholder Involvement for the Relicensing of the Lewiston Falls Dam". Bates College: 1-31. 2011

Lower Barker relicensing process with dates

The actual relicensing process begins five years prior to the license expiration date. The current license for the Lower Barker Dam expires on January 31st, 2019,[2] meaning KEI Inc. began the relicensing process for the Lower Barker in January 2014. They have filed a notice of intent (NOI) with FERC stating that they intend to go forward with the relicensing process. They have also filed a pre-application document (PAD) explaining all pertinent engineering and power specifications, as well as any possible environmental concerns. In addition, KEI Inc. requested the use of the Traditional Licensing Process (TLP)[3]. FERC accepted both the NOI and PDA, and authorized the use of the TLP on March 19th, 2014.[4] Following the filing of these two documents, KEI Inc. published a Draft Study Plan on March 6th, 2015 which was open to the public for comment. On March 20th, 2015 a public meeting was held where stakeholders could appeal to KEI Inc. with concerns about the Study Plan and make their requests for changes to the document. On June 5th, 2015, after reviewing the concerns raised in this meeting and comment period, KEI Inc. submitted a Final Study Plan to FERC.[5]

In the next year and a half, KEI Inc. will conduct the studies required through the relicensing process and prepare a preliminary license application, or Draft Application. There will be a period where the stakeholders can raise concerns over the Draft Application, and KEI Inc. will hold a meeting to resolve these concerns. After that meeting, KEI Inc. must submit a Final Application to FERC before January 31st, 2017. Over the next two years, FERC will review the application before choosing one of four options listed below:[6]

1. Issue a new license to the current dam owners or to a competing applicant.
2. Issue a non-power license: a temporary license for a project that is in transition from power generation to another use outside of FERC's jurisdiction.
3. Decommission the project. This may mean removing the project or leaving it intact in a "nonfunctional form".
4. Issue a federal takeover of the project (this is a rare occurrence).

After FERC issues its final decision, the Lower Barker Dam will likely be licensed for the next 30-50 years. Barring further legislation or unforeseen changes to economy, environment, or a buyout by a group wishing to remove the dam, it will remain in operation as per the terms of the new license.

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[2] http://www.ferc.gov/industries/hydropower.asp Expected Relicense Projects FY 2015 - FT 2030
[3] Appendix A
[4] Maloney, Kelly. "Final Study Plan for the Lower Barker Project (FERC no. 2808)." Kleinschmidt Group on behalf of KEI (Maine). Online submission, June 5th, 2015.
[5] Kelly, 2015
[6] Creedon et. al. 2011

III. Comparable Communities

Advocating for recreation opportunities through the FERC relicensing process is something communities across the country do every year. As stated above, the FERC licenses are required to give equal consideration to interests not related to power generation, including recreation.[7] In considering recreation opportunities on the Little Androscoggin, the presence of the Lower and Upper Barker dams influence the river's ability to provide recreation opportunities. When the dam is relicensed, recreation opportunities such as increased paddling, fishing, and whitewater development could arise, paving the way for more community involvement with Auburn's outdoor spaces. In this Comparable Communities section, we will highlight how two other communities in New England gained recreation opportunities through the FERC relicensing process.

It is important to note that the Lower Barker Dam is extremely small in terms of power generation. Literature surrounding relicensing and recreation generally covers projects on larger rivers with higher-wattage dams, lending increased leverage to attempts at improving community recreation around these large-scale projects. Many communities already have long-established recreation opportunities around dams, often in man-made impoundments at the head of the dam. However, after speaking to Risa Shimoda, a whitewater recreation expert, we conclude that the lack of similar communities is not a detriment to the project, but rather an opportunity for the city to develop their own vision. She suggests that increasing community support to the project is the most vital tool in seeking increased recreation opportunities through the FERC process.

Despite the lack of similar projects to the Lower Barker Dam, we would like to highlight two projects in New England that made tremendous gains for recreation in their respective communities. While the scopes of their projects are significantly larger than that of the Lower Barker, the recreation interests in these areas resemble those in this community. Additionally, their processes were extremely effective in focusing on recreation, an area in which we think the City of Auburn stands to gain the most.

Deerfield River

In 1994, the New England Power Company, who own nine dams on the Deerfield River in Massachusetts, reached a settlement agreement as part of their FERC relicensing process. This settlement - valued at somewhere between 27 and 30 million dollars - provides whitewater release days on the river each year, a fund for environmental enhancement, conservation of land and

[7] FERC 1996

free access to river resources.[8] What is notable about the Deerfield River process is the formation of the FLOW Coalition, a group of whitewater boaters and relevant stakeholders committed to pushing for whitewater opportunity through the FERC relicensing process. New England FLOW served as the head of a steering group that was comprised of stakeholders who were interested in maintaining and creating recreation opportunities in the area. According to Risa Shimoda, what made the Deerfield project successful was the stakeholders' commitment to the project. They went into the process with a clear vision and enthusiasm, which were likely the keys to their success. We feel this process adequately reflects similar aims that the city of Auburn seeks from the relicensing of the Lower Barker Dam. The creation of a steering committee in Lewiston-Auburn to oversee recreation development on the cities' rivers is something we recommend creating in order to move forward with this, and other, relicensing projects.

See Appendix A more information on the Deerfield River relicensing process, the scope of the project, and contact information.

Fifteen Mile Falls

The Fifteen Mile Falls project is located on the Connecticut River between the borders of New Hampshire and Vermont. The project consists of three hydroelectric dam projects. During the dam's FERC relicensing process in 1997, a committee of stakeholders successfully negotiated with the New England Power Company to secure donations for conservation easements, an enhancement fund paid for by the company to improve recreation on the river and a fund to ensure the completion of further feasibility studies.[9] These feasibility studies will focus on wildlife conservation. Fifteen Mile Falls is significant to this project as it serves as an example of how to create river enhancement funds that can be used to develop environmental, recreation, or conservation projects on dammed rivers. The creation of an enhancement fund is something to strongly consider; while it might not be feasible for a project as small as the Lower Barker, it could be a viable option for the Great Falls Dam relicensing. We recommend the steering committee pursue this avenue.

See Appendix A for more information on the Fifteen Mile Falls relicensing and resources detailing a river enhancement fund.

