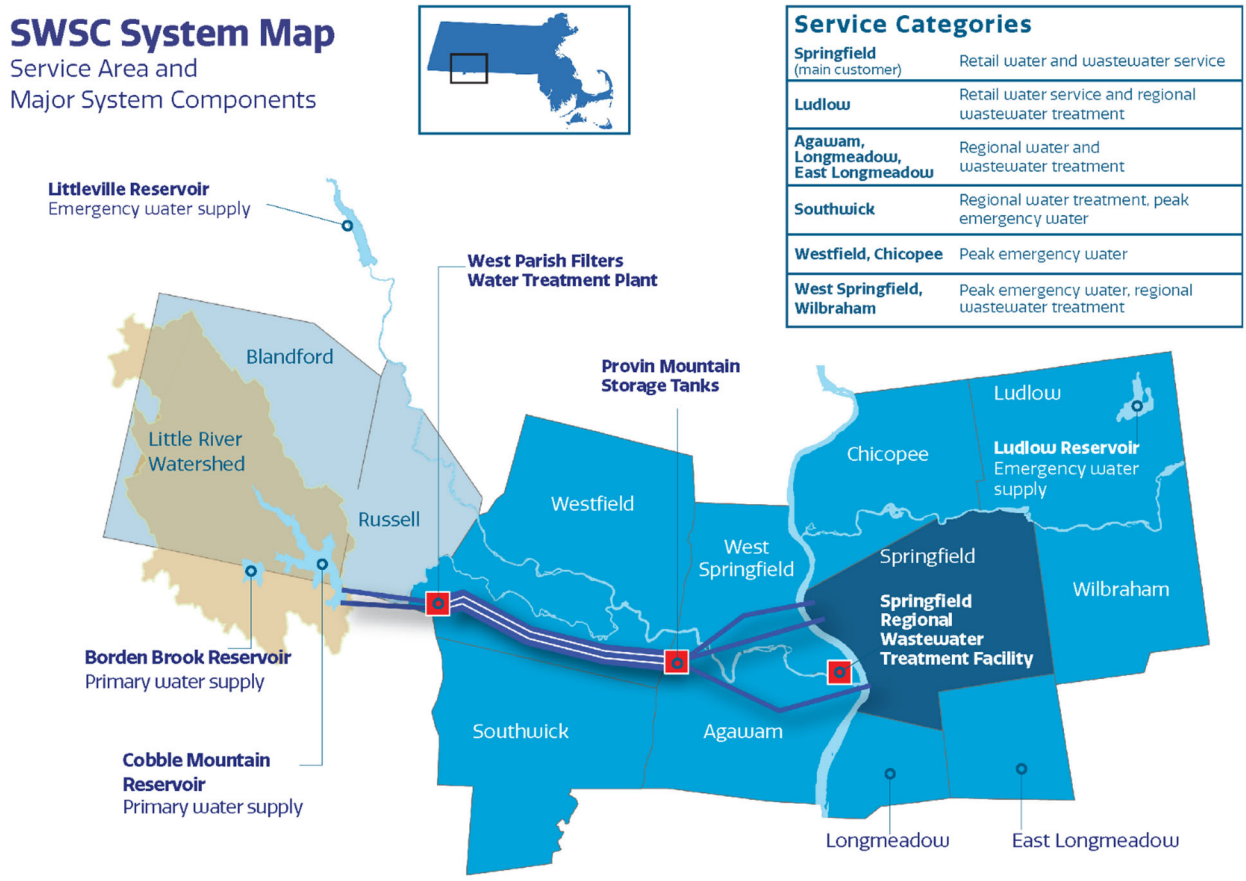


Springfield Water & Sewer Commission

Draft Hazard Mitigation Plan 2026

EXECUTIVE SUMMARY

Introduction

The Springfield Water and Sewer Commission (SWSC) developed this Hazard Mitigation Plan (HMP) to reduce the impacts of natural hazards and changing weather conditions on critical water, wastewater, watershed, and dam infrastructure. The plan establishes a framework for identifying risks, evaluating vulnerabilities, and implementing actions that will improve the reliability and resilience of services provided to approximately 250,000 people throughout the lower Pioneer Valley. Hazard mitigation planning is a proactive process that helps protect lives, infrastructure, natural resources, and the economy while supporting long-term operational continuity.

