

Whiting Street Reservoir Committee Study Report

November 21, 2022



Cover Photo: Original Entrance to Whiting Street Reservoir

The Whiting Street Reservoir Study Committee wishes to thank the Holyoke City Council and Mayor Joshua Garcia along with the citizens, stakeholders and business community members who provided input to this report.

Whiting Street Reservoir Study Committee Members:

Sue Ellen Panitch – Committee Chair – Mayor’s appointment

Marlene Connor – Committee Vice Chair – appointed by City Council

Harry Craven- Appointed by City Council

Kip Foley - former community preservation committee member, chair. Appointed by City Council

Jeff Horan – represents Holyoke Conservation Commission

Kate Kruckemeyer - represents Holyoke Planning Board

Dave Moore – represents Holyoke Water Works

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All plates from the Harry Craven collection of historic Holyoke Records

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Executive Summary

The Whiting Street Reservoir Study Committee (WSRSC) which was created by order of the Holyoke City Council in 2019, was given a charge “to consider all aspects of the Whiting Street Reservoir to include reviewing costs to maintain and repurposing it for future use as well as ensuring that reasonable environmental considerations are maintained.”

To accomplish its charge, the Committee decided on the following tasks:

- Investigate the laws and protections that currently exist for the reservoir
- Investigate the effect of the current uses and any future plans of the adjoining properties to the reservoir
- Hold a public meeting to gather public input and understand future needs and wants regarding the reservoir, and
- Consider potential new revenue sources including expanded uses

After completing these tasks, the Committee has reached the following conclusions and recommends the following:

- Ensure long term protection of the Whiting Street Reservoir (WSR) as a resource for the Citizens of Holyoke, through conservation restrictions or other means
- Assure availability of the reservoir to serve future water needs for the City of Holyoke
- Allow for passive recreation while enhancing visitor safety, environmental education, and accessibility to the communities of Holyoke and to the public.
- Develop a Vision Statement and North Holyoke Master Area Plan to guide use, protect resources, engage stakeholders and benefit the citizens of Holyoke.
- Implement the vision and major components of the North Holyoke Master Area Plan, by establishing an Areawide Management Council, sponsored by the City of Holyoke; the Council would include adjoining property owners or managers, and engage citizens, in order to coordinate area management.