[8] William K. Stevens, "New Rules for Old Dams Can Revive Rivers.
[9] Creedon et. al. 2011; Gabriela Goldfarb Consulting, Review Of Low Impact Hydropower Institute Application For Low Impact Hydropower Certification: Fifteen Mile Falls Hydroelectric Project (Portland: Gabriela Goldfarb Consulting, 2009).

Urban Whitewater[10]

We have become aware of several urban centers where whitewater features have been implemented after navigating the FERC process. One such project is in Missoula, MT where local paddlers and outdoor enthusiasts advocated for the construction of a whitewater feature downtown. The feature is located next to a park that is commonly used for city events and summer festivals. After the relicensing process granted flow releases and construction of the whitewater feature, business grew in the area and both a whitewater school and kayak shop opened their doors.

Another example of whitewater recreation in an urban area is on the Truckee River in Reno, NV. After flow releases were granted through the FERC relicensing process, the community built a whitewater park that has attracted significant business to the area. The paddling community paired the construction of the park with an annual event to raise awareness about this local whitewater recreation opportunity.

Both of these examples suggest that a strong commitment to developing recreation in a community is vital to ensuring project completion. In terms of the Lower Barker Dam, we recommend the city consider these projects' successes in building community support and awareness of urban whitewater opportunities.

IV. Interested Community Stakeholders

A list of potential stakeholders that could participate in the future relicensing of dams in Lewiston/Auburn can be found in Appendix B. This section will focus on current responses we have received from recently contacted stakeholders. Tree Street Youth and the Grow L+A River Working Group are two local stakeholders who have replied to our initial inquiry regarding interest in this project. Tree Street Youth - a local organization aiming to support the youth of Lewiston/Auburn through academics, the arts, and athletics in a safe space that encourages healthy physical, social, emotional, and academic development - indicated that they are interested in remaining informed in regards to the status of this project.

Peter Rubins, founder of the Grow L+A River Working Group, expressed a high level of interest in the project, suggesting that the Grow L+A River Working Group may be interested in becoming more directly involved in this project through a steering committee, though the organization needs to gauge commitment and interest from all of its board members. This group has formed very recently and consists of a small group of board members who hold meetings in order to assess "best use" strategies for the rivers in the Lewiston and Auburn communities.

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[10] Personal communication with Risa Shimoda.

Daryn Slover, a photojournalist for the Lewiston Sun Journal also expressed interest in remaining informed on the status of the project. The National Park Service (NPS) is a conservation-based stakeholder that showed interest in remaining informed as to the status of this project. Kevin Mendik, the Hydro Program Manager for the National Park Service (New England Region) was our NPS contact. Risa Shimoda, of the Shimoda Group, is a notable and internationally recognized advocate of river stewardship and whitewater recreation. She provided additional information about river conservation and recreation studies conducted in comparable communities. She also echoed the importance of highlighting the advantage that Auburn has: a developed, urban community that also offers outdoor recreation along a significant Maine river.

The Penobscot Paddle and Chowder Society is a recreational organization which has expressed interest in engaging in this project and perhaps organizing a paddle on the Little Androscoggin. Ryan Galway, a local paddling enthusiast, has also shown great enthusiasm in organizing flow release paddle events on the Little Androscoggin this Spring. He has experience participating in flow studies in Massachusetts and feels strongly about creating a successful day for paddlers. He has also expressed interest in being engaged in general promotion of recreation along the river. We have recently heard back from Adam Platz of Baxter Outdoors, who suggested that the company is very interested in being involved. Their involvement, as well as the involvement of the Androscoggin Land Trust, with the whitewater release days next Spring could greatly contribute to a support network for having events on the river.

V. Benefits of a Steering Committee

When dealing with projects that span long periods of time and involve multiple organizations that operate on different timescales, it is advisable to create a steering committee in order to best manage the available resources. This committee should be formed by multiple people working towards a common objective. A steering committee is a dedicated group comprised of cross-sector community partners who provide strategic direction and represent relevant facets of the ecosystem in which they are working.[11] Ideally, this steering committee would help to develop a common goal centered around a problem, guide the processes involved with successfully completing the goal, help develop an organizational philosophy, and ensure sustainability as people join and leave the committee.[12]

With regard to the FERC relicensing of the Lower Barker Dam in Auburn, Maine, we believe that the best course of action moving forward is for the formation of a steering committee

[11] Collective Impact Forum. Tools for Steering Committees.
[12] Judy A. Braus and David Wood. Environmental Education in the Schools: Creating a Program that Works, Desktop Publishing: 1993.

that would be tasked with leading relicensing processes in the Lewiston-Auburn community for the years to come. The City of Auburn, or another invested organizations, might achieve this by linking the resources of multiple different community organizations and partners that are interested in river restoration issues. A primary goal of the proposed steering committee would be to promote community engagement relating to recreation along the Little Androscoggin. They would also be situated at the forefront of future relicensing projects in the Lewiston/Auburn area, such as the Upper Barker Mill on the Little Androscoggin expiring in 2023[13] and the Lewiston Falls Dam on the Androscoggin River, whose license expires in 2026.[14]

It is advised that a steering group be comprised of stakeholders from various sectors of the community. Appendix B provides a full list of interested stakeholders in the Auburn community. Some of the organizations that we have contacted are already involved separately in the FERC relicensing process of the Lower Barker Dam and have attended the comment period meeting on March 20th, 2015. Based upon our interactions with the stakeholders who have communicated with us, we found that the Penobscot Paddle and Chowder Society, the Androscoggin Land Trust, and the GROW L+A River Working Group may reflect organizations with enough enthusiasm, interest in river recreation, and availability to participate in a steering committee. Although the GROW L+A River Working Group is a relatively recent organization, we have encountered a large amount of enthusiasm from its founder, Peter Rubins. We recommend that if the City has interest in pursuing a steering committee, these organizations be contacted as possible members and leaders of the committee.

If a steering committee is formed, several sources have been gathered that provide useful guidelines to operating this new group. For example, Braus and Wood (1993) provide recommendations on how to best assure steady communication between different community partners. The literature also helps to fully define what is desired and required when organizing a steering committee comprised of colleagues and organizational representatives from different areas of a community. Furthermore, Thomas (2013) provides an example of how a steering committee designed to advocate for recreation opportunity fits into the FERC process.[15]

[13] http://www.ferc.gov/industries/hydropower.asp Expected Relicense Projects FY 2015 - FT 2030
[14] http://www.ferc.gov/industries/hydropower.asp Expected Relicense Projects FY 2015 - FT 2030
[15] Please see Appendix C. We will illustrate the useful strategies that could be used to create a steering committee with applications to the Lower Barker Dam project.