SWSC provides drinking water, wastewater treatment, and emergency response functions across a regional service area that includes retail, wholesale, peak-demand, and emergency customers throughout the lower Pioneer Valley. The planning area encompasses the Commission's water and wastewater infrastructure, watershed lands, dams, reservoirs, and supporting facilities that may be affected by natural hazards.

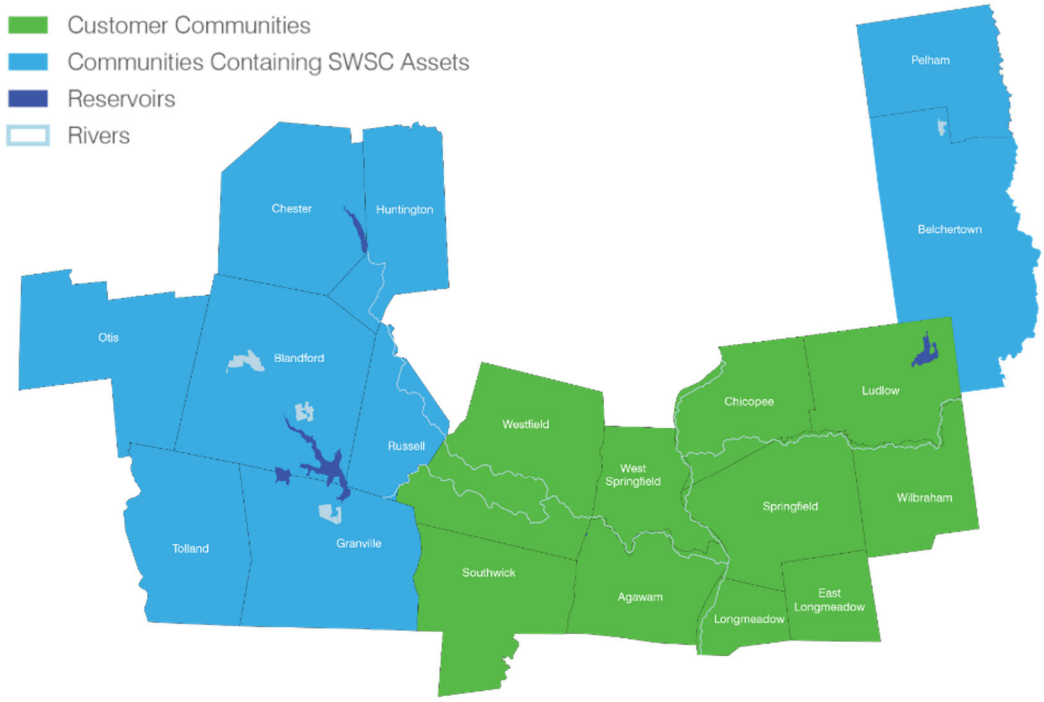


Figure ES-1: SWSC HMP Planning Area. Source: Weston & Sampson

Guided by federal hazard mitigation requirements and FEMA planning standards, the Commission established goals focused on strengthening emergency preparedness, improving understanding of hazard vulnerabilities, maintaining reliable water and wastewater services, investing in resilient infrastructure, and enhancing coordination with municipalities, emergency managers, regulatory agencies, and other partners. These goals provide the foundation for reducing risks to critical facilities, protecting public health and environmental resources, supporting operational continuity, and improving the Commission's ability to prepare for, respond to, and recover from future hazard events.



