

City of Keene
New Hampshire

ASHUELOT RIVER PARK ADVISORY BOARD
MEETING MINUTES

Tuesday, June 2, 2020

4:00 PM

Remote Meeting via Zoom

Members Present:

Arthur Winsor, Chair
Councilor Steve Hooper, Vice Chair
Dave Whaley
Paul Bocko
Suzy Krautmann
Judy Sadoski (Arrived at 5:16 PM)

Staff Present:

Andy Bohannon, Director of Parks,
Recreation & Facilities

Members Not Present:

George Foskett
Thomas Haynes, Alternate

1) Welcome & Call to Order

Chair Winsor called the meeting to order at 4:08 PM and Mr. Bohannon read the executive order authorizing a remote meeting: Emergency Order #12, issued by the Governor of the State of New Hampshire pursuant to Executive Order #2020-04. Pursuant to this order, Chair Winsor called roll. All members were calling alone from their home addresses.

2) Acceptance of Minutes – May 5, 2020

Councilor Hooper moved to approve the minutes of May 5, 2020, which Mr. Bocko seconded, and the motion passed by unanimous roll call vote.

3) Finance Update

Mr. Bohannon reported on the budget presented in the meeting packet, which included the landscape contract and spring clean-up bills. Next month's budget would reflect the \$185 mulch bill and the \$3,475 Bartlett Tree invoice.

Mr. Bohannon continued providing an update on the lights, which were ultimately much more expensive than the \$650 per light budgeted by the Board because Hamblet Electric suggested the benefit of replacing both lights at the same time. As such, Mr. Bohannon paid for the second light and electrical work totaling \$1,700 from the Parks, Recreation & Facilities operating budget

because the Board did not plan for the extra work but it needed to be done. While the Board only approved \$500 in their miscellaneous budget, Mr. Bohannon recalled that the actual Conway School fee was less than budgeted, so the Board could use those extra funds for the remaining \$150. Board members recognized this report as informational and expressed no concerns with Mr. Bohannon's decisions for replacing the lights.

4) Conway School Stakeholder Engagement Session #2

Chair Winsor welcomed the Conway School of Landscape Design students studying ecological resilience of the Arboretum at Ashuelot River Park and Rachel Marshall Outdoor Learning Laboratory – Katherine Holder, Samantha Peikes, and Amanda Smith – all of whom were calling alone from their home addresses. Ms. Holder began the presentation by recalling the goal of this project centered on climate resilience of the park to enhance ecological function and services, reinvigorate community involvement, and revitalize a community treasure. The scope of this project is limited to the Arboretum and the Rachel Marshall Outdoor Learning Lab (RMOLL).

The primary project goals are to:

1. Assess ecological resilience
 - a. Conduct an ecological analysis
 - b. How resilient is the park?
2. Understand what ecosystem services the park performs
 - a. Improve performance of services
 - b. Increase number or types of services
3. Identify weaknesses in the landscape's performance
4. Identify ideas for educational opportunities
5. Assess effectiveness of current maintenance
 - a. Provide recommendations
6. Inventory plants and garden beds
 - a. Provide recommendations

The secondary project goals are to:

1. Increase seating and fundraising opportunities
2. Develop an invasive species management plan
3. Explore options for replacing the composting toilet

Ms. Peikes described the concept of resilience as planning with flexibility so a system can withstand shocks, adapt to change, anticipate risk, and protect weak spots in the system so that stakeholders can pursue their goals. She recalled that ecosystems are dynamic and change over time, which is why it is essential to anticipate those changes in the park, such as increased invasive species or tree deaths. Ms. Peikes recalled the components of ecological resilience: ecosystem production, biodiversity, wildlife habitat (food & shelter), clean water/air, carbon sequestration, protection from natural disasters, nutrient cycling and soil fertility, erosion protection, and pollination. Ms. Peikes continued explaining the concept of social-ecological resilience, which emphasizes:

- A “humans in nature” perspective

- Interaction of ecological components with social components
- A holistic complex “systems approach”
- Balancing built environment with natural environment
- Working with natural systems
- Social equity:
 - Landscape governance
 - Community participation
 - Access to resources
 - Education opportunities

Ms. Smith discussed how climate change is affecting the park, based on responses to the public survey. The majority of participants (75%) are either concerned or very concerned with climate change and the following issues in particular: heat (73.6%), vector-borne illness (69.8%), water shortage (69.8%), loss of income or employment (49.1%), invasive species (69.8%), larger storm events (62.3%), and flooding (66%).