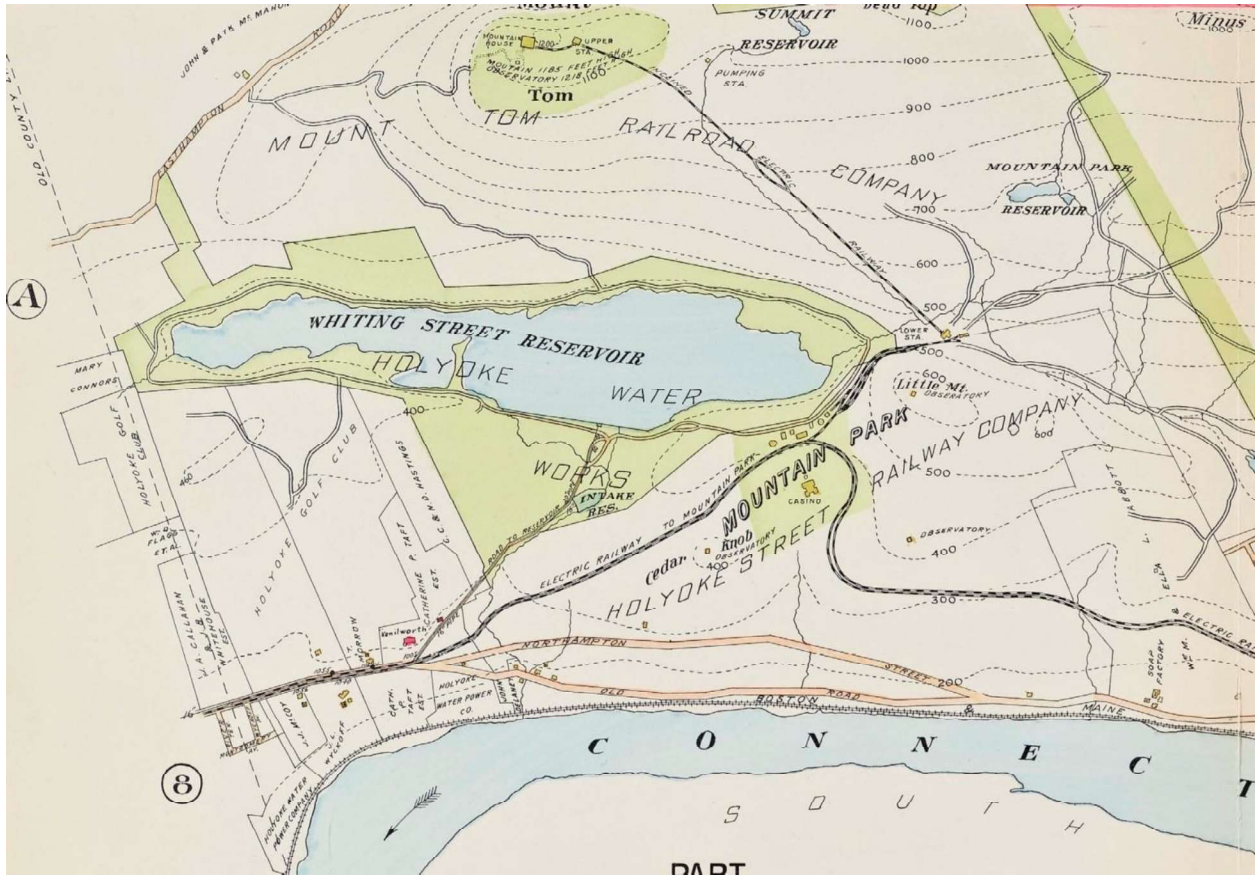


Plate 1. Early Map of Whiting Street Reservoir and surrounding lands

Introduction

The Whiting Reservoir Study Committee (WSRC) was created by order of the Holyoke City Council in 2019. The charge given to the committee by the City Council was “to consider all aspects of the Whiting Street Reservoir to include reviewing costs to maintain and repurposing it for future use as well as ensuring that reasonable environmental considerations are maintained.”

The City Council established the WSRC, at least in part, in response to recognition that the Holyoke Water Works was facing significant costs for repairs to the Whiting Street Reservoir’s spillway as required for compliance with the Massachusetts Department of Dam Site Safety Rules and Regulations.

History/Background

The Whiting Street Reservoir (WSR) and the entire Mount Tom area have long been considered a jewel by Holyoke residents and our “National Park.” The WSR is just one of more than a dozen existing parcels that make up what people refer to as the Mount Tom area. The WSR was originally built in 1889-1890 on land previously owned by Mr. Whiting Street, and was developed by Mr. John Delaney and Delaney Brothers, a Holyoke Company. It was built as a storage reservoir for a smaller intake reservoir to the east. Fed by the Whiting Street Brook, the original intake reservoir, which no longer exists, was built in 1884 with a dam length of only 142 feet and a surface area of just one acre. The current Whiting Street reservoir has a dam length of 1773 feet, spillway length of 40 feet, surface area of 114 acres and a capacity of approximately 500 million gallons, with a watershed area of approximately 1 1/2 square miles.

The WSR, Mount Tom, and the Smith’s Ferry neighborhood were part of Northampton when the reservoir property was purchased and constructed. Some years later, the residents of Smith’s Ferry successfully petitioned the Massachusetts Legislature to join Holyoke due to the lack of fire protection and road maintenance from Northampton. The annexation was completed on June 9, 1909 with \$55,000 being paid to Northampton and an additional cost of approximately \$10,000 to improve the road between Northampton and Holyoke.

