CITY OF DOVER

CERTIFICATE OF ADOPTION

Agenda Item#: 4A

Adopting: Community Infrastructure Chapter of the Master Plan

BACKGROUND MATERIAL:

According to New Hampshire Planning and Land Use Regulation 674:2, the Master Plan is intended to clearly and practically propose the best and most appropriate future development of the City under the jurisdiction of the Planning Board, to aid the Board in designing ordinances, and to guide the Board in the performance of its other duties in a manner that achieves the principles of smart growth, sound planning and wise resource protection.

The Master Plan is a set of statements about land use and development principles for the municipality with accompanying maps, diagrams, charts and descriptions to give legal standing to the implementation of ordinance and other measures of the Planning Board. A Master Plan should lay out a physical plan which takes into account social and economic values describing how, why, when and where the community should build, rebuild and preserve. This physical plan should be comprehensive in nature, and have a long range vision – 10 years is the average. The master plan shall include, at a minimum, the following required sections:

- A vision section
- A land use section

The master plan may also include the following sections:

• A stewardship of resources section	• A cultural and historic resources section
• A community facilities section	• A regional concern section
• An economic development section	• A neighborhood plan section
• A natural resources section	• A community design section
• A natural hazards section	• A housing section
• A recreation section	• An implementation section
• A utility and public service section	• A climate adaptation section
• A transportation section	• An energy section

Dover has completed Master Plans in 1963, 1978, 1988, 1998, 2000, 2007, 2009 and most recently in 2012. It is the intention of this cycle to be revised again in 2023, which will continue the community on a proactive revision cycle. The Community Infrastructure Chapter acts as the community facilities and utility and public service sections and will then be revised in 2030, 2040, etc.

The Master Plan process involves 8 steps:

- Collect data about the community
- Analyze the data
- Define a community vision
- Evaluate alternative development scenarios
- Select a preferred alternative
- Implement recommendations
- Monitor the plan
- Amend the plan as necessary

CITY OF DOVER

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Agenda Item#: 4A

Adopting: Community Infrastructure Chapter of the Master Plan

WHEREAS: The Planning Board and Planning Department have finalized a draft of the Community Infrastructure Chapter of the Master Plan in accordance with RSA 674:3, and

WHEREAS: A concerted effort was undertaken to include participation by the general public through the use of public meetings and a citizen steering committee; and

WHEREAS: A formal public hearing on said Chapter, in accordance with RSA 675:6, was held before the Planning Board on June 28, 2022; and

NOW, THEREFORE, BE IT RESOLVED BY DOVER PLANNING BOARD THAT:

1. The Community Infrastructure Chapter of the Master Plan is adopted and certified in accordance with RSA 674:4;

2. The Planning Board Chairman is authorized to sign and label as "adopted" the final reproduced documents of said Chapter; and

3. The Planning Department is authorized to forward a certified copy of the adopted Chapter to the Office of Strategic Initiatives, as required by RSA 675:9.

AUTHORIZATION

Approved as to Legal Form: J Wyatt

Joshua Wyatt
City Attorney

Gina Cruikshank

Gina Cruikshank
Planning Board Chair

Date of Adoption: 6/28/22

Members in Favor: 8

Members Opposed: 0

CREATING A RESILIENT FRAMEWORK

Community Facilities and Utilities

City of Dover Master Plan

Adopted June 28, 2022

ACKNOWLEDGMENTS

Thank you to all the people who have contributed to the creation of this Master Plan chapter, especially the Community Facilities Master Plan Chapter Sub-committee and the City of Dover department heads and staff. Their hard work, dedication, and thoughtfulness towards maintaining high quality, resilient, and well-maintained municipal services and facilities in Dover is reflected in this Master Plan chapter. Special thanks is given to Christopher Parker, AICP, Deputy City Manager, Donna Benton, AICP, Director of Planning and Community Development, Steve Bird, Former City Planner, John Storer, PE, Director of Community Services, and Eric Sanderson, Facilities Project Manager for providing critical support and guidance through the completion of this chapter. The City also thanks their consulting team, Resilience Planning and Design and Placework, for their work coordinating this project.

Community Infrastructure Sub-Committee Members

- Mayor Robert Carrier
- Otis Perry
- Robert Berry
- Jan Nedelka

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1. INTRODUCTION

PURPOSE

This chapter inventories and analyzes Dover's municipal facilities and services, and the public and private utilities residents and businesses depend on daily. The previous master plan chapter addressing these topics was completed in 2009. It guided and informed capital improvement planning in Dover for over a decade. From 2020-2022, the City's consultants worked closely with a Steering Committee of residents and City staff to collect, review, and synthesize existing planning documents and other resources related to these facilities and related infrastructure. This background information helped to identify documented needs, current and pending capital improvements, and actions that are needed to ensure these services continue to be delivered at the highest quality possible.