VI. Summary of Deliverables

Website

We created a website[16] in order to provide our community partners with a platform for sharing and distributing information pertaining to recreation opportunities and dam relicensing in a user-friendly manner. This website was created with the hope that it could one day be incorporated into the City of Auburn's website as a page dedicated to river recreation possibilities. We feel that the creation of a website will enable the city and other stakeholders to quickly connect members of the community. The end goal for this website is to develop a space where community members could post information about their recreation experiences on the Little Androscoggin River, seek advice on local recreation opportunities, and learn about the FERC process as it affects their community. We have identified a dam project in New Hampshire that has its own website; it seems to be an excellent way of communicating with the community and interested parties.[17]

Printed Materials

We have designed brochure and flyer templates (see Appendix D) that educate the public about the FERC relicensing process, as well as inform interested parties of upcoming events on the Little Androscoggin River. These materials would hopefully be distributed by the city or a future steering committee to interested community members and stakeholders.The flyer that has been drafted will be used to advertise a proposed whitewater release day in the Spring of 2016; a large amount of support for this event could show the owners of the dam, KEI Inc., that there is interest in increased recreational opportunities on the Little Androscoggin River in the heavily urbanized area just below the dam.

[16] See Appendix D for link to web domain.
[17] The domain for the Eastman Falls Relicensing Project: http://www.eastmanrelicensing.com/

VII. Timelines for FERC Process and City of Auburn

Timeline

Barker Mill Specific Date	General Date (years from relicensing)	FERC	City of Auburn
1/31/14	**5+**	Notice of Intent to relicense must be submitted	Assemble steering committee and have clear goals defined
3/6/15	**3.75**	Draft Study Plan due	Review study plan
3/20/15	**3.75**	Community meeting to discuss study plan	Propose amendments to study plan
6/5/15	**3.5**	Final Study Plan due	Keep careful documentation, begin drawing up concerns
1/1/16-1/1/17	**3-2**	Company conducts studies as per Study Plan	Double check studies, make note of issues with methodology. Make use of public support for changes to license terms
1/1/16-1/1/17	**3-2**	Company creates Draft Final License Application	Review Draft Application for concerns
1/1/16-1/1/17	**3-2**	Review of Draft Application with community	Present concerns about study results and Draft Application, keeping in mind overall goals
1/31/17	**2**	Final License Application due	Continue to draw public support and remind FERC of community concerns
1/31/19	**0**	FERC grants new license **OR** FERC refuse license application	Devise ways to pursue goals outside of FERC process.

VIII. Little Androscoggin River Day

KEI Inc. will be conducting flow studies below the Lower Barker Dam in the Spring of 2016. With increased water flow being released downriver, these flow studies will provide an opportunity for whitewater paddling directly in downtown Auburn. Rafting opportunities such as standing waves and whitewater slalom courses could become available for recreational usage. After connecting with several stakeholders and whitewater experts, we recognize the importance of garnering community engagement around these flow releases, possibly in the form of a "river day", a festival-like event that would connect local businesses, recreation opportunities, outdoor enthusiasts, and local residents in an outdoor space. Risa Shimoda pointed to several other communities that have created events surrounding whitewater paddling and flow studies with great success in building community support. She suggested that in a developed area it is essential to facilitate and create opportunities for people to come to the river, even if they are not interested in paddling. Because the Lower Barker Dam site offers walking trails and the Little Andy Park, we believe such an event would help bolster recreation awareness in Lewiston/ Auburn and allow those unfamiliar with recreation to see the river in a new light.

Ryan Galway, a local paddling enthusiast and American Whitewater member, has expressed interest in organizing flow release days and paddling events that could pull together whitewater and recreation enthusiasts from all over New England. He recommends advocating for the real-time publication of flow data by the owners of the dam, KEI Inc. Paddlers often travel many miles in search of whitewater features and it is imperative to provide real-time information on river flow levels. We recommend advocating for a series of whitewater release days while KEI is conducting flow studies in the Spring of 2016. We have established contact with Adam Platz of Baxter Outdoors and he is enthusiastic about working to sponsor events in the future. As mentioned above, Ryan Galway is enthusiastic about taking the lead on organizing the paddling events.

IX. Recommendations for Moving Forward

In order to make the relicensing process effective for stakeholder cooperation, community participation and recreation improvement, we recommend creating a steering committee to spearhead the relicensing process of the twin cities' dams, beginning with the Lower Barker Dam. This committee should incorporate a wide range of stakeholders, including community members, local government officials, and representatives from non-governmental organizations (NGOs). This steering committee would serve as a liaison between the hydropower company and other stakeholder groups. The most important aspect of developing a steering committee to work

on the Lower Barker is to practice communication and collaboration strategies in preparation for future relicensing projects in the area. Looking forward to the Great Falls Dam, we feel the city must recognize the need for collaboration now, as to give all future parties an equal opportunity to familiarize themselves with the FERC proceedings.

This steering committee should:

- Identify a representative from a one organization or city commission to chair the steering committee. This individual and their organization should be committed to bridging all interested parties and should be interested in spearheading future licensing issues in both municipalities.
- Establish a plan of action for stakeholders and the municipalities of Lewiston and Auburn to become involved in future relicensing projects before they begin moving into the future. Identifying clear roles for participating organizations will help maximize the potential for impact of this effort.
- Advocate for funds to increase recreation potential rather than removal of the dam. Dam removal is often evaluated on a case-by-case basis, and small dams are often not seen as priorities unless they are of an immediate threat to the community.[18] We fear that if the dam were not issued a license, it would sit on the property until a third party came along to purchase it or pay for its removal. For these reasons, we believe it would be better to pursue relicensing with emphasis on recreation rather than slating the dam for removal.
- Realize that goals for the relicensing might not be met, and that it is better to aim high and settle for a compromise than to target the bare minimum.
- Plan and execute a Little Androscoggin "river day" surrounding the scheduled flow releases in the Spring of 2016. This will give the city and FERC a chance to see what kinds of recreation local residents and river enthusiasts are interested in seeing, as well as raise awareness about recreation in the community. We feel that such an event will enable the city to better connect its residents with the river. An excellent turnout will show the commitment of the community to the value of the Little Androscoggin.