The reservoir is owned and operated by Holyoke Water Works. Activities and access are controlled by the Holyoke Water Works Board of Water Commissioners and its professional staff. Information about Holyoke Water Works can be found at <https://www.holyoke.org/departments/water-department/>. The reservoir serves as an important backup water source for the City of Holyoke. The reservoir was taken offline in the 1990s when a new service was laid from the Tighe-Carmody Reservoir. There is no water treatment system currently linked to the Whiting Street Reservoir. However, it remains an emergency back-up, non-potable source for sections of the city should the need arise. Even in its backup status, the reservoir must meet strict safety and environmental standards as a municipal water source and could be needed as a source of potable water in the future.

Like all natural resources, the reservoir experiences a range of conditions brought on by current usage and natural occurrences. Structural safety of the reservoir is an important issue since Interstate 91 is only 1,000 feet due east and downstream from the WSR dam and main outfall, and dozens of residences are directly downstream of the reservoir. Historical events, like the October 1955 (before construction of Interstate 91) Hurricane Diane, dumped 19 inches of rain locally and caused many serious washouts in the city, including Whiting Street Brook which almost took out the Whiting Street Reservoir spillway and dam. The brook overflowed its banks causing a portion of Route 5 to collapse across from the southern entrance of Mountain Park.

To meet current Massachusetts Department of Dam Site Safety Requirements and Regulations, permitting is currently underway to increase the size of the dam spillway from its current 40-foot length to a length of 110 feet. The new spillway construction is planned for 2023. The Massachusetts Department of Dam Site Safety Requirements and Regulations can be found at <https://www.holyoke.org/documents/massachusetts-dcr-dam-site-safety-regulations/>.

The reservoir is part of collection of stunning adjacent properties and resources that are important to the character of the City of Holyoke and important to its citizens. These resources include Mount Tom, the Mount Tom Reservation, and the Mount Tom Range, along with other private and publicly held properties. Several associated and affiliated stakeholders also have an interest in what happens at the reservoir, including the Trustees of Reservations, the MA Department of Conservation and Recreation, and the Appalachian Mountain Club. Additionally, the Whiting Street Reservoir is currently part of an agreement between Holyoke Water Works and the Appalachian Mountain Club for trail maintenance and hiking as part of the New England Scenic Trail system, which runs from the Long Island Sound to Maine and now traverses the northwesterly section of the reservoir property. Information about the 215 mile scenic hiking trail can be found at <https://newenglandtrail.org/>.

