



RESILIENCY IMPROVEMENTS AT WATERSHOPS POND DAM



- Frequently Asked Questions -

1. What is the Resiliency Improvements at Watershops Pond Dam Project?

The City of Springfield acquired Watershops Pond and the dam in 1969 after the federal government closed the Springfield Armory, which had been in operation since 1794. The dam at the Watershops at 1 Allen Street has been in existence since the mid-1800s and has supplied various forms of waterpower to the Watershops, including hydroelectric power from 1920 to the 1950s. The current Project will modernize the dam by replacing obsolete components, increasing stability, and improving its resilience to floods and other natural hazards.



2. Why is the Project necessary?

While the dam was exceptionally well constructed, any structure of its age requires maintenance and upkeep to remain in service. Most importantly, the dam was built prior to modern-day standards and regulatory requirements for dam engineering and dam safety. The Project will protect the long-term integrity of the dam and Watershops Pond and will ensure the dam meets or exceeds current regulatory standards regarding safety and stability, during “sunny days” and also during extreme flooding and seismic events. This Project will make Springfield more resilient in the face of future severe weather incidents.

3. What are the benefits of the Project?

Other than the Connecticut River, Watershops Pond is by far the largest body of water in the City of Springfield. By ensuring the long-term stability and safety of the dam, the Project will protect the Watershops Pond recreational resource for generations to come. The Project will ensure the safety of the areas and the people that live downstream of the dam by ensuring the dam continues providing necessary flood reduction benefits to downstream areas and that any risks to downstream areas are



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kept to a minimum.

Additionally, the Federal Lands to Parks (FLP) program of the National Park Service (NPS) conveyed two parcels of land including Watershops Pond (Lake Massasoit) to the City of Springfield to be used as public parkland. Since then, Watershops Pond and adjacent parkland has been used by the residents of Springfield and the surrounding area for fishing, boating, picnicking, and many other forms of passive and active recreation. This Project would ensure continuation of these amenities.

Ancillary to the dam improvements, any pond drawdown associated with the work could be leveraged to allow for secondary benefits including access to the shoreline and pond bottom for removal of debris and rubbish, and maintenance and inspection of structures that might ordinarily be submerged. Other secondary benefits can include:

- a water level drawdown over the winter months can kill aquatic plants that grow in shallow water by exposing the root systems to drying and freezing—Watershops Pond is known to have extensive populations of *Ceratophyllum demersum* (coontail) at nuisance levels. Winter drawdown is a known management tool for coontail and other plant species.
- exposed sediments can oxidize and compact

Please note that any work within 100 feet of the exposed pond bottom or any other wetland will require review and approval by the Springfield Conservation Commission and potentially other regulatory bodies.

4. What is the timeline of the Project?

Design and permitting are currently underway. It is currently anticipated that construction at the dam will commence in early 2021 and be completed by late-summer of 2022.

5. How will abutters be impacted by the Project?

As the design of the Project proceeds, the City is conducting a thorough review of potential environmental consequences and will consider all feasible measures to avoid, minimize, and mitigate damage to the environment. All practicable measures to minimize damage to the environment will be taken. The City has studied and will continue its evaluation of alternatives to the Project, including removal of the dam.

One significant consideration currently under review is the potential for a full or partial drawdown of the pond's water surface during portions of the Project. A drawdown would reduce risks to workers and downstream areas during the active construction work and would facilitate the control and diversion of the Mill River around or through the active work zone at the dam. Multiple drawdowns of the pond have occurred in the past, most recently in 1973-74 for a sewer main construction project and in 1996-97 for aquatic weed control. This new drawdown will necessarily be of longer duration to allow completion of the dam rehabilitation. Most likely, some minimum pool size will be maintained above the dam during the duration of the Project.

Past drawdowns have also allowed for the removal of debris from the extensive pond margin through cooperative cleanup programs with local civic groups and volunteer organizations. Use of the pond by residents and abutters would be halted temporarily during the drawdown and construction period. Additionally, debris removal may require brief utilization of construction equipment for removal of large bulk items. This would take place during normal business hours, and any abutters who might experience impacts would be notified prior to the start of work.



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6. How will the Project benefit abutters once completed?

The long-term preservation and protection of Watershops Pond is important to the abutters to the pond, and the Project will ensure the long-term benefits of the pond for generations to come. Important additional benefits could be realized if a pond drawdown were to be included as part of the Project. A properly timed and conditioned drawdown would expose the dense beds of aquatic plants to killing temperatures during winter months. Bearing in mind that such activities would need to be separately permitted, a drawdown would facilitate the cleanup and maintenance of abutting properties that might normally be inaccessible.

7. What will be the hours of construction? Will noise from construction impact neighbors?

The period of active construction is not anticipated to require any significant extent of work outside of normal construction periods. The construction contract will require that all work be conducted in accordance with local, state, and federal regulations regarding worker safety and noise conditions. Other than the potential for a temporary cofferdam in proximity to the dam, all dam work will be taking place at the dam and within the 1 Allen Street industrial complex.

If debris removal is permitted there may be brief periods of construction equipment utilized to remove bulk items from the pond.

8. What is the total cost of the Project?

The total cost of the Project is \$2.6M.