Regarding flooding, Ms. Smith said that the students assessed the 100 and 500-year floodplains in Keene and found that portions of the park lie in both zones. The Arboretum is elevated from the flood hazard zone, possibly due to past fill in the area, but the RMOLL and adjacent property to the northeast are prone to flooding. She said that because of this flood risk, manmade structures should be minimized on the RMOLL and vegetation there should be preserved, where there is already a healthy floodplain forest.

Regarding heat vulnerability, Ms. Smith said that high-density impervious surfaces hold and reflect more solar radiation making cities hotter than their surrounding rural areas where vegetation cools the air through the process of transpiration. This is called the heat island effect, which Ms. Smith said that greenspaces help to mitigate and provide sometimes lifesaving benefits during heatwaves. She said that the Arboretum has a higher heat index because of its proximity to surrounding impervious surfaces and so maintaining the greener and cooler RMOLL forest canopy would mitigate that heat island.

Ms. Holder explained that north of the Arboretum and RMOLL, there is a small wetland with poorly draining soils that provide flood storage. She said that conditions are very different hydrologically south of the dam, where the river has been dredged and removed from the wetland connections that once existed, which may reduce local floods but speeds the flow of water downstream. Ms. Holder said that plans for the Arboretum and RMOLL should consider wetlands as a resource for both the City and citizens learning about their local environment. She described more of the ecological context observed in the park and its implications:

- Observations:
 - Floodplain forest and shrubby marsh priority habitat comprises the majority of park area.
 - Only remaining active dam along the Ashuelot River is found near the main entrance closest to the Arboretum.

- High amount of impervious area surrounding the park in the form of buildings, sidewalks, roads, and large parking lots.
- Implications:
 - Wetlands and floodplain forests serve many functions in the park that enhances ecological resilience such as filtering storm water runoff pollutants, preventing flooding, and providing wildlife habitat.
 - Preserving these ecosystem services garners greater importance because the park is a small patch of green in a highly urbanized area.
 - The dam is a hydrological break between upstream and downstream, and it has preserved the natural riparian functions upstream.

Ms. Holder continued explaining setbacks and regulatory challenges that could impede future redevelopment of the park. She said that the Ashuelot River is a Designated River in NH, meaning that it is protected by the Shoreline Water Quality Protection Act (SWQPA) and its Designated River Status. The SWQPA and Keene Zoning Code both have criteria with which to comply. The Arboretum is zoned as Conservation and the RMOLL as Rural, both requiring special permits from the City for activity occurring within the 50' setback from the property line. Ms. Holder encouraged involving the Conservation Commission in design and decision-making.

Ms. Holder provided the NH Listed Invasive Species identified in the park: Japanese barberry, bitter sweet, autumn olive, burning bush, Japanese honeysuckle, Japanese knotweed, common buckthorn, and multiflora rose. There is also an Amur cork tree in the arboretum, which is a NH Species of Concern, and Ms. Holder said there should be a decision-making process on whether to remove and replace it with a native species before it becomes a problem. Ms. Holder said this is an example of the importance of understanding the lifecycle of each invasive species and the best timing of any safe management/eradication applications chosen.

Ms. Holder described existing conditions in the Arboretum garden beds. Most species on the south portion of the Arboretum are non-native ornamental perennials, which are beautiful but she said that heavy mulch application and liberal plant spacing observed could increase weed opportunities and therefore maintenance. Ms. Holder said that soil compaction was also observed and so establishing perennials is recommended in the long-term to improve soil health and reduce maintenance.