The early document analysis also helped to outline a planning process and the development of an inventory form to engage department staff in an assessment of their facilities, services, and utilities. The inventories were then reviewed and expanded upon during site visits to each City owned facility, and through interviews with representatives of the various utilities. This process resulted in a detailed profile of each facility while also identifying the related needs and opportunities that the City needs to plan for over the next decade. An implementation section was also developed to guide the maintenance and construction of municipal facilities and infrastructure. This planning process was also informed by a community resilience perspective to ensure Dover continues to incorporate energy conservation, renewable energy production, and environmental design into all future projects.

OUTREACH AND ENGAGEMENT

As part of this Master Plan Chapter Update, the City of Dover coordinated a public survey to obtain feedback from residents on their level of satisfaction with municipal facilities, buildings, and utilities. This survey was advertised through a promotional video, poster, and on the City's

website. It was formatted as both an online survey, and as an in-person display at the Public Library and City Hall. General findings from this survey include:

- The buildings that received the highest number of responses were Dover City Hall, the McConnell Center, and the Public Library. This is not too surprising, considering these are three of the most frequently visited facilities by the public.
- Parking capacity was identified as an issue at many municipal facilities such as the indoor pool, City Hall, the McConnell Center, and the Public Library.
- Directional signage and bathroom renovations were also identified as priorities at multiple facilities, such as the Public Library and City Hall.
- Responses suggest that many of the older municipal structures should be modernized and updated to better reflect future needs.
- There is a desire that maintenance and repairs be performed in a timely manner for both new and old buildings to protect both the lifespan and integrity of these structures.
- There is concern that some structures do not meet current or future population demands.
- Some respondents expressed a desire for more public open hours at many of the recreation facilities.
- There is interest in restoring vacant structures and better utilizing vacant space to increase value (such as the chapel and veterans building).

A RESILIENCY FRAMEWORK

The City of Dover has embraced the concept of "Resilience" in earlier master planning and regulatory efforts. This chapter integrates these concepts further so they may inform future decision making related to investments in community infrastructure. While this section focuses on how municipal buildings, their sites, and their operations can be retrofitted or designed to be more sustainable and resilient, other aspects of these issues related to climate change adaptation and natural hazard response can be found in the Master Plan's Climate Adaptation chapter. The City's 2012 Vision also guides this ongoing effort by stating that:

GOALS FOR DOVER'S MUNICIPAL FACILITIES AND INFRASTRUCTURE

- Plan, develop, and provide for high-quality public facilities and utilities for Dover property owners.
- Coordinate maintenance of all facilities and utilities to increase efficiency of maintenance activities, utilize best practices such as asset management tracking, and to ensure the longevity of Dover's buildings and infrastructure.
- Adopt a sustainability and resiliency framework to guide all design, construction, renovations, and maintenance of Dover's facilities and utilities.
- Promote collaboration between departments, relevant partner organizations, and neighboring municipalities to enhance efficiency and ensure different perspectives are integrated into facility projects.

- Municipal government and schools are run effectively and efficiently with full transparency, resulting in high quality services, well maintained buildings and infrastructure, a great recreation system and a competitive property tax burden.
- Enhanced environmental quality and sustainability are actively pursued and inherent in all the City's activities. Including the use of cost-effective management practices for energy efficiency and sustainability.
- Efficient management practices are used to ensure that all City and school buildings and all infrastructure are very well maintained and managed based on adopted improvement plans for each.
- City and School buildings generate a significant amount of their own energy.

The buildings and infrastructure presented in this chapter represent significant financial investments by Dover property owners, and these structures and essential utilities are intended to support these residents and others long into the future.

The City also has a commitment to the many employees and volunteers that spend significant amounts of time within these facilities on behalf of all Dover residents. Smart investments in healthy and productive indoor environments will help recruit and retain these individuals while also increasing productivity.

As we look to the future of the City's facilities and utilities we must also consider the ongoing costs related to operations and maintenance, and find ways for the City's buildings and infrastructure to serve as examples for private sector development. To do this we need a decision-making framework that can be utilized by City Departments during the project development process, and this presents an opportunity to go beyond the aspirations of energy reduction and LEED certification that were articulated in the 2009 chapter. While green or high-performance buildings are laudable goals they will still likely result in negative environmental impacts unless we take a holistic approach to planning, constructing and maintaining future municipal facilities in Dover. The City should prioritize defining metrics and design standards to guide all City building projects, including construction and renovation.