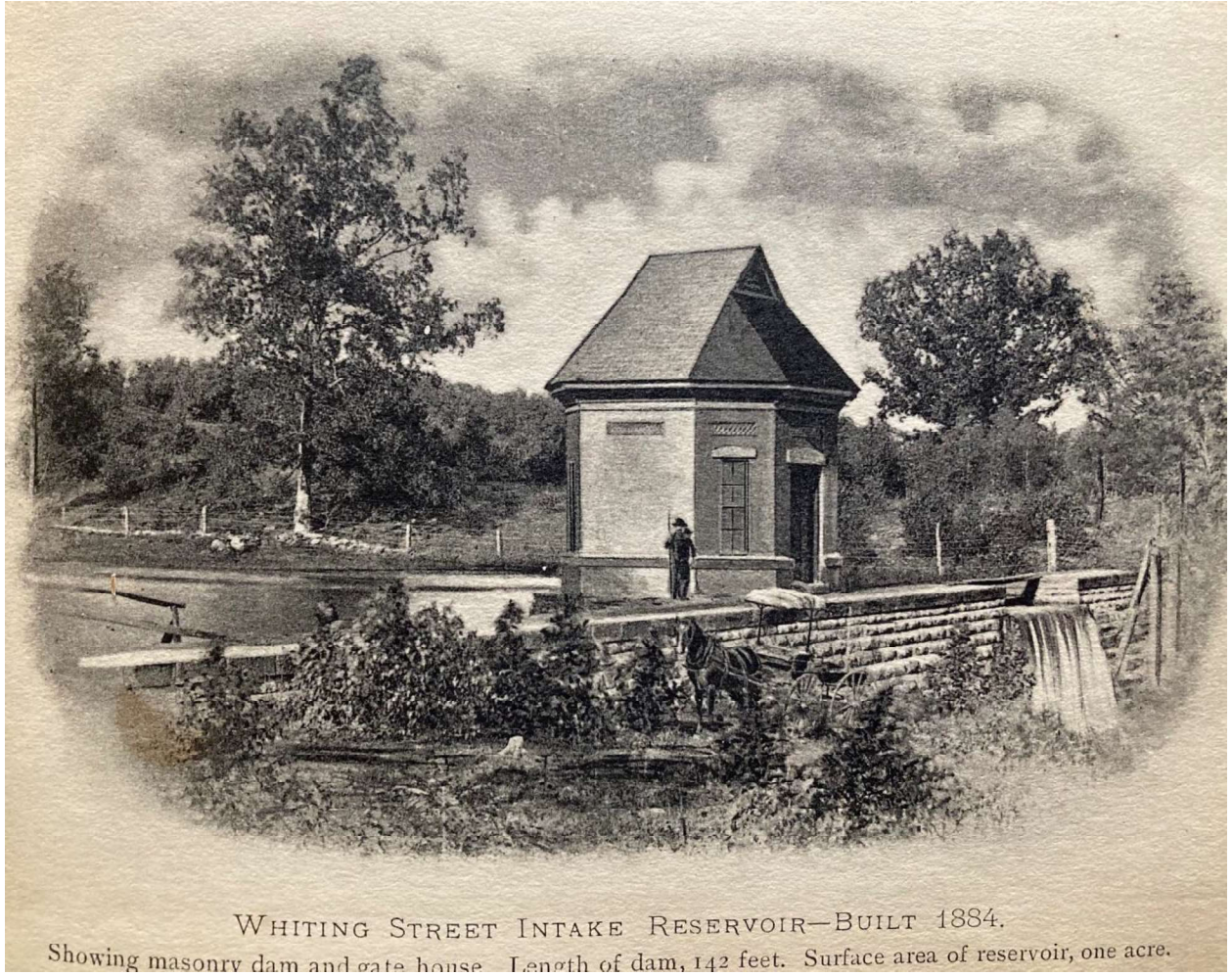


Plate 2. Drawing depicting the gate house and the original Whiting Street Reservoir and dam built in 1884

Current Activities

The Board of the Holyoke Water Works has taken actions to address public access to and use of the reservoir areas in the City including the Whiting Street Reservoir. The activities at the reservoir are designed to accommodate safety and maintenance of the surrounding areas in order to preserve and protect the source and supply of water to the City.

The current uses which are approved for Whiting Street Reservoir are passive recreation and listed as follows:

- Walking
- Jogging
- Hiking
- Biking
- Photography
- Observing nature

In addition to activities which are allowed, there are public access activities which are distinctly prohibited. These include the following:

- All active water related activities
 - swimming
 - fishing
 - boating
- Dog walking
- Horseback riding
- Motorized vehicle use
- Alcoholic beverages

During discussions with the Holyoke Water Works staff, they made their views clear that the City of Holyoke is likely to need the water capacity at Whiting Street Reservoir in the future. Furthermore, regulatory agencies that oversee public water supply are also likely to require water filtration at all City reservoirs. The filtration requirements will allow the WSR to maintain its standby public water supply status, or to meet standards if pushed into service to meet water supply needs. The cost of a filtration facility, along with the upcoming spillway renovation project in 2023, will be a significant financial commitment by the Department and the City.

These commitments make it clear that future access and recreational uses will need to be consistent with the primary use of providing a safe drinking water supply for the residents of Holyoke. This means that public access, and the type and intensity of public recreational uses, will need to be planned, controlled, and limited in order to protect the reservoir.