[18] Martin W. Doyle, Jon M. Harbor and Emily H. Stanley, 'Toward Policies And Decision-Making For Dam Removal', Environmental Management 31, no. 4 (2003): 453-465.

X. Appendices

Appendix A

Deerfield River Project Specifics
Location: Western Massachusetts
Capacity:[19] combined capacity of 86 MW between eight dams
Relicensing (years):[20] 1997
Stakeholders:[21] FLOW coalition, American Whitewater, Appalachian Mountain Club, Conservation Law Foundation, Trout Unlimited, various state and governmental agencies
Outcome:[22] 40 guaranteed whitewater release days every summer on "The Dryway", and 106 releases on another section of the river, $100,000 river enhancement fund for conservation efforts, improved river access for the public, wildlife enhancement program.

Fifteen Mile Falls Project Specifics[23]
Location: Border between NH and VT
Capacity: 376 MW (combined)
Relicensing (years): 1997
Stakeholders: New Hampshire Fish and Game Department (NHFGD), New Hampshire Department of Environmental Services (NHDES), Vermont Agency of Natural Resources (VANR), United States Fish and Wildlife Service (USFWS), United States Environmental Protection Agency (EPA), National Park Service (NPS), Appalachian Mountain Club (AMC), Connecticut River Joint Commissions (CRJC), Connecticut River Watershed Council (CRWC), New Hampshire Rivers Council (NHRC), North Country Council (NCC), Northeastern Vermont Development Association (NVDA), New Hampshire Council of Trout Unlimited (TU)
Outcome: Creation of a river enhancement fund, a study fund (to conduct future studies of recreation, wildlife, environmental protection, etc.), donations of conservation easements, and increased flow levels.

[19]Transcanda Hydro Northeast Inc., *Attachment C: Project Description.*
[20] Hydropower Reform Coalition, '5.1 New England Power (Now Usgen PG&E), Deerfield River, Vermont And Massachusetts - FERC # 2323'.
[21] Christopher 1995.
[22] Americanwhitewater.org, 'Deerfield River (MA)'.
[23] Low Impact Hydropower Institute, 'LIHI Certificate #39 | 15-Mile Falls'.

Appendix B. List of Stakeholders & Stakeholder Information

Conservation and Environmental	*Recreational*	*Local Community*	*Government*
Maine Rivers*	American Whitewater*	Auburn Boys and Girls Club	City of Auburn*
Atlantic Salmon Federation*	Maine Trout Unlimited	Tree Street Youth	Auburn Parks and Rec. Department
Androscoggin Land Trust*	L.L. Bean Outdoor Discovery School	Healthy Androscoggin	Auburn City Council
Maine Department of Environmental Protection*	Maine Outdoor Adventure Club	New Auburn Neighborhood Group	Auburn Conservation Coalition
National Park Services*	Appalachian Mountain Club	Bates Outing Club	L/A Economic Growth Council
Maine Department of Inland Fisheries and Wildlife*	Penobscot Paddle and Chowder Society	Daryn Slover (Lewiston Sun Journal Photojournalist)	
		Barker Mill Tenant Group	
		Auburn Chamber of Commerce	
		Colby Gilbert (Kennebec River Guide)	
		Grow L+A River Working Group	

** Organizations who have already made an appeal during the FERC relicensing process*

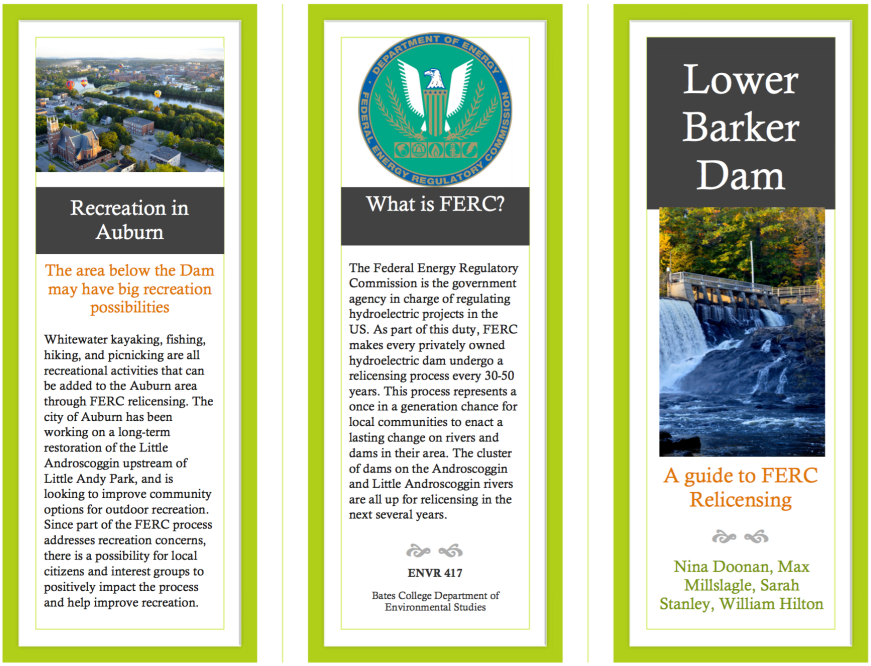
Appendix C

Traditional vs. Integrated Relicensing

Appendix D

Web domain: http://littleandy.weebly.com/

Brochure:



Recreation in Auburn

The area below the Dam may have big recreation possibilities

Whitewater kayaking, fishing, hiking, and picnicking are all recreational activities that can be added to the Auburn area through FERC relicensing. The city of Auburn has been working on a long-term restoration of the Little Androscoggin upstream of Little Andy Park, and is looking to improve community options for outdoor recreation. Since part of the FERC process addresses recreation concerns, there is a possibility for local citizens and interest groups to positively impact the process and help improve recreation.

What is FERC?

The Federal Energy Regulatory Commission is the government agency in charge of regulating hydroelectric projects in the US. As part of this duty, FERC makes every privately owned hydroelectric dam undergo a relicensing process every 30-50 years. This process represents a once in a generation chance for local communities to enact a lasting change on rivers and dams in their area. The cluster of dams on the Androscoggin and Little Androscoggin rivers are all up for relicensing in the next several years.