To help support the resilience initiatives underway by the City and integrate a holistic facilities planning and development process, we have identified this decision making framework composed of five critical areas: Energy, Water, Materials, Ecology, and Equity, (see graphic below). Each of these areas is further defined by strategies that can be implemented at the site/building scale and at the city scale.

SUSTAINABILITY: Balancing the values of environmental stewardship, social responsibility and economic vitality to meet our present needs while ensuring the ability of future generations to meet their needs.

RESILIENCE: The capacity of the city to function so that all people are able to withstand the shocks and stresses they encounter. Dover must address resilience with a broad lens that prepares for social, economic, and environmental shocks and stresses in the future.

Energy has been identified as a key area of focus for Dover, and the City has worked hard over the past decade to understand and reduce municipal energy consumption. The following are examples of trends in energy related best practices, while the overarching goal should be to prioritize reducing energy use and increasing renewable energy supply.

ENERGY

Building Scale

Reduce and then produce! At the building scale, the City can continue to pursue a number of measures to improve energy efficiency and produce energy from renewable sources. Some of the more effective practices that the City has experience with include: installing high performance lighting; utilizing load management and Energy Star equipment; installing solar photovoltaic systems that offset energy use; and integrating building technology that connects people's experience with a building's mechanical system, this improves comfort and saves energy. The City should prioritize setting

carbon emission reduction goals and targets, and incorporate them into the City's building standards, such as reduction goals that increase annually.

City Scale

According to the 2018 Climate Adaptation Chapter, the City of Dover should continue to find ways to reduce energy consumption and greenhouse gas emissions while helping other sectors do the same. This will include investments in electric charging infrastructure, stronger energy policy reflected in land use regulations, and strategic investments in renewable energy production and storage. As the City looks for opportunities to invest in distributed energy and storage it will also need to address the identified vulnerabilities to existing infrastructure.

WATER

Water is a precious resource and a critical issue in the Seacoast Region. In order to optimize our use of water, it is important to first understand where and how it is being utilized. It is also important to reinforce the connection between Dover's drinking water supply and the need to capture and clean stormwater so it can recharge the region's aquifers. The following represent examples of best practices and innovations in buildings, landscapes, and infrastructure.

Building Scale

As the City continues to build or renovate buildings, there is a great opportunity to include water saving systems. This should include basic strategies like repairing leaks in existing equipment, and creating drought tolerant native landscapes that capture and infiltrate water on site and serve as demonstration sites for private property owners. Over time there may be opportunities to also consider rainwater harvesting infrastructure and the use of rainwater in place of treated drinking water for many uses.

City Scale

At the city scale, the best practices related to water are focused around water conservation, ecological treatment and infiltration of stormwater, and improvements to collection and distribution infrastructure. As the City is required to upgrade the stormwater infrastructure in keeping with the EPA's MS4 permit requirements, this will present many new opportunities for the decentralized capture and treatment of stormwater and the incorporation of nature-based solutions.

MATERIALS

Dover should identify zero waste as a key initiative in an effort to greatly reduce the City's contribution to landfills. The following strategies demonstrate examples of how to greatly reduce material consumption, ensure healthy indoor environments, and incorporate universal access. Dover should incorporate embodied carbon tracking and identify benchmarks in its design standards, similar to energy targets noted earlier.

Building Scale

In building design and renovation, in addition to the building's structural elements, the key interior materials to target are flooring, ceilings, walls, and furniture. It is important to select materials that are natural and do not off gas, employ responsible sourcing practices, such as use of recycled content, take-back programs at product end of life, and are designed for disassembly and reuse.

City Scale

At the city scale, policy and infrastructure decisions are critical to reducing waste. Dover has a well-established practice of recycling and composting yard waste. The next steps toward reaching the zero waste goal is to support or develop a residential and commercial composting program and to pursue a ban on single use plastics.

ECOLOGY

The topic of ecology refers to how Dover can protect and regenerate the various ecosystems within its boundary, and its own ability to thrive with changes to the climate in the future. The following are examples of strategies at the building and city level which can strengthen Dover's ecological health and resilience.

Building Scale

At a building scale, the City can enhance the local ecology through landscaping with native trees and plants that provide habitat, capture and store carbon, clean the air and water, and provide other valuable ecosystem services. Green roofs and walls should be incorporated into future renovations and new construction as the climate gets warmer to lead by example and increase awareness of these nature-based solutions. Another best practice is to continue to evaluate each structure's exposure to risk due to blackouts, changes in temperature, coastal flooding, sea level rise, drought, and other hazards.