Ms. Peikes described how the students divided the project scope area into five zones with different design characteristics:

1. Formal Gardens
 - a. Arboretum
 - b. Cobbles/Memorials
 - c. Gazebo
 - d. Seating
2. Historic View of the Dam & River
 - a. Seating Areas

- b. Iconic Views
- 3. Naturalized Education Zone
 - a. Unmanaged Forest
 - b. Dike
 - c. Natural Floodplain Community
- 4. Forested Trail System
 - a. Floodplain Forest
 - b. Wide Trails (~10')
- 5. Riverbank Stabilization
 - a. Invasive Species
 - b. Erosion
 - c. Views of the River
 - d. Kayak Launch

Ms. Peikes listed historic and iconic assets to preserve or improve as needed when redesigning: the footbridge, the Colony Faulkner Dam, the original entry sign, the gazebo, and the formal archway entry. Ms. Peikes also explained how microclimates – sunny, open, exposed, partly shaded, screened, or covered – would be important in redesigning the park to ensure there are diverse and accommodating spaces for all visitors to feel comfortable in the park. Before describing the three initial design alternatives the students developed, Ms. Smith recalled the primary project goals to recommend replanting, enhance education, minimize maintenance, and improve seating; the secondary project goals are to develop plans for the gazebo/covered seating, invasive species management, and improved accessibility.

Design 1: Cohabitation – Create a more connected and accessible network of paths with a diversity of habitats and spaces for both humans and wildlife.

- Features:
 - Large and small pavilions to provide covered seating, while maintaining visibility
 - Demonstration areas to provide an opportunity to experience native and resilient landscaping designs, while also learning about local ecology
 - Formal entry featuring the original sign to welcome visitors into the garden beds of the Arboretum
 - Fun and informative signage encouraging exploration of the RMOLL
 - Subtle signs for the Arboretum and formal garden beds
 - Bank stabilization with blueberry, elderberry, and dogwood
 - Seating nooks and observation platforms
 - Buffer zone maintenance following regulatory guidelines to provide ecologically sustainable views and set a precedent for stewardship that promotes resilience
- Pros:
 - Universally accessible
 - Permeable pavement
 - Diverse seating areas
 - Covered seating

- Open lawn space for events
- Educational signs
- Demonstration gardens
- Preserve river views – observation deck
- Centrally located facilities – how a composting toilet could be a learning tool through the [Living Building Challenge](#), with a water bottle filling station, a sink, solar panels, and rainwater collection
- Cons:
 - Cost
 - Extensive installation
 - Permitting
 - Long-term maintenance

Design 2: Education for All – Create innovative educational opportunities with a sustainable focus without compromising key features of the park.

- Features:
 - Seating such as a pergola or new larger gazebo
 - A sensory garden
 - A dry well creek
 - Permeable pavement areas
 - Student research areas
 - No-mow areas
 - A new front entrance
- Pros:
 - Increases educational components within the park and designates areas for student research
 - Lease cost and maintenance intensive
 - Gathering areas with shaded seating to be more visible and limit unwanted behaviors/activities
 - Unwanted views buffered with plant trellises and shrubs
- Cons:
 - No additions or changes to existing garden beds
 - Design could deter other visitors from using resources if the park becomes focused solely on education

Design 3: Resourceful Resilience – Maximize local resources of the site to protect the riparian zones, create gathering places, demonstrate the aesthetics of native plants, and increase educational opportunities.

- Features:
 - RMOLL interactive trail
 - Granite blocks for seating on an elevated platform
 - Solar powered charging stations
 - A welcome center gazebo

- River bank stabilization with a “pollinator strip” of native plants that support native pollinators. The strip would be surrounded by a gravel path and no-mow clover lawn that people can walk on freely, as well as four overlook benches.
- Pros:
 - Produce electricity on site
 - Re-purpose materials from the site
 - Coordinated community effort
 - Restoration of riverfront areas
 - Clear lines of sight into the park
 - Increased seating areas, with an elevated seating area that is beneficial for park access during times of high water
- Cons:
 - Invasive species management may require chemical application
 - Cost of new features
 - Reduced views of the river
 - Reduced open space for large events

The students welcomed feedback.