ENVR 417

Bates College Department of Environmental Studies

Lower Barker Dam

A guide to FERC Relicensing

Nina Doonan, Max Millslagle, Sarah Stanley, William Hilton

How You Can Help

If you or anyone you know is interested in becoming more involved with this process, the Auburn community can use your help! The best way to do this is to make your voice heard. There is a public meeting to present the FERC relicensing draft sometime summer 2016. This is a great chance to get out there, address the company that owns the dam, and make sure that your opinion is taken into account. In addition, we have created a website to keep the community educated not only on the Lower Barker Dam, but on all the dams in the L/A area that are about to come up for relicensing. This includes the big dam on the Androscoggin, which could change the course of both cities for decades to come.

There are also plans for a whitewater release day during the spring. This would be a time when the Dam temporarily stops operation and the full flow of the river is directed through the river. The hope is that with full flow, the area below the dam will be great to kayak through. So stay alert for an upcoming announcement on a whitewater release day, and come down either as a participant or spectator. Demonstrating community support for whitewater recreation will go a long way towards securing that recreation for the future.

Quick Links

Scan this QR code with a QR reader to show your support and get involved with bringing more recreation to Auburn.

Or, send an email to littleandropaddle@gmail.com

You can also get in contact with the following groups to get involved:

Flyer:

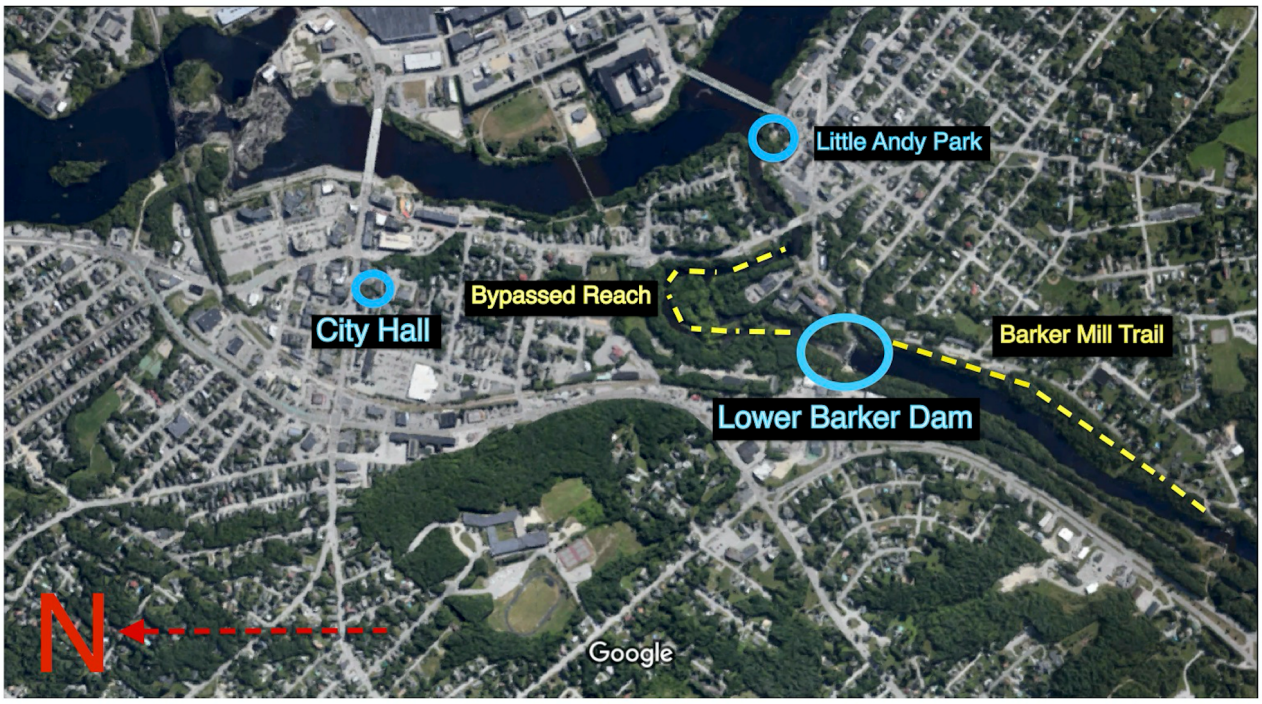
CONTROLLED
WHITEWATER RELEASE
SPRING 2016
Scan this QR code or
contact:
littleandropaddle@gmail.com
littleandy.weebly.com
Show your support for equal recreational river opportunities on the Little Androscoggin River. Sign up for the first-ever controlled whitewater release below the Lower Barker Dam in the heart of Downtown Auburn. Coming Spring 2016.