City Scale

Dover can reduce habitat fragmentation by avoiding new municipal building and infrastructure development within the City's existing open space network. Further best practices include the daylighting and restoration of streams and rivers, which improves the hydrologic cycle, provides habitat, and provides opportunities for ecological awareness and education.

EQUITY

The focus on Equity when planning Dover's buildings and infrastructure is to ensure these facilities foster a true, inclusive sense of community that is just and equitable regardless of an individual's background, age, ability, class, race, gender or sexual orientation. The following strategies address how to create this more equitable and inclusive reality.

Building Scale

All public building and site design, and management, in Dover will ensure that all residents and visitors have easy access physically, can navigate to their destination, feel safe and secure, and feel welcome. This will require accessing the grounds, building access points, interiors, restrooms and other shared facilities, security, and wayfinding. Since the act of building is a considerable environmental impact shared by all, there is also an inherent responsibility to ensure that any project provides public good and does not degrade the environment or quality of life.

City Scale

At the city scale, Dover should consider who has access to the many services and utilities provided, and how they are engaged in planning for the future of the city. It is essential that we recognize our approaches to planning for and investing in this shared infrastructure, and consider all of the people that this infrastructure supports as we design, build, and maintain these facilities and utilities.

ASSET MANAGEMENT

Asset management has also become a priority for the City of Dover, which refers to a planned approach and set of strategies for managing and investing in a municipality's public infrastructure. Dover utilizes a number of tools to effectively manage their public assets, including roads, water and sewer, and other infrastructure, to maintain quality conditions and level of service. In 2008, the City of Dover began using VUEWorks, which is a web-enabled, integrated geographic information systems (GIS) asset management software package. It allows the City to track the condition of various pieces of equipment, infrastructure, grounds and facilities. It can be used to minimize failure risk, optimize expenditures, and ensure service functions are being met. It allows for seamless integration of all infrastructure information into a GIS platform.

VUEWorks integrates with the City's tax assessing software, so all City parcels are mapped within GIS, and there are subsequent distinct infrastructure layers for all items such as roads, bridges, sidewalks, water mains, sewer lines, storm drains, utility poles, street lights, HVAC systems, parks, grounds and City facilities. Asset information, condition rankings, and maintenance history are then assigned to each individual infrastructure component. Each distinct asset within the VUEWorks platform can have information linked, such as Service Requests, Work Orders, repair costs, etc. Items can also be queried to look at prior repair histories. Work Orders can also be linked for recurring maintenance or inspection items.

The VUEWorks software enables the City to actively implement various Asset Management Programs (AMP) by monitoring and tracking conditions, and developing a capital

improvement and financial implementation plan which will guide asset investment decisions into the future. Given the range of Community Services functions, there are several different AMP's in process involving Water, Sewer, roadways, and facilities. With any AMP, it is expected to include the following:

- **Existing Infrastructure** – inventory and documentation of the current condition of the City's existing infrastructure assets.
- **Level of Service** – Level of Service agreement for infrastructure assets to define how the system and the City should be performing over the long term.
- **Business Risk Exposure (BRE)** – BRE spreadsheet and tables delineating the prioritization of recommended improvements to the various infrastructure.
- **Financial Implementation Plan** – Financial implementation data delineates the potential impacts to user rates and taxes based on the proposed capital improvements recommended by the BRE.
- **Asset Management Program and Maintenance Plan** – next steps and recommended workflows for the continued maintenance and support of the asset management program.
- **Communication Plan** – summary of internal and external communications to educate and inform all stakeholders on the development and use of the City's asset management program.

Some level of AMP's have been prepared for the wastewater treatment facility; facilities, grounds & cemeteries; sewer collection and pump stations; and public water supply. Internally, Fleet Services is working to upgrade its Fleet AMP, and the completion of this Community Facilities Master Plan will help guide staff during the development of a comprehensive AMP specific for the remaining City buildings and facilities.

2. PUBLIC SAFETY

FIRE PROTECTION AND EMERGENCY MANAGEMENT

MISSION STATEMENT

"Utilizing exceptional customer service, our mission is to provide the community with information, education, services and representation, improving its quality of life and enhancing our citizen's ability to survive and recover from the devastation of fire, environmental, natural and man-made emergencies."