9. Who is paying for the Project?

The Project is being funded by a combination of funding from the City of Springfield general funds and U.S. Department of Housing and Urban Development, CDBG National Disaster Resilience funding that the City won in a resilience competition.

10. How will the Project impact the parks and public space around the pond and will the public still be able to access them during construction?

The parks and public spaces around the pond will continue to be available to the public throughout the Project. If a partial or full drawdown of the pond is incorporated into the work, use of the pond may be temporarily interrupted. The City is exploring creative ways to mitigate for any temporary impacts. For instance, the City is working closely with the Massachusetts Division of Fisheries and Wildlife to explore opportunities for a temporary relocation of the annual spring and fall stocking of trout. In conjunction with any drawdown, Springfield will work closely with MassWildlife to institute stocking of Watershops Pond with cold- and warm-water fish species at the conclusion of the work.

11. What will happen to the wildlife and fish that are in and around Watershops Pond?

Permanent impacts to fish and wildlife in and around the pond are not anticipated, although temporary impacts are unavoidable which will persist during the temporary drawdown of the pond. A drawdown would temporarily affect the flora and fauna in and potentially along the margins of the pond. Certain types of lake-bottom invertebrates (e.g., crayfish, mussels, various stages of insects, etc.) would likely experience temporary reductions in numbers that would rapidly rebound. Fish habitat will be temporarily reduced. However, because the drawdown is temporary, no species are expected to be lost from the system.



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If a drawdown is conducted, it will be conditioned to minimize impacts to fish and wildlife by following the recommendations of the Springfield Conservation Commission and the Massachusetts Division of Fisheries and Wildlife. Most fish species would be expected to move to the remaining areas of open water or migrate upstream or transit downstream during the active period of drawdown. Even in the event of a full drawdown there would remain a partial pool in the deepest portions of the pond that will allow some of the resident fish population to be retained in the pond and help in repopulating the pond after the drawdown is complete. Oxygen levels would be monitored in the remaining pool and aeration would be initiated if found necessary. While some fish displacement and mortality is unavoidable during the drawdown, enough adult fish would be expected to survive the drawdown to reproduce in the spring. Importantly, no fish species would be lost, and restocking programs would give the fish populations a “jump start” following the Project.

12. Will there be an odor during the drawdown with the exposed mucky bottom and potential for dead fish?

The City’s environmental consultant indicates that in their experience with numerous lake and pond drawdowns, sediments do not tend to produce much long-term odor. However, if fish are trapped in pools or on the exposed lake bottom and die, there will be brief odors. Again, our consultant’s experience is a short duration of potential odors—two weeks following initial drawdown. The City will have staff on hand to provide for removal or burial of the fish in place to minimize odor.

Other forms of odor control can be ready as a contingency for any “hot spots”; for instance, portable foam generating systems for emission control. Readily available foams have little or no odor themselves, although a pleasant wintergreen or vanilla scent can be added. The foam forms a barrier between the odor-producing substance and the atmosphere and can be applied to provide an immediate and effective barrier to minimize odors. The foams are completely biodegradable and pose no threat to workers, neighboring residents, or surface- and ground-water.

13. What are the different local, state, and federal agencies that will have to review and approve the Project?

The Project will undergo intensive environmental review and approvals from a variety of regulatory agencies including:

Local

Springfield Conservation Commission

Springfield Historical Commission

State

Massachusetts Environmental Policy Act (MEPA)

Massachusetts Department of Environmental Protection

Massachusetts Office of Dam Safety

Massachusetts Historical Commission

Federal

U.S. Army Corps of Engineers / federal Clean Water Act

14. What is the Massachusetts Environmental Policy Act (MEPA), and how will it intersect with the Project?

The MEPA Office is part of the Massachusetts Executive Office of Energy and Environmental Affairs



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(EEA). On behalf of the Secretary of EEA, the MEPA Office conducts reviews of environmental impacts of projects that require one or more state agency actions. The Watershops Pond Dam Project requires certain state agency permits (listed above) and thus requires MEPA review.

In June, the City will file an Expanded Environmental Notification Form (EENF) with MEPA. This will commence a 20-day public comment period, following which the EEA Secretary will issue a Certificate on the EENF stating whether or not further environmental review is necessary and, if so, identify the scope of the additional review.

On the City's Watershop Pond Dam Project webpage, we will provide up-to-date information on how and when you can submit your Project-related comments to the Secretary of EEA. Your thoughts and concerns are important, and the City hopes you will exercise this opportunity to express your support for the Project.

15. Will the City be providing regular updates on the Project?

Absolutely! The City is hosting a Project-specific page on the City's website that will provide up-to-date information on the Project from now until completion in 2022. Please visit www.springfieldcityhall.com at your convenience.

16. Where can I get more information about the Project and who can I contact with questions, comments, or concerns?

Until very recently, the City had been planning for multiple public meetings to discuss the Watershops Pond Dam Project. The COVID-19 crisis has postponed the opportunity for close community contact while we practice safe social distancing. Until our daily lives get back to some degree of normalcy, please visit www.springfieldcityhall.com for regularly updated information regarding the Project, including frequently asked questions and responses to public comments/questions. Abutters/residents may also email Tina Quagliato Sullivan at tquagliato@springfieldcityhall.com.