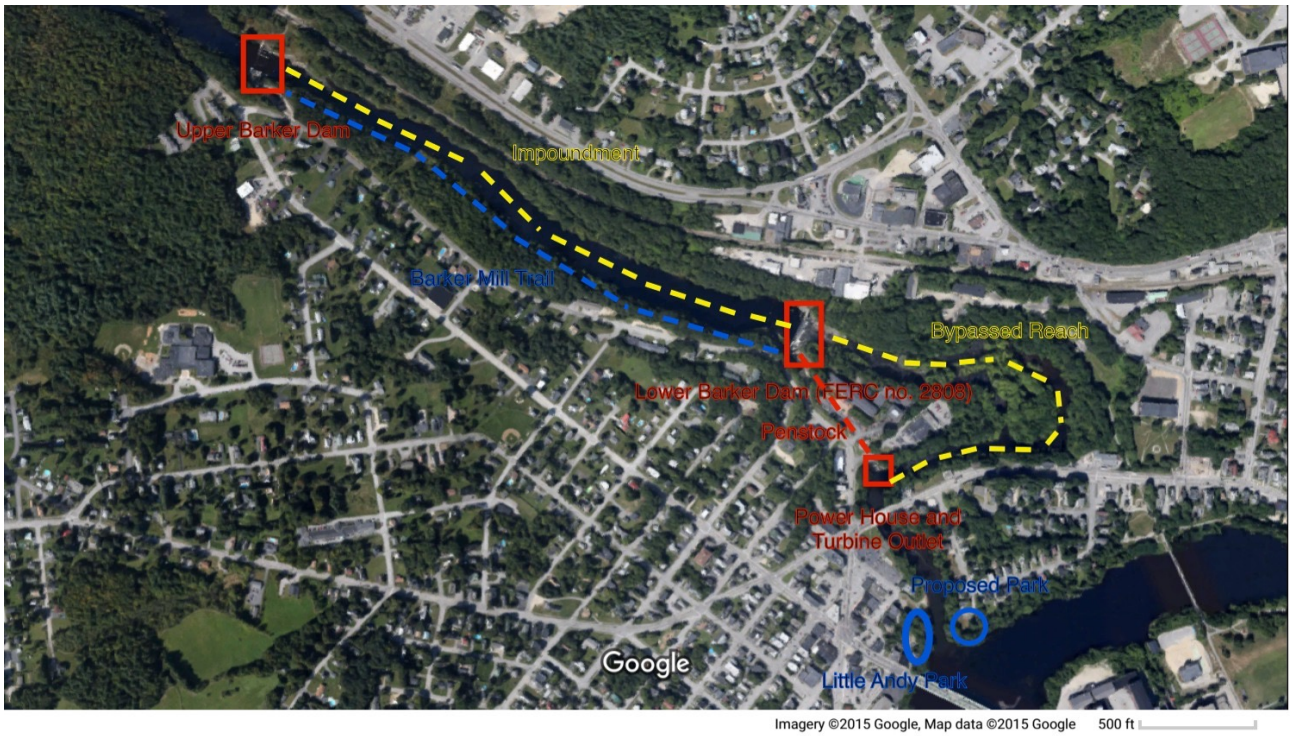
Appendix E

Contact Information for Stakeholders

Auburn Recreation Department - (207) 784-0191
Auburn Economic Growth Council- John Holden jholden@economicgrowth.org (207)-786-0161
Androscoggin Land Trust - Deb Charest - dcharest@androscogginlandtrust.org
Atlantic Salmon Federation - John Burrows - john@asf.comcastbiz.com
Auburn Boys and Girls Club - Robert Clark (207) 882-2446
Bates Outing Club - contact current President - http://www.bates.edu/boc/directors/
Baxter Outdoors - Adam Platz - adam@baxteroutdoors.com
Colby Gilbert - colby@rsmwc.net
Daryn Slover - dslover@sunjournal.com
Grow L+A River Working Group - Peter Rubins - prubins1@gmail.com
Healthy Androscoggin - Christine Adamowicz - adamowch@cmhc.org (207) 795-2506
Maine Rivers - Landis Hudson - landis@mainerivers.org
Ryan Galway- rcgalwa@hotmail.com (207) 650-0978
Tree Street Youth - treestreetyouth@gmail.com (207) 577-6386
Whitewater America - Risa Shimoda - risa@theshimodagroup.com
Whitewater America - John Anderson - j.anderson126@verizon.net

XI. Maps of Project Area





XII. Annotated Bibliography

Americanwhitewater.org,. 'Deerfield River (MA)', 2015. https://www.americanwhitewater.org/content/Project/view/id/deerfield/.

Braus, Judy A and David Wood. Environmental Education in the Schools: Creating a Program that Works. Desktop Publishing. Book. 1993.

This book contains some chapters that give us the basic insights and fundamentals behind creating a long-lasting and sustainable steering group or committee for our final recommendation to the Auburn City Council. This literature gives recommendations on how to best assure steady communication between different community partners. The literature also helps to define fully what is to be desired and what is required while setting up a steering committee that is created by colleagues and organizational representatives from different areas of a community.

Chen, Valerie. "Lower Androscoggin River Watershed Initial Ecological Risk Assessment". Thesis. Western Washington University, 2006. Print.

This is a Master's thesis that seeks to measure the ecological risks along the Androscoggin River watershed, which includes our study area of the Little Androscoggin River. The study seeks to identify and analyze potential stressors on the Androscoggin River. I believe that we can use this study to look at data pertaining to ecological risks of damming the Little Androscoggin River. The study speaks to the ecological dangers of water impoundments - the areas where water is stored behind dams for later use. We will use this document to speak to the environmental stressors created by dam impoundments.

Christopher, Tom. "Deerfield Victory!" American Whitewater Journal 40, no. 2 (1995): 12-13.

This article describes in greater detail the events that took place after a successful FERC relicensing on the Deerfield River. This was a victory for American Whitewater and outdoor enthusiasts in the area, as the license agreement came with an increased number of whitewater release days, grants for conservation easements, and wildlife enhancements. This article also talks about the FLOW coalition, a group organized to fight for recreation through the FERC relicensing process. Because the Deerfield project took place almost twenty years ago, it seems that the FLOW coalition is no longer in existence, but it is a good lead to investigate.

Collective Impact Forum. Tools for Steering Committees. collectiveimpactforum.org/sites/default/files/Steering%20Committee%20Toolkit%20-%20for%20Upload%20-%2012.18.13.docx. Accessed: October 28, 2014.

This is a document produced by an organization called the Collective Impact Forum. They provide a literal toolkit for producing an effective and reliable steering committee for a community-engaged cause. It includes a guide for determining the correct community partners to form a steering group, how to depict and describe responsibilities within the steering group, sample meeting agendas for steering groups and a guide for how to lead productive and engaging discussions within a steering committee. We will most likely use this as our main source to condense information on how best to form a steering committee or group to take on the FERC relicensing of the Lower Barker Dam and the Great Falls Dam further down the line.

Crane, Jeff. "“Setting the river free”: The removal of the Edwards dam and the restoration of the Kennebec River." Water history 1, no. 2 (2009): 131-148.

In 1989, the FERC ordered the removal of the Edwards Dam on the Kennebec River in Maine. The dam was removed for the sole purpose of restoring fisheries of multiple species including alewives and the critically endangered shortnose sturgeon. This paper will be a great resource to study the effects on a river and its fisheries system after having removed a dam. We hope to use this paper to present the positive effects that dam removal can have on fish passage and the restoration of fisheries.