The City of Dover Fire and Rescue Service is comprised of 57 full-time uniformed employees, one full-time non-uniformed support staff, and two part-time non-uniformed support staff, operating from three locations: the Central Fire Station, the South End Fire Station and the Liberty North End Fire Station. The City maintains a fleet of five fire engines, two ladder trucks, four ambulances, a heavy rescue vehicle, and several support vehicles. The department also includes Inspection Services, a division of Fire and Rescue, which consists of 5 full time inspectors, a Building Official and Division Secretary. The overall department is responsible for fire suppression, emergency medical services, vehicle extrication, water rescue, high-angle rescue, and hazardous materials response. The department also provides a number of non-emergency services, including fire prevention and code enforcement, inspection services, hazard public education and fire investigation.

According to the City's Annual Financial Report, from 2011-2020, Dover's Fire and Rescue Service responded to an average of 5,566 calls for service annually (an increase from the average of 5,032 calls reported in 2009). The table below outlines which calls for service were medical emergencies and which were fire related emergencies.

Year	Total Calls	Medical Emergencies	Fire Related
2011	5,347	2,945	286
2012	5,242	2,880	353
2013	5,215	2,873	328
2014	5,154	2,824	255
2015	5,481	3,335	228
2016	5,426	3,387	190
2017	5,474	3,264	138
2018	6,040	3,365	144
2019	6,347	3,722	137
2020	5,937	3,676	193

MUTUAL AID

Currently, the City has mutual aid agreements with it's surrounding communities. During Fiscal Year 2020, Dover's Fire & Rescue Service provided mutual aid approximately 143 times and received mutual aid during approximately 114 emergencies. These mutual aid agreements allow a designated level of staffing to be maintained to handle an average number of emergency calls per day, with staffing for surge capacity and major events supplemented through mutual aid agreements and department staffing recall procedures.

EMERGENCY MEDICAL SERVICES

The Emergency Medical Services (EMS) division is charged with the responsibility to reduce the incidence of death and disability by providing prompt and effective pre-hospital emergency medical treatment and transportation to victims of illness or injuries in the City of Dover. The City's demand for emergency medical services continues to increase each year and with that comes demand for more complex skills and training. The City has 30 paramedics who are cross-trained in fire, rescue and hazardous materials handling and 27 Emergency Medical Technicians or Advanced Emergency Medical Technicians.

EMERGENCY MANAGEMENT

The Fire and Rescue Service is responsible for emergency management and coordinates the City's Emergency Management program, which encompasses a wide variety of services for the citizens including major health emergencies including pandemics, natural disasters including winter storms, flooding, hurricanes and severe thunderstorms, and manmade disasters requiring emergency response including wildfires, utility disruptions and hazardous material leaks and spills. The Fire Chief also serves as the City's Emergency Management Director. In the event of a major disaster, such as a severe winter storm, the Emergency Operations Center in the Police Facility is opened to coordinate all emergency-related activities. All communication is handled through the Public Safety Communications Center. This facility currently has ample space to accommodate key City Officials and is equipped with an emergency generator and key communications equipment.

KEY ISSUES, CONSIDERATIONS, AND FUTURE PROJECTS

The Fire and Rescue Service has prepared a Strategic Plan for 2017 through 2022 that documents the current status of service and other department needs, as well as considerations for future actions to meet its mission. These issues, along with findings from staff engagement during this master planning process, are summarized below.

- **Staffing:** There has been a high number of retirements in recent years which has resulted in a loss of institutional knowledge. Fire and Rescue has also brought on additional personnel positions in recent years between the Fire and Rescue and Inspections. With people in new positions, the amount of training to have a prepared workforce has had to increase, which takes time away from other priorities. Fire and Rescue has noted that hiring a Department-specific Information Technology Manager would make an excellent addition to their team and serve their increasing information technology system needs.
- **Evolving Technological Needs:** Many daily workflow processes that could be completed electronically are currently still paper/manual. Additionally, the two main records management systems that Fire and Rescue uses to meet the mandates of the National

Fire Incident Reporting System (NFIRS) and the State of NH Trauma Emergency Medical Services Information System each lack functionality for proper data analysis at the local level, which is a key requirement for accreditation achievement, metrics reporting, community paramedicine programs and modern service delivery.

- **Radio command and control infrastructure:** While radio communications and control infrastructure is adequate due to recent improvements, it would be worthwhile for the Department to inventory its internal processes to ensure they are well thought out, easy to understand, and lean.
- **Facility Condition and Service Delivery Match:**
  - **Operational and Utility Costs:** Though facilities are in relatively good shape, both Central Station and South End Station have very high operational/utility costs.
  - **Inspection Service Improvement:** The North End Station Inspection Services area is not set up for two customer service stations, which will be needed if Inspection Services demand increases any further. Other improvements are outlined on the North Station building profile.
  - **Future Service Needs:** Looking forward at future Fire and Rescue service delivery needs, the South End Station hose drying tower is aging. A structural analysis to determine its end-of-life is needed so that repair or replacement can be incorporated in future budget cycles. Additionally, to meet Insurance Services Organization requirements, a plan to meet the training tower requirement is needed.
  - **Future Growth:** Looking ahead, if growth along Dover Point Road south of Pointe Place continues at the current rate, this will be the next area needing a Fire and Rescue facility.