Figure ES-2: Hazard Mitigation Plan Goals. Source: Weston & Sampson

Planning Process

Development of the Hazard Mitigation Plan was a multi-year effort beginning in 2024 and concluding in 2026. The planning process included the establishment of a Project Management Team, a Steering Committee, and a Hazard Mitigation Planning Team composed of utility staff, consultants, state agencies, municipal representatives, and subject matter experts. Through a series of meetings, workshops, surveys, interviews, and technical reviews, participants identified critical assets, evaluated natural hazards, assessed vulnerabilities, reviewed existing capabilities, and developed mitigation actions tailored to SWSC operations. The planning process also incorporated historical hazard data, climate and weather trends, infrastructure information, and operational knowledge to better understand current and future risks across the Commission's service area.

Outreach was conducted with customer communities, dam owners, local emergency planning committees, regulatory agencies, and the general public to gather input and increase awareness of the planning effort. Existing federal, state, utility, and municipal plans were reviewed and incorporated into the analysis to maintain consistency with ongoing resiliency, emergency management, watershed protection, and capital improvement initiatives. This collaborative process

helped align the plan with regional priorities, operational realities, and hazard risks while meeting FEMA planning requirements.

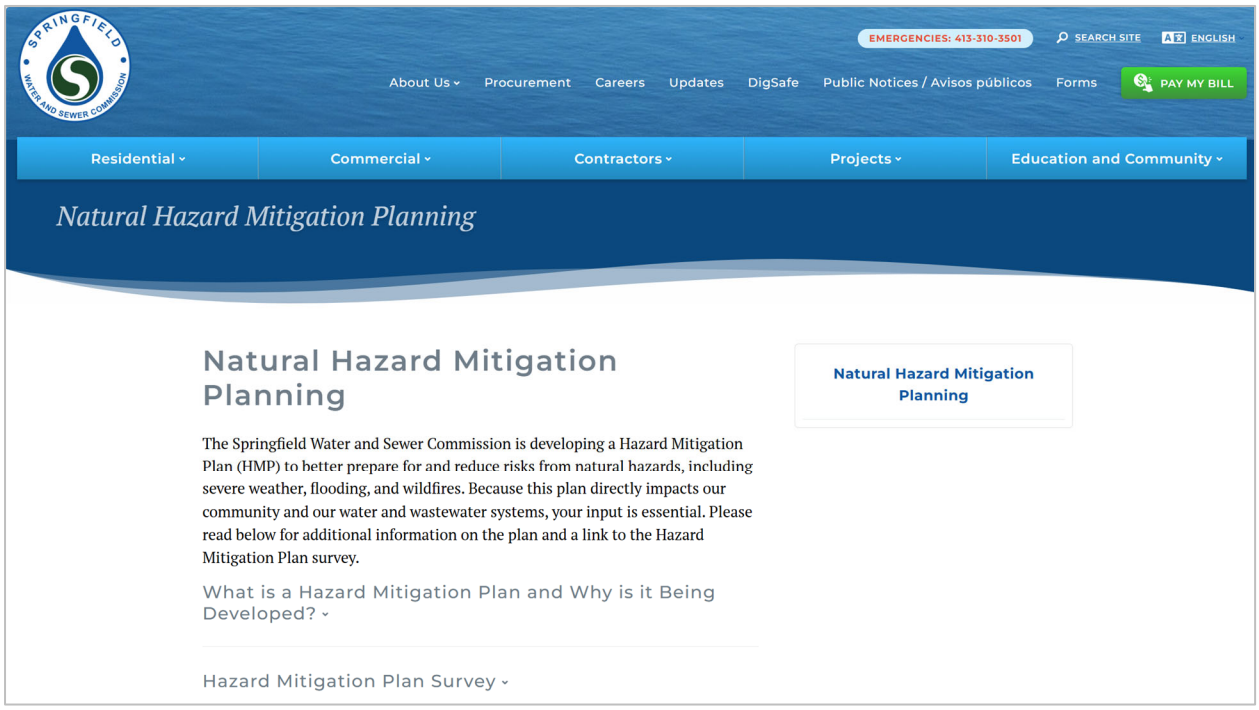


Figure ES-3: Screengrab of Hazard Mitigation Plan Webpage.