Plate 3. View of Whiting Street Reservoir and Mount Tom from the reservoir gatehouse

Study Process:

Current Protections for the Whiting Street Reservoir

To begin its work, the committee reviewed the existing statutory rules and regulations which provide protection for the reservoir in its current state and govern the maintenance and preservation of water resources both locally and statewide. There are multiple regulations which govern the management of water and water resources under local, state, and federal authorities. Some of the most relevant sections are noted below:

Massachusetts General Laws Chapter 111, Section 160 protects public sources of water supply for the public. Massachusetts General Laws Chapter 111, Section 160: Examination of water supply; assistance to cities, towns and districts for groundwater aquifers and recharge areas can be found here:

<https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXVI/Chapter111/Section160>.

Further regulation of drinking water is found under the Code of Massachusetts Regulations 310 CMR 22.00 <https://www.mass.gov/regulations/310-CMR-22-the-massachusetts-drinking-water-regulations>. This is intended to promote the public health and general welfare by preventing the pollution and securing the sanitary protection of all such waters used as sources of water supply and ensuring that public water systems in Massachusetts provide to the users thereof water that is safe, fit, and pure to drink.

The Massachusetts Wetland Protection Act (WPA) and Holyoke Wetlands Protection Ordinance (HWPO) also provide some jurisdictional protections to the reservoir. All land under water, wetlands, streams, and their buffers are subject to and regulated by both the WPA and the HWPO. Massachusetts Wetland Protection Act (WPA) Regulations are found at: <https://www.mass.gov/regulations/310-CMR-1000-wetlands-protection-act-regulations>. The Holyoke Wetland Protection Ordinance (HWPO) are found at: <https://www.holyoke.org/documents/holyoke-wetlands-protection-ordinance/>.

Article 97 of the Constitution of the Commonwealth of Massachusetts also offers some protection. Article 97 was passed by voters in 1972 to ensure that lands acquired for conservation purposes were not converted to other inconsistent uses. However, Article 97 protections can be undone by a 2/3rds vote of the Legislature. (see <https://www.mass.gov/files/dcsarticle97.pdf>)

Although all the laws and regulations under which Whiting Street Reservoir is managed provide some form of protection, this can be changed by the Massachusetts Legislature.

All laws are subject to change. The only long term protection which can be afforded the reservoir is through a conservation easement written to manage the concerns of the Holyoke Water Works, and the City of Holyoke and to protect the resource for the community.

Planning Efforts and Future Vision for the Whiting Street Reservoir and Mount Tom Area

Review of Previous Plans

The WSRSC researched and reviewed planning efforts and studies undertaken in the last twenty years that may have impact on or provide insight into past, current, or future uses of the WSR and the entire Mount Tom area. Many of these documents are listed below. Additional documents are listed in Appendix F: Reference and Study Materials.

Mount Tom, Making Connections, Conway School, 2016

<https://www.holyoke.org/documents/mt-tom-making-connections-mt-tom-ecological-assessment/>

HG & E Mount Tom Comprehensive Report, Tighe and Bond, 2012

“City of Holyoke Open Space and Recreation Plan 2019-2025”, 2018.

<https://www.holyoke.org/documents/city-of-holyoke-open-space-and-recreation-plan/>

Forest Stewardship Green Certification, Wigmore, 2016

Mount Tom Power Plant Reuse Study, 2015

“Mount Tom Range Study”, 1991 <https://www.holyoke.org/documents/mt-tom-range-study/>

“Resource Management Plan - Mount Holyoke Range Planning Unit”.

Massachusetts Department of Conservation and Recreation. DCR 2013.