BUILDING PROFILE: LIBERTY NORTH END FIRE STATION

The Liberty North End Station is 13,470 square feet and serves as the main headquarters for Dover Fire and Rescue Services and Inspection Services. With a daily staff composed of Chief officers, the Fire Prevention Bureau, and the City of Dover Inspection Services, Liberty station is also home to an Advanced Life Support Ambulance, Frontline Engine, Heavy Rescue, and a 100' Tower Ladder. The apparatus are staffed with a Shift Captain and 4 firefighters.

GENERAL BUILDING INFORMATION

Address: 262 Sixth Street
Date Built: 2008
Primary Functions: Fire Rescue support, and Emergency Medical Services; Inspection; Services Division; Department Administration, Fire Protection Bureau
Main Interior Uses: Offices, conference rooms, training space, storage, kitchen, bunks
# of Employees: 4 shifts of 5 employees; 6 Fire Department Admin staff; 1 PYT Fire Department staff member; 7 inspection services staff members
Future Changes to # of Employees?: Yes, there is not enough office space presently; more will be needed.
On-Site Visits with Public?: Yes
Roof material: Asphalt shingle
Siding Material: Brick
Heating System Type: Combination forced hot water and air - natural gas
Heating System Age: installed in 2008
Cooling System Type: natural gas
Cooling System Age: installed in 2008
Accessory Storage: No
Asset Management Plan: Yes
Parking: On-site parking for staff and public

Recent Building Improvements
- Roof leaks repaired in 2018
- Upgraded lighting to LED bulbs in 2020
- Renovation of office spaces started in 2019
- Boiler was replaced in 2020

Building Deficiencies
- There is not enough parking for current staffing and for functions.
- Since construction the need to relocate Inspection Services in the building resulted in an inefficient use of available space. This creates inadequate space for command staff and too closely intermingles Fire Department Administration and Inspection Services.
- In need of security cameras on outside of building; keyless entry updates needed throughout.
- Need interstation teleconferencing ability
- Heating/cooling management system is inadequate.
- Climate control is inadequate and difficult to control. Placement of thermostats and other individual controls is poor and results in the overall system constantly fighting itself.
- Accessory storage is needed.

Building Code Issues
- None.

Future Building Projects:
- Assess deed and building lot for North End Station, and determine feasibility of additional parking.
- Complete renovations for separating Inspection Services and Fire Department Administration and creating additional office space. Improve physical workflow of Inspection Services. Reduce noise in renovation of Inspection Services reception area. Consider how to reconfigure space to better facilitate plan review and short-term plan storage to better meet service demand.
- Equip building with interstation teleconference capability.
- Construct accessory storage on-site.
- Complete interior finish upgrades and replace carpet.
- Assess building for solar installation to reduce electricity costs and increase resiliency. Determine if solar installation is feasible.

BUILDING PROFILE: SOUTH END FIRE STATION

The South End Station, located on Durham Road started as an approximately 6,000 sq. ft. single story block structure built in 1967 with a small addition completed in 1999 and another addition of a second floor over part of the building in 2005. The apparatus bay is 4,664 sq. ft. with the remaining space devoted to a kitchen, physical training room, and bunk rooms. The station is home to an Advanced Life Support Ambulance, a Frontline Engine and a reserve engine. This station also houses a Department Mechanic who works to maintain the fleet of vehicles.

GENERAL BUILDING INFORMATION

Address: 25 Durham Rd.
Square Footage of Building: 7,500 sq. ft.
Date Built: 1967
Primary Functions: Fire and Rescue Support, Emergency Medical Service, Vehicle Extrication, and Hazardous Materials Response
Main Interior Uses: Apparatus bay, kitchen, bunk rooms, physical training room, vehicle maintenance area, locker areas, bath/shower rooms.
# of Employees: 4 shifts of (5) plus 1 mechanic
Future Changes to # of Employees: None
On-Site Visits with Public?: Yes
Roof material: Asphalt/stone (last replaced in 2013/14)
Siding Material: Concrete Block
Heating System Type: Forced hot water; natural gas
Heating System Age: Installed in 2019
Cooling System Type: Partial internal AC; partial window AC units
Cooling System Age: Internal system is over 10 years old
Accessory Structures: Single accessory storage shed, stores lawnmower, tools, and equipment
Asset Management Plan: Yes
Parking: On-site parking; 15 spaces, 1 handicapped

Recent Building Improvements
- Installed natural gas heating system in 2019.
- Parking lot was repaved in 2019.