https://waterandsewer.org/hmp/

Asset Inventory

The asset inventory establishes the foundation of the risk assessment by identifying the people, facilities, infrastructure, natural resources, and critical functions that support SWSC operations. The Commission provides essential drinking water and wastewater services to approximately 250,000 people throughout the lower Pioneer Valley and manages a diverse portfolio of assets that are vital to maintaining reliable service delivery.

SWSC's infrastructure assets include drinking water and wastewater treatment facilities, pump stations, reservoirs, transmission mains, dams, flood control facilities, storage tanks, and information technology systems. These assets support the collection, treatment, storage, and distribution of water and wastewater services across the Commission's service area and are critical to public health, safety, and operational continuity.

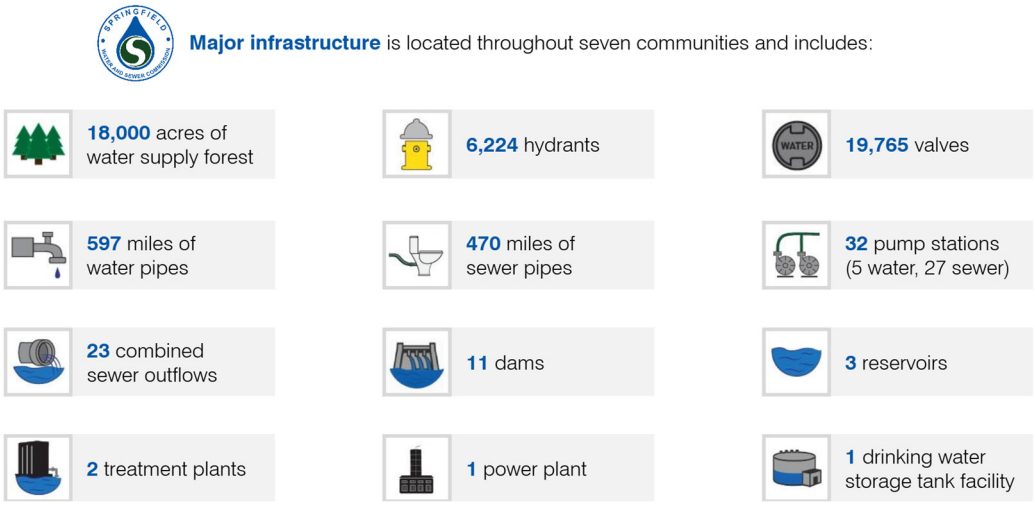


Figure ES-4: SWSC Asset Counts by Type

Source: Springfield Water and Sewer Commission

In addition to its utility infrastructure, SWSC manages approximately 19,000 acres of watershed lands and a variety of natural resource assets that support water supply protection, water quality, ecosystem health, and long-term system resilience. The inventory also includes hydroelectric facilities, transportation and communication assets, and historic and cultural resources that support emergency response, public outreach, and day-to-day operations.

Assets were evaluated to identify those most critical to SWSC's mission and the services it provides. Particular consideration was given to facilities and systems whose disruption could affect public health and safety, environmental protection, regulatory compliance, emergency response capabilities, operational continuity, and regional economic activity. The resulting inventory provides the basis for understanding how natural hazards may affect Commission assets and for prioritizing future mitigation investments.



Figure ES-5: Springfield Regional Wastewater Treatment Facility on Bondi's Island.