Mr. Whaley asked about the wash station associated with the educational composting toilet. Ms. Smith said that the toilet roof would collect rainwater in a rain barrel that would feed a small sink for hand washing that would drain and filter as greywater through a rain garden.

Chair Winsor recalled the social issue of people gathering in the gazebo for long periods because of the covered roof and as such, while he loves the gazebo he does not like what it has become. He said that is why the Board has discussed a pergola for shade and shelter from the sun but that is more open to discourage congregating.

Ms. Sadoski recalled that the previous composting toilet sustained damage over time and had inappropriate uses. The Board has discussed this project as an opportunity to consider various uses and determine how to mitigate large gatherings of people who might damage the property. Therefore, she was concerned that moving the garden shed to a less visible location might make it more of a target for damage. Ms. Sadoski added that the idea of a viewing platform is lovely.

Councilor Hooper thanked the students for a comprehensive report with many great ideas. To him, it seemed the ideas presented were with the notion of the dam remaining in place, which he favors highly. He asked if/how the students’ proposals would be effected by dam removal. Ms. Smith said that the possibility of dam removal was certainly under discussion but said they are awaiting more information from the Rhode Island School of Design (RISD) team’s research on community preferences regarding dam removal and their hydrological studies. She said that one of the designs proposed does consider how blocks from the dam could be repurposed elsewhere in the park to maintain the historic feature if the dam were removed. Mr. Bohannon said he has been trying to acquire the RISD research and Councilor Hooper understood that more data was

needed before the students could make an educated comment. Ms. Holder said it was already clear that some bank stabilization is needed on the east shore of the Arboretum currently and should the dam be removed, the river hydrology would change significantly and it is uncertain where the shore would be.

Ms. Krautmann asked for more details on changing the entrance location and then about the snow removal area. Ms. Smith said that the garden bed by the handicap parking spots in the Mascoma Savings Bank lot is where snow is piled in the winter, making it hard to grow things there. In the Cohabitation design, a salt-tolerant rain garden is proposed there. Additionally, visitors report using that parking lot predominantly, entering from the corner near the Jonathan Daniels (JD) Trail. Therefore, the students proposed an additional more formalized, welcoming, and open entry point introducing visitors to the site. Ms. Krautmann thanked the students for their presentation and good work.

Mr. Bocko liked the idea of a more welcoming entrance at the corner by the JD Trail to provide a more open view of the park from that parking lot right-of-way. He thought it was telling that each design presented some significant work on the Arboretum riverbank and thought it was important that a need for work there was clear to the students. He added that there are many invasive species on the RMOLL riverbank as well. Chair Winsor noted that the students' professors mentioned celebrating flooding on the RMOLL side because it will always occur. Mr. Bocko spoke to the Education for All design, in which he appreciated minimal development in favor of research on the RMOLL side because it is flood prone and could be a learning space. Throughout the designs, Mr. Bocko appreciated a focus on more accessibility to the RMOLL forest though, so he envisioned a balance with minimal signage letting the area speak for itself. He thought that a proposed trail loop/walking path through the RMOLL forest is important because people are always looking for new places to walk, so he thought formal walking areas could promote positive activity on that site.

Councilor Hooper agreed with the importance of a more welcoming entrance off the Mascoma Savings Bank parking lot. Overall, he thought that combining aspects of all three designs would result in a friendlier park that more people enjoy, which is the key to the whole process.

Ms. Krautmann referred to the vacant parking lot off the northeast corner of the property boundary and questioned how much heat from that lot is affecting the park. Mr. Bohannon said he had an upcoming meeting with Ken Stewart about that lot, which Chair Winsor said could change things. Ms. Holder said that is an area to consider for invasive species as well and added that vegetation conditions there are good due to being in the 100-year floodplain. Ms. Holder added that the area in question is outside this project's scope but developing the area as a part of the park would create more visibility for the community north of the park.