Building Deficiencies
- South End Station has high operational/utility costs.
- Speaker system is inadequate.
- Interior storage is a major issue; need additional closets and gear room.
- Bay doors are older and not insulated well; heat loss occurs.
- Support spaces such as copy/print rooms, specialized work spaces, and server closets are not adequate. Break room and classroom could use general interior upgrades.
- IT deficiency: reliance on unstable comcast connections.
- In need of security cameras on outside of building; keyless entry updates needed throughout
- An upgraded gym would be a significant improvement.
- Customer service interaction area could be improved.
- The South End Station hose drying tower is aging.
- No separate gear room; separation from truck fumes.
- Existing kitchen and lounge area needs updating: remove extraneous fridge, new kitchen cabinets; lounge carpet, workstations and furniture.
- Washer separate from dryer; consider installing new compact unit located in kitchen
- Exterior unheated closet currently unused.
- Storage upstairs would be better on 1st floor in built-in cabinets
- Need better ventilation in vehicle areas.
- Existing 1st floor kitchen/lounge A/C window units create security issue

Building Code Issues
- Electrical and sprinkler system not up to code.
- Interiors stairs are not up to code.

Future Building Projects:
- Building slated for renovation in 2021 and will include the following:
  - Construction of one additional bay with drive-thru capacity
  - Sprinkler system upgrades
  - Replacement of lighting with LED bulbs,
  - Rooftop cooling unit to increase energy efficiency
- A structural analysis of the hose tower is needed to determine its end-of-life so that repair or replacement can be incorporated in future budget.
- Assess building for solar installation to reduce electricity costs. Determine if solar installation is feasible.
- Equip building with interstation teleconference capability.
- Provide new exterior shed for lawn equipment (or utilize existing unheated storage?).
- Develop plan to improve insulation of apparatus bay.
- Consider adding lift to Mezzanine in new mechanic's bay.

BUILDING PROFILE: CENTRAL FIRE STATION

The Central Station is located on Broadway in Downtown Dover. This facility is a three-story, 7000 sq. ft. brick structure. The apparatus bay is 3,000 sq. ft. while the remainder of the space is devoted to offices, a kitchen, physical training/locker room, and bunk rooms. Originally built to house three vehicles and a small number of firefighters, this station houses a Frontline Engine, a reserve Engine, and a reserve Ambulance.

GENERAL BUILDING INFORMATION

Address: 9-11 Broadway
Square Footage of Building: 7,000 sq. ft.
Date Built: 1899
Primary Functions: Fire and Rescue Support, Emergency Medical service, Vehicle extrication, and Hazardous Materials Response
Main Interior Spaces: Apparatus bay for vehicles, offices, kitchen, physical training/locker room, storage, and bunk rooms
# of Employees: station is staffed 24 hours a day by a 3 employees/shift
Future Changes to # of Employees: Possible addition of a 3rd ambulance; possible addition of administrative staff members
On-Site Visits with Public?: Yes
Roof material: Asphalt/tar paper
Siding Material: Brick (repointing is needed)
Heating System Type: FHW; natural gas
Heating System Age: replaced in 2019
Cooling System Type: Window AC units
Cooling System Age: Cooling system should be part of FY2024 upgrade
Accessory Structures: Yes
Asset Management Plan: Yes
Parking: On-site parking; 7-8 spaces total; 1 accessible parking space

Recent Building Improvements

- Heating system (FHW, natural gas) was replaced in 2019.

Building Deficiencies

- Central Station has very high operational/utility costs.
- ADA compliance issues not known for both interior and exterior of building.
- Interior room layout is fragmented and systems are haphazard throughout the building.
- In need of security cameras on outside of building and keyless entry updates needed throughout.

- Need interstation teleconferencing ability.
- IT system needs - Intermittent comcast connection issues, affecting networking and station alerting systems.

Building Code Issues

- Numerous due to age of building, including sprinkler, electrical, stairs, etc

Future Building Projects:

- FY2023 architect assessment of building and 2024 renovation of building. Renovation should include:
  - Addition of 1 bay in FY2024
  - Improve insulation of apparatus bay areas
  - Repointing of exterior brick
  - Energy conservation upgrades including window replacements and replacement of cooling system
  - Assess building for solar installation to reduce electricity costs and increase resiliency. Determine if solar installation is feasible.
  - Install LED lighting.
  - Equip building with interstation teleconference capabilities.
  - Ensure space needs for additional staff are considered during the renovation
- Create a plan for addressing Information Technology System needs.