Source: Springfield Water and Sewer Commission

Risk Assessment

The risk assessment evaluated natural hazards based on their potential extent, frequency, geographic reach, and future probability of occurrence. Results indicate that many hazards affecting SWSC are expected to occur frequently and could result in serious to extensive impacts across large portions of the Commission's service area. Extreme temperatures, drought, changes in groundwater conditions, invasive species, severe weather, and winter storms were identified as having a high likelihood of future occurrence, while flooding from precipitation was determined to pose extensive impacts with a high probability of occurrence. Although less frequent, earthquakes and tornadoes have the potential to cause catastrophic damage to critical infrastructure if they occur.

These hazards could affect drinking water and wastewater treatment operations, damage facilities and infrastructure, disrupt power and communications systems, impact watershed resources, limit access to remote sites, and reduce SWSC's ability to provide reliable services during emergency events. Understanding both the likelihood and potential consequences of each hazard allows SWSC to prioritize investments and mitigation actions that address the greatest risks to its assets, operations, and customers.



Figure ES-6: Hazards Impacting SWSC. Source: Weston & Sampson

Table ES-1 summarizes the overall risk profile of the hazards evaluated in the HMP. Hazards such as flooding, severe weather, winter storms, extreme temperatures, and drought represent the most significant ongoing risks because of their combination of high probability and high potential impacts. Other hazards, including earthquakes and tornadoes, occur less frequently but could result in severe consequences for critical facilities and operations if they occur.

Table ES-1: Summary of Hazard Risk Profiles

Overall Risk Profile	Hazard
High Probability / High Impact	Flooding, Severe Weather, Winter Storms, Extreme Temperatures, Drought
High Probability / Moderate Impact	Groundwater Changes, Invasive Species
Low Probability / High Impact	Earthquakes, Tornadoes
Moderate Probability / High Impact	Hurricanes/Tropical Storms, Landslides

Capabilities

The capabilities assessment evaluates the policies, programs, staffing, technical expertise, partnerships, financial resources, and operational procedures available to support hazard mitigation. SWSC maintains a strong foundation for resilience through emergency planning and response programs, capital improvement planning, watershed protection and management, infrastructure investment, regulatory authority, mutual aid participation, community outreach, and coordination with local, regional, and state partners.

These capabilities provide the organizational, technical, and financial framework necessary to reduce risk and support implementation of the Hazard Mitigation Plan. Existing programs and partnerships enable SWSC to maintain reliable operations, protect critical infrastructure, respond effectively to emergencies, and pursue long-term investments that strengthen system resilience.

The assessment also highlights opportunities to build upon these existing strengths through continued infrastructure investment, staff development, regional coordination, public engagement, and pursuit of external funding resources. Together, these capabilities support implementation of realistic and achievable mitigation actions that align with SWSC's operational priorities and long-term resilience goals