Mr. Bocko referred to the Resourceful Resilience design and asked if the raised platform would increase the heat island effect of the park. Ms. Holder said the platform is intended to provide better perspective of the river and park as well as potential flood storage and dry land if the water

were to rise that high; it could also be a bandstand or place for additional activities. Being approximately 2' above ground and made of simple design products like wood or stone, she said it makes for a lovely area that should not contribute to the heat island effect. Mr. Bocko agreed that the platform would bring nice texture to the park without being a building or gazebo. Mr. Bohannon also agreed that the platform is a design feature that could carry well through the two sides of the park. Ms. Holder said that not all patrons want to sit on the lawn and added that even being just a little higher off the ground provides a better view across the river. Still, development within the 200' SWQPA requires permitting based on the property's total impervious surface, of which there is minimal that could be mitigated with rain gardens. Ms. Smith thought it could be argued that revegetating and concentrating impact to a few places improves the area versus the whole shore being degraded.

Chair Winsor asked if there were any allowances in the plans for boat launching. Ms. Holder said the possibility was considered in the riverbank stabilization process, through which impervious paver could be applied to stabilize a channel into the river for safe launching, though flooding must be anticipated. Mr. Bohannon said that large granite blocks from the dam or other structures in Keene could build steps down into the water, though they would have to be compliant, which could be more difficult.

Mr. Bocko expressed support for shifting to more native perennial plantings to reduce maintenance and act as an educational tool with minimal signage, but he was unsure how the Friends would support that throughout the Arboretum. He thought that a self-sustaining plot of native plants would be a nice feature to consider. Mr. Bohannon thought it was a good point regarding garden bed maintenance. While Mr. Foskett was not present to speak for the Friends, Mr. Bohannon said that the Friends are becoming harder to find for the maintenance aspect and it is harder for individuals to find time for that volunteer upkeep. Mr. Bohannon thought that the less maintenance required the better. Mr. Bohannon also thought that native plantings are an opportunity to demonstrate to the community within its park system that Keene is working actively toward City Council and staff aspirations for enhanced climate resilience by 2030 or 2050. He thought this was an opportunity to reform an already incredible asset. Ms. Holder said that native plants offer many wonderful benefits for native pollinators that coevolved together. Native species are also tolerant of the natural local conditions and therefore can be left alone to grow in cottage style gardening, reducing weeds among many other benefits.

The Board agreed that they would appreciate the students presenting two final alternatives.

Ms. Krautmann liked a sample photo of a larger gazebo possibility because it seemed more open, though Mr. Bohannon said that would be quite expensive. Chair Winsor recalled that the current gazebo is 35-40 years-old and it acts as a hangout spot where it is located currently. Ms. Smith agreed that opening lines of sight moving forward would be important.

The students questioned if there are any specific areas in the park that are considered unsafe. Chair Winsor said the RMOLL side because it is isolated right now and is not a destination. He

said that better lighting (despite the cost) and opportunities for healthier behaviors would make the area safer. Mr. Bohannon said that the City cleared a lot of underbrush from the RMOLL side a few years ago, which has done a world of good, and so he said it would be important to maintain that level of clearing. Mr. Bocko understood part of the impetus of that clearing was to manage a homeless village there but thought that maintaining a small patch of woods there could provide a learning and recreation destination. Ms. Holder thought that by opening a 5' accessible path, level on-grade, around the top of the levee that circles back down would be more navigable and could become a more visible feature of the park just by presence of use.

The Board thanked the students for their work.

5) Adjourn – Next Meeting Tuesday, July 14 at 8:00 AM

The Board would also meet informally at the park on Tuesday June 16 at 8:00 AM. Other questions, ideas, etc. can be fielded through Mr. Bohannon as he meets weekly with the students.

There being no further business, Chair Winsor adjourned the meeting at 5:26 PM.

Respectfully submitted by,
Katie Kibler, Minute Taker
June 9, 2020

Respectfully edits submitted by,
Andy Bohannon,
June 30, 2020