Creedon, Corey, Naomi Crimm, and David Cutler. “A guide to the FERC Hydro Relicensing Process and Stakeholder Involvement for the Relicensing of the Lewiston Falls Dam”. Bates College: 1-31. 2011

A few years ago, another ENVR 417 group did a project remarkably similar to ours. Although our project will focus on a different dam and different issues, we can still use this not only as a source for some information, but as a source for sources, and even a sort of rough idea of what our final product needs to include at a bare minimum. It offers case study information about other successful FERC relicensing projects in New England, as well as preliminary research about the relicensing of the Great Falls Dam. The case studies compared in this study have greatly informed our research; their synthesis of information about the dams on the Deerfield River and Connecticut River helped guide our understanding of what recreation possibilities could come from the relicensing at the Lower Barker. This study is also helpful for guiding our potential recommendations for future relicensing projects in the L/A area.

Didisheim, Pete. “A Citizen’s Guide to Dams, Hydropower, and River Restoration in Maine.” Natural Resources Council of Maine. Accessed September 2015.

This is a document that was put together with funding from the Natural Resources Council of Maine. It details the history and consequences of the damming of many of Maine’s largest rivers. It focusses mainly on the negative environmental impacts that dams have on river systems. The document also provides some great detail on the benefits of removing dams and focuses greatly on the Kennebec River system which is very geographically close to the site of the Lower Barker Dam. The document details the different types of possible fish passage and also compares the power output of various large dams in the state of Maine. The document also lists a great amount of events that take place on rivers around the state of Maine and we could use those to model an event on the Little Androscoggin river to garner interest in recreation from local residents. We will use this document for information on the effects of dam removal and for the great graphics that it provides.

DiGennaro, Bruce, and Gordon H. Merklein. Recreation monitoring. No. CONF-9507190--. American Society of Civil Engineers, New York, NY (United States), 1995.

The paper describes the increased occurrence of recreation monitoring requirements in license articles and discusses methods for complying with such requirements. This may be useful for our report as it describes legal requirements related to hydropower and recreational opportunities. The potential for misinterpretation of legal requirements is lessened as we become more familiar with the literature which describes past monitoring.

Doyle, Martin W., Jon M. Harbor, and Emily H. Stanley. 'Toward Policies And Decision-Making For Dam Removal'. Environmental Management 31, no. 4 (2003): 453-465. doi:10.1007/s00267-002-2819-z.

Federal Energy Regulatory Commission. “Hydropower Licensing- Get Involved: A Guide for the Public.” FERC Office of External Affairs, no date.

This is a text published by FERC that details how the public can get involved with a relicensing process. It helps explain a lot of the minutiae in the process, and is great for building the timeline. Unfortunately, since it is published by FERC it might be a bit biased, and could gloss over some of the less convenient or fair parts of the process.

Federal Energy Regulatory Commission,. Recreation Development At Licensed Hydropower Projects. Washington DC: Division of Project Compliance and Administration, 1996. Print. https://www.ferc.gov/industries/hydropower/gen-info/guidelines/recreat-dev-hydro-licen.pdf

This source provides a history of recreation opportunity through the FERC process. In 1935, when the Federal Water Power Act was incorporated into the Federal Power Act (FPA), an amendment was created to include recreation as a public benefit. The article goes on to explain the relevance of recreation in the law through the 1980s. Modifications or additions surrounding project recreation facilities might require an amendment to the filing for relicensing. This article suggests developing a comprehensive plan for recreation around the dam site outlining the quality and supply of recreation potential and how that might change over the course of the license.

"Forming a Steering Group, What Makes a Good Group?" Accessed October 26, 2015.

This article provides information on the general process of forming a steering committee as well as outlines role of the committee chair, suggestions for planning in a group context, and advise on how to cooperate and reach conclusions when a committee has multiple actors or entities involved. Though this is not an academic source, it does provide necessary information that presents a useful guide to developing a dedicated and effective steering committee.

Gabriela Goldfarb Consulting,. Review Of Low Impact Hydropower Institute Application For Low Impact Hydropower Certification: Fifteen Mile Falls Hydroelectric Project. Portland: Gabriela Goldfarb Consulting, 2009. http://www.lowimpacthydro.org/assets/files/lihi-cert-app-files/15MileFallsReview.pdf.

Hooker, Megan. "Recreation and Aesthetics in the Public Interest: History and Overview of Hydropower License Denials by the Federal Energy Regulatory Commission." Journal of Environmental Law and Litigation 29, no. 1 (2014): 87-122.

Written by an American Whitewater staff-person, this article offers a perspective on FERC relicensing that highlights the need for recreation and other river benefits rather than pure power generation. The introduction of the article makes the author's stance on dams clear; she positions herself on the offensive and does not seem to hold the nation's dams in high regard. The article goes on to provide an overview of FERC license denials on the grounds of recreation. The information the author provides could be very useful to our research, as she gives an overview of many cases during the last 30-40 years. Identifying similarities and differences

between the Lower Barker Dam and the city of Auburn and other dams and their different cities could help guide our project and influence what leads we pursue.

Hydropower Reform Coalition,. '5.1 New England Power (Now Usgen PG&E), Deerfield River, Vermont And Massachusetts - FERC # 2323', 2015. http://www.hydroreform.org/hydroguide/shorelands/5-1-new-england-power-now-usgen-pg-e-deerfield-river-vermont-and-massachusetts-ferc-2323.

Johnson and Graber. "Enlisting the Social Sciences in Decisions about Dam Removal." Bioscience 52, no. 8 (2002): 731-738.

As far as articles go this is pretty spot on for our subject. It's more or less a summary of the social processes in action surrounding small dam removal. It deals with the problems that arise from group decisions that are often partisan and divisive, as well as offering solutions and advice for better processes. Most of the solutions can be summarized as "educate the stakeholders."

I don't think there is any original research in here, nor does it strike me as very objective. That being said, it directly applies to our topic and touches on some of the stuff we are going to deal with.

Kosnik, Lea-Rachel D. "Sources of Bureaucratic Delay: A Case Study of FERC Dam Relicensing." The Journal of Law, Economics, and Organization 22, no. 1 (2005): 258-288.

This is a kind of cool article on how FERC can sometimes take years to get through their backlog and issue licenses. It puts a good amount of the blame on Environmental Groups, which is really interesting. It could go a long way to explain why FERC puts a lot of the responsibility of relicensing on the company, and might not end up with entirely fair outcomes.