<https://www.holyoke.org/documents/massachusetts-dcr-resource-management-plan-2013/>

While these planning efforts, reports and activities provide significant facts, information, ideas, and insight into WSR area, what is striking is that there is no over-arching vision or comprehensive plan to help guide current and future uses of the greater Mount Tom area. The future of the Mount Tom area is considered by many to be crucial to the character and quality of life for the citizens of Holyoke and the surrounding area. As previously noted, there is no clear mechanism or guaranteed protection for the character and important natural, scenic, and recreational resources provided by the WSR, Mount Tom, and surrounding area. Our research finds that the small 371.8 acre parcel that is the WSR does not adequately protect the entire watershed of the 500 million gallon water supply if it is needed for drinking water in the future. Thus, an area-wide perspective is a crucial issue to Holyoke if the WSR is needed for drinking water in the future.

There was also interest expressed to the committee from the public to provide enhanced recreation and access to WSR. However, as described above, upon further study it became clear that the WSR alone does not have the capacity to handle the increased recreational use that better access and parking can provide. Also, significantly increased recreational use may be inconsistent with future drinking water protection needs. However, there may be opportunities to work together with adjacent property owners, managers, and partners to provide these enhanced opportunities and benefits for all under a plan for the entire area.

In our view, a comprehensive area plan is necessary to provide a common vision and the necessary protections for the WSR, Mount Tom, and surrounding areas. There is also a need to bring key landowners and managers together as stakeholders, to develop mechanisms to collectively benefit each of the individual parcels, while implementing a vision for the greater Mount Tom area.

Pioneer Valley Planning Commission Review

In addition to reviewing prior plans, the WSRC reached out to the Pioneer Valley Planning Commission (PVPC) for support through their Local Technical Assistance program. The information requested was to identify relevant projects and precedents for review of community water resources, especially:

- a. Examples of reservoirs or other drinking water sources successfully adapted to passive recreation without compromising water quality
- b. Clear explanation of what recreational uses are allowed in other MA properties while still maintaining ability of the reservoir to be brought on line in the future

Three highlights the WSRC took from the PVPC review include the following:

- Evaluation of the feasibility or opportunity for revenue generation for the city related to the Whiting Street Reservoir found severe limitations due to size, capacity and available infrastructure in comparison to the other models reviewed.
- Additional recreational activities would require broader area considerations, such as through an areawide master plan and partnerships. In addition, actions such as establishing conservation restrictions would provide limited revenue generation.
- It was clear to the Committee, through this review, that the value of maintaining a safe secure drinking water source provides an invaluable resource for the City and maintenance of that water source should be viewed as the primary issue.

Surrounding Area Considerations

Whiting Street Reservoir is part of a larger area of Northwestern section of Holyoke which encompasses other properties including the former locations of Mt. Tom Ski Area

and Mountain Park, the Mount Tom Reservation, and the Wyckoff County Club. Activities and plans for each property have the potential to impact WSR water quality, and recreational uses and pressures, thus owners and representatives from each of the neighboring properties were part of the larger information gathering process for this report. The discussions were focused generally on the following topics:

- a. How owner/representative understands how his/her property relates to WSR
- b. Present uses of property; uses being considered for the future and their impact on the reservoir
- c. Thoughts on access, traffic, and traffic management
- d. Whether there are any conservation easements or restrictions on the property
- e. Abutters' hopes for future of WSR
- f. How potential uses of WSR could be beneficial or harmful to their property

The participants we spoke with included:

Holyoke Water Works

Holyoke Conservation Commission

Wyckoff Country Club

Suher Concert Venue on Mountain Park

US Fish and Wildlife Service

MA Department of Conservation and Recreation, DCR

Trustees of Reservations

Holyoke Gas & Electric

New England Trails

The areas of common concern expressed by interviewees:

- Environmental Impacts
- Traffic
- Parking
- Illegal activities
 - Speeding
 - Behavior of users
 - Graffiti
 - Noise
 - Alcohol and drug use
 - Arson
- Lack of a system of coordination and cooperation between the properties

- Long term protection of the area

Public Input

In October 2021, the WSRC held a public meeting which was held both in-person and also available on Zoom. The following is a summary of comments received:

- Need for parking
- Improved transportation access
- Enhanced amenities, such as benches
- No change to the type of activities allowed
- Increased and enhanced protection of the reservoir as a valuable community resource
- Fear of development in the Mount Tom and WSR area

Recommendations

Recommendation 1: Ensure long term protection of the Whiting Street Reservoir (WSR) as a resource for the Citizens of Holyoke, through conservation restrictions or other means.