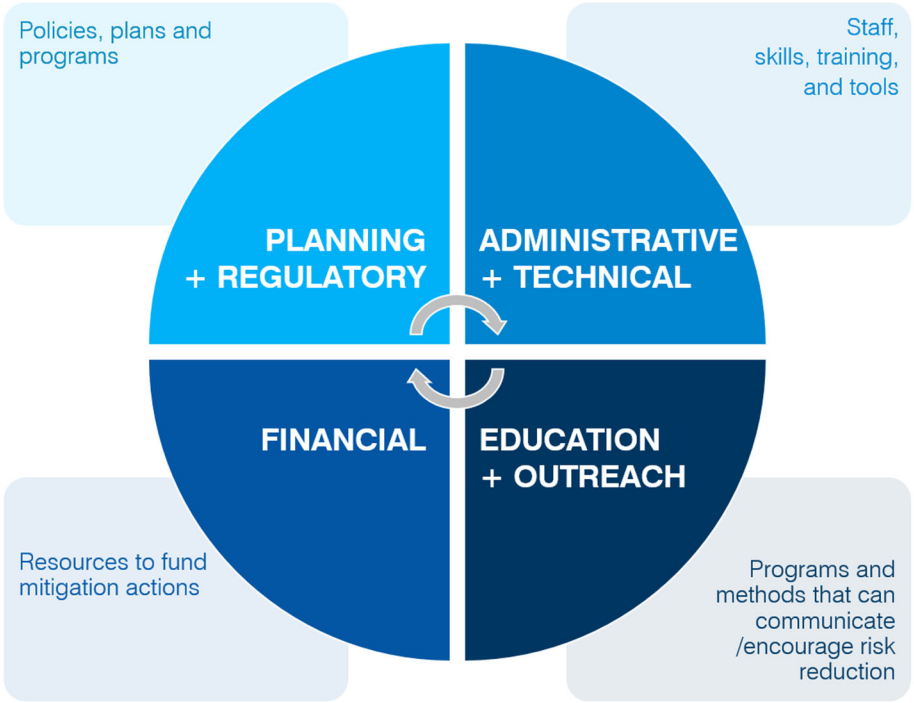


Figure ES-7: Examples of Capabilities. Source: Weston & Sampson

Mitigation Strategy

The mitigation strategy is the core component of the Hazard Mitigation Plan and provides a structured roadmap for reducing identified risks. Actions were developed through stakeholder engagement, technical analysis, assessment of existing capabilities, and review of hazards, vulnerabilities, and operational priorities. The resulting strategy includes projects, policies, planning activities, infrastructure improvements, natural resource protection measures, and educational initiatives designed to improve overall resilience.

Many mitigation actions build on work already underway at SWSC, including improvements to drinking water and wastewater treatment facilities, upgrades to transmission and collection systems, emergency planning and exercises, watershed management, public outreach, and coordination through MassWARN and local emergency planning committees. Additional priority actions include strengthening dam and spillway safety, improving reservoir and seismic monitoring, protecting critical facilities from flooding, expanding backup power and redundant communications, maintaining access to remote facilities, rehabilitating aging pipelines, stabilizing vulnerable slopes, and managing watershed forests and vegetation.

Mitigation actions were prioritized using FEMA guidance and evaluation criteria that considered feasibility, cost, legal authority, staffing capacity, benefits, consequences of failure, and consistency with Commission goals. The final action plan is intended to support funding applications, guide future capital investments, coordinate implementation responsibilities, and establish measurable progress toward risk reduction across all areas of SWSC operations.



Figure ES-8: Types of Mitigation Actions Included in the HMP. Source: Weston & Sampson

Plan Maintenance

Hazard mitigation planning is an ongoing process rather than a one-time effort. This plan establishes procedures for monitoring, evaluating, updating, and integrating the Hazard Mitigation Plan into routine Commission operations. The Emergency Response Department and Hazard Mitigation Plan Steering Committee will oversee implementation and conduct annual reviews to track progress, identify emerging risks, and evaluate the effectiveness of mitigation actions.

The maintenance process includes regular reporting, public engagement, integration with capital planning and budgeting efforts, coordination with municipal hazard mitigation plans, and preparation for future FEMA plan updates. By maintaining an active and evolving plan, SWSC can maintain eligibility for mitigation funding while adapting to changing infrastructure conditions, regulatory requirements, and future hazard risks.



Figure ES-9: Plan Maintenance Steps. Source: Weston & Sampson

Plan Adoption

Plan adoption represents the final step in development of the Hazard Mitigation Plan and confirms SWSC's commitment to implementing the strategies and actions identified throughout the planning process. Following review by stakeholders, the public, the Massachusetts Emergency Management Agency (MEMA), and the Federal Emergency Management Agency (FEMA), the plan is formally adopted by the Springfield Water and Sewer Commission Board of Commissioners.

Formal adoption enables SWSC to begin implementation of the mitigation strategy, enter the five-year maintenance phase, and obtain eligibility for FEMA mitigation funding programs. Adoption also demonstrates organizational commitment to improving resilience, protecting critical infrastructure, supporting regional emergency preparedness, and maintaining reliable water and wastewater services for the communities served by the Commission.