Leimbach, Julie. "Preparing for FERC Hydropower Relicensing: An Activist's Guide." Hydropower Reform Committee. April 2009, Accessed September 2015.

This is a hundred page long review of the FERC process from the perspective of an activist trying to reduce or eliminate the dam's impact on a river. It goes into detail on how exactly, an individual, interest group, or NGO would go about dismantling a hydroelectric dam through the FERC relicensing process. It also includes a glossary of terms often used in the FERC process explained in simple English.

With all that being said, it a guide for an activist, and inherently involves an us versus them attitude which doesn't seem to leave a lot of room for compromise. That might work well

for high profile dams, but something tells me that for projects on the scale of the Lower Barker Dam a more subtle approach might be called for.

Loomis, John and Marvin Feldman. "An Economic Approach to Giving 'Equal Consideration' to Environmental Values in FERC Hydropower Relicensing." Rivers 5, no. 2 (1995). http://resourcedecisions.net/pubs/FERC.pdf

This paper offers a statistical, economic analysis of flow releases. It ascribes a monetary value to increased flow days, in terms of aesthetic value and increases in recreation opportunity, by analyzing the value of visits, recreation, and preservation value. This paper conducts a case study of a dam with falls significant larger than those on the Lower Barker Dam, but offers valuable information about the valuation process for environmental and recreational benefits. We could use this information in analyzing the timeline and providing information about how to go about conducting an economic impact study of the Lower Barker in the next phases of the relicensing process. More likely, this could impact the Great Falls Dam relicensing process as there is more time to conduct a study, and the aesthetic value is possibly more significant because of its visibility between the two cities.

Low Impact Hydropower Institute,. 'LIHI Certificate #39 | 15-Mile Falls'.Lowimpacthydro.Org, 2015. http://lowimpacthydro.org/lihi-certificate-39-15-mile-falls-project-new-hampshire-ferc-2077/.

Maloney, Kelly. "Final Study Plan for the Lower Barker Project (FERC no. 2808)." Kleinschmidt Group on behalf of KEI (Maine). Online submission, June 5th, 2015.

This is the text that KEI submitted to FERC detailing the concerns raised about relicensing, and stating what studies will be carried out. It also has a whole bunch of correspondence between the stakeholders. Useful for identifying stakeholder involvement, as well as establishing timeline stuff.

Morhardt, S. S. "Recreation and hydropower: A partnership deserving attention." Hydro Review; (United States) 10, no. 2 (1991).

This paper may be valuable in that it describes recreational requirements of the applicant. In addition, the role of public support in a hydropower project is also discussed, making this paper a potentially useful source as the city of Auburn attempts to provide evidence to KEI that a certain level of recreation is not only required but desired by the city's residents.

Poland, Sherman S. "Development of Recreational and Related Resources at Hydro-Electric Projects Licensed by the Federal Power Commission." Land & Water L. Rev. 4 (1969): 375.

Though this paper is relatively old it has the potential to provide relevant and useful information to this report. Specifically, the document discusses strategies to allow recreational development plans to balance the goals of hydropower and recreation. Aspects of this paper that suggest how to maximize waterways to achieve these goals provides our group with examples of development that could be applied to the Little Androscoggin.

Reichart and Phillips. "The Environment as a Stakeholder? A Fairness-Based Approach." Journal of Business Ethics 23, (2000): 185-197

This article is a pretty dense discussion of moral obligations regarding business practices. It's basic argument is that in terms of identifying various stakeholders in a business setting, the environment cannot be ignored. It does not argue that the environment should be a stakeholder itself, but it touches on the idea. The article puts forward a somewhat ill-defined (perhaps because it's common knowledge in the field) idea that environmental interests can be resolved through a "fairness-based approach."

Obviously there are some things here that are useless to us, but I think that in our project we need to give some thought to whether we count the environment as a stakeholder or not. If we end up doing so then we also will need to decide in what manner we address it, and this article might help with that.

Stevens, William K. "New Rules for Old Dams Can Revive Rivers." New York Times, November 28, 1995. Accessed November 2, 2015. http://www.nytimes.com/1995/11/28/science/new-rules-for-old-dams-can-revive-rivers.html?pagewanted=all

Thomas, Christopher. "New England Flow's Comments on Updated Proposed Study Plans for the Turners Falls hydroelectric Project, FERC Project No. 1889-081, and the Northfield Mountain Pumped Storage Project, FERC Project No. 2485-063." Federal Energy Regulatory Commission (2013): 1-5. http://www.northfieldrelicensing.com/Lists/Document/Attachments/193/20130709-5117(28542756).pdf

This document is an example of the New England FLOW Coalition's comments during the comment period of the FERC relicensing of two hydroelectric projects in 2013. Looking at the Coalition's work on this projects suggests to us how a steering committee designed to advocate for recreation opportunity fits into the FERC process. This also gives us an idea of how

comments regarding recreation could be framed. Because this group has close to 20 years of experience, they are likely a trustworthy source.

"Time to Lead: 4 Easy Steps to Steering Committee Success." ITtoolkit. 2015. Accessed 2015. http://www.ittoolkit.com/how-to-it/projects/project-steering-committees.html.

This article, though not an academic source, provides valuable information that could be utilized if a steering committee was formed. This article describes the process to develop a committee which is necessary for the chair of the steering committee if that entity has never lead a committee like this before. Furthermore, it provides a way to keep the group focused, if it is formed, which is vital to newly established committees.

Title 18, Chapter 1B §16. Procedures Relating to Takeover and Relicensing of Licensed Projects. 101st US Congress, 1989. Electronic Code of Federal Regulations, US Government Publishing Office. http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&sid=148cf628d8ccc1a54009ab0a940bac7d&rgn=div5&view=text&node=18:1.0.1.2.16&idno=18#18:1.0.1.2.16.2.22.3

Text of the law that explains FERC process, it's accessed on an online database, and is pretty hard to navigate through, but it's helpful to have a fully unbiased source for FERC material.

Transcanda Hydro Northeast Inc.,. Attachment C: Project Description. LOW IMPACT HYDROPOWER CERTIFICATION APPLICATION: DEERFIELD RIVER PROJECT (LP 2323). Low Impact Hydropower. Accessed 20 November 2015. http://www.lowimpacthydro.org/assets/files/Deerfield%20documents/Attachment%20C%20-%20Project%20Description.pdf.