One of Holyoke's greatest assets is that it is a water-rich community. The Committee wants to ensure that that asset remains unchanged. Although protected by Article 97, that protection could be revoked by a request from the Holyoke City Council and a 2/3rds vote of the Massachusetts Legislature. As a committee, we therefore strongly urge the Holyoke Water Works and the Holyoke City Council to place a conservation restriction (CR) on the WSR land. The most effective long-term protection can be afforded the property through a long term conservation easement written to protect the property in its designated use, and to protect the concerns and appropriate uses by the owner. This action would be most appropriate in the case where the reservoir is not needed as a primary drinking water source and would indicate a strong commitment by the City of Holyoke for long term protection of WSR to benefit its citizens.

Placing a CR on the WSR property is an opportunity to protect the property from development in perpetuity and would also generate limited revenue for the city. The Holyoke Water Works and the City would continue to own the property, but future uses would be restricted (protected from development) and would be set forth in the CR agreement developed between the landowner (the City) and easement holder (usually the State or local land trust). Payments to the City would be based upon the difference in the appraised value of highest and best uses of the property and the appraised value of the property with allowed uses included in a CR. The CR could also be written to

address all future needs of the Holyoke Water Works, including the possible future needs related to water supply and filtration. The Town of West Springfield undertook this commitment to put a CR on its Bears Hole Reservoir Area. Their CR included a provision that allows the future possibility of a drinking water reservoir on their property if the need arises. If Holyoke decides not to pursue the CR as recommended, the City should make a strong statement and a commitment to the long term protection of the WSR as a public resource.

Recommendation 2: Assure availability of the reservoir to serve future water needs for the City of Holyoke

Whiting Street Reservoir is currently on reserve as a non-potable emergency water source for sections of the city. Even in its backup status, the reservoir must meet strict safety and environmental standards as a municipal water source and could be needed as a source of potable water in the future. Staff at the Holyoke Water Works have indicated that it is likely in the future that WSR will need to come back on-line to meet water needs of the City either as a drinking water source or to meet other needs. Regulatory agencies that oversee public water supply are also likely to require water filtration at all City reservoirs. The filtration requirements will allow the WSR to maintain its standby public water supply status, or to meet standards if pushed into service to meet water supply needs. It should be a high priority for the City to ensure all actions and activities related to preserving the resource are completed in a timely and effective manner.

Recommendation 3: Improved public access and enhanced community engagement

The Whiting Street Reservoir presents an opportunity for the City of Holyoke to improve access to nature for populations that often find barriers to nature-based experiences. Increased usage by a wider portion of the public would enhance public health and strengthen residents' commitment to environmental stewardship of this precious resource. While Holyoke Water Works currently does not promote access to the WSR given the challenges it faces managing safety and usage, encouragement of more responsible usership by a broader constituency could create better conditions for all, particularly if part of an area-wide approach as described in this document.

There are at least three overlapping constituencies who we feel could be specifically engaged through improvements in physical amenities and programming: persons with disabilities, schoolchildren, and historically underserved Holyokers. Improvements for these specific populations would have the long-term effect of benefiting all residents.

First, during the public meeting in October 2021, we heard from numerous constituents requesting universal access amenities, including but not limited to: benches to rest,

accessible pathways, and enhanced signage. The accessible loop trail at nearby Bray Lake was cited as a model. It was also noted that the disability community (and others) could benefit from more public awareness of accessibility conditions at the WSR, for instance through clear information on websites like Everyone Outdoors, maps, signage, etc.

Second, specific connections could be made to outdoor educational and environmental research communities, particularly to Holyoke schoolchildren. Much as the Fishlift at the Holyoke Dam has become a beloved field trip destination that has built appreciation of the Connecticut River in generations of children, facilitation of school outdoor education programs from K-12 and beyond could build life-long appreciation for the WSR and for Holyoke's water resources, as well as enhancing environmental knowledge. We point out the Fresh Pond case study (included in the PVPC, link to the report attached) as a relevant model of such programs at a functioning reservoir.

Finally, the WSR is an ideal location for creating increased access to nature for Holyokers in the Lower Wards, people of color, low-income residents, and other historically underserved populations. Efforts should be made to promote existing, safe, and low-cost means of reaching the WSR, such as the PVTA route which serves the entrance on Rt 5. These efforts would be most beneficial if coordinated with other area landowners and managers. Efforts for transportation access improvements and wayfinding, through bike, transit or other mobility services should be considered and developed as part of the recommended North Holyoke Master Plan to ensure safety considerations. Additional efforts could also be made (again, ideally as part of an area-wide approach) to work on needs assessment, programming, and outreach with active community stakeholders like Latino Outdoors and Birding for Everyone, non-profits like Eagle Eye Institute, the New England Trail System, and government agencies like US Fish and Wildlife, which have current initiatives to increase access for urban communities.

Recommendation 4: Develop a Vision Statement and North Holyoke Master Area Plan to guide use, protect resources, engage stakeholders, and benefit the citizens of Holyoke.

In our view, a comprehensive area plan is necessary to provide a common vision for and necessary protections of the Whiting Street Reservoir, Mount Tom, and surrounding area. The vision statement put forth and implemented through a master area plan can provide guidance and capture opportunity to benefit Holyoke citizens for decades to come. The efforts should be led by the Mayor and the Department of Planning and Economic Development with support from the Holyoke City Council. They should strongly focus on guiding use and protecting resources, while engaging stakeholders and citizens to maintain the valuable character and benefits of North Holyoke. There

should also be considerations in the plan to address sustainability in the face of a changing climate and increased pressures on natural resources.

As noted earlier in this report, the committee researched and reviewed a number of planning efforts and studies undertaken in the last twenty years that may have impact on, or provide insight into past, current, or future uses of the WSR and the entire Mount Tom area. Again, what was striking was that there was no over-arching vision, or comprehensive plan, to help guide current or future uses of the north Holyoke area and protect its critical resources. There was also no clear mechanism or guaranteed protection for the character and important natural, scenic, and recreational resources provided by the WSR, Mount Tom and surrounding area.

Recommendation 5: Implement the vision statement and major components of a North Holyoke Master Area Plan, by establishing an Areawide Management Council, sponsored by the City of Holyoke, to include adjoining property owners or managers, and to engage citizens, to coordinate area management

Through our interaction with the many adjacent landowners to the WSR, it became clear that there were many challenging management issues that were common to the many landowners. However, no individual landowner had the ability to even begin to address these issues alone. Many of the landowners spoke of efforts led by the City more than a decade ago to bring landowners together to effectively address these issues. Those efforts initially led by the City of Holyoke were discussing creating long term protections for many of the properties in the area and for solving many issues related to uncontrolled access, traffic, and safety, but the group no longer exists. Those efforts were fairly successful at the time, but the need still exist.

These comments led us to the recommendation to bring key landowners and managers together as stakeholders, to develop mechanisms to collectively benefit each of the individual parcels, while implementing a vision for the larger Mount Tom area. The efforts could lead to cooperation to allow safe access, additional parking, enhanced educational and recreational opportunities, interconnecting trails, trail head services, on-site staffing, and greater dialogue and engagement between the community and landowners. A thoughtfully conceived Areawide Management Council could be well positioned to help implement the vision and major components of a North Holyoke Master Area Plan. The Mayor and City Council should include adjoining property owners or managers, partners, stakeholders, and citizens in the effort.