POLICE DEPARTMENT

MISSION STATEMENT

"Enforce Laws of Society, maintain order, protect life and property, deliver quality services to the community and to assist the public at large in a manner consistent with the rights and dignity of all persons as provided for by law and under the constitution of the United States and the State of New Hampshire."

The Dover Police Department provides law enforcement services to the City's roughly 30,000 residents. In 2020, the Police Department responded to 29,303 calls for police service (30,347 in 2019), which is an increase of 22% since 2010. Additionally, officers conducted 9,189 Motor Vehicle Stops (9,702 in 2019). The Department operates out of a facility that was built in 2016 and is located at 46 Chestnut Street. The Department has a staff of 86 employees, 53 being full-time sworn officers and 33 being civilian staff. The Department manages a fleet of 9 marked patrol vehicles, as well as unmarked staff vehicles and specialty vehicles, such as a crime scene van and incident command vehicle.

The Dover Police Department has been a nationally accredited agency through the Commission on Accreditation for Law Enforcement Agencies (CALEA) since March of 1988. It was the first law enforcement department in the state and the 62nd agency nationwide accredited by CALEA. The Police Department's national accreditation ensures that staff collectively identify trends, remain current with best practices, and are focused on guaranteeing that our internal policies, procedures, and practices result in the high level of customer-focused service to all members of the community.

In addition to responding to police calls for service and investigating crime, the Police Department has a specific Community Involvement and Crime Prevention policy that covers numerous aspects of establishing and maintaining working partnerships

with the community. Those programs include various youth prevention programing, such as Youth to Youth, DARE, the Teen Center, parenting programing such as PACT, as well as area specific Neighborhood Liaison officers, adult and teen citizen police academies, the Big Brother Big Sister "Bigs with Badges" program, and neighborhood watch initiatives, and a citizen lead Police-Community Engagement Committee.

ORGANIZATION

The Department is organized into two major divisions: Field Operations and Support Services. Field Operations personnel provide first contact services with the public and include patrol officers, traffic enforcement, public safety dispatchers and animal control. Support Service personnel serve in a variety of support functions and include detectives, school resource and neighborhood officers, training, Records Unit and Prosecution Unit.

POLICE ACTIVITY

In 2020 the Police Department responded to 29,303 calls for police service. Activities requiring criminal investigations are categorized as Part I crimes and Part II crimes. Part I crimes are the most serious and include offenses such as murder, burglary, robbery, and assault. Part II crimes are those that are less serious and include the offenses of criminal mischief, petty theft, liquor law violations and driving while intoxicated. In 2020, the Police Department investigated 447 Part 1 Crimes and 1,049 Part 2 Crimes. The department made 891 physical custody arrests. Additionally, over 17,000 cases were processed through the Department's Records Unit resulting in 658 right to know requests. Since 2009, the Department has seen a 22% increase in police calls for service, a 31 % increase in dispatch services, and a 34% increase in records services.

Police Activity - 2020	#
Calls for Police Service	29,303
Cases Processed	17,000
Right-to-know Requests	658
Part 1 Crimes	447
Part 2 Crimes	1,049
Physical Custody Arrests	891

KEY ISSUES, CONSIDERATIONS, AND FUTURE PROJECTS

The Police Department has prepared a Strategic Plan for 2017 through 2022 that documents the current status of service and other department needs and issues, as well as considerations for future actions to meet its mission. Key issues that have been identified by this Department are summarized below.

- **Professional Police Services:** It is important that the Police Department continue its CALEA accreditation and that staff build strong, positive relationships with the broader community.
- **Staffing:** Increase in calls for service as well as an increase in right- to- know and other records requests are taxing police staff and increasing demands.
- **Community Engagement:** Positive police-community relationships and trust are critical in the success of the Department and the Community.
- **Transparency:** Increasing transparency of Dover's Police activities including providing statistics regarding crime, police use of force, and frequency and outcome of citizen complaints will enhance the community's trust.
- **Proper Training and Equipment:** Proper equipment, facilities and training is necessary to provide high quality, efficient, and professional police services.
- **Technology and Efficiency:** The growing demands on the Department require that technology be used to maintain or increase efficiency.

BUILDING PROFILE: POLICE DEPARTMENT

The Dover Police Department was completed in 2016. The building consists of three floors and a secure police vehicle parking area and is approximately 31,700 square feet, with 11,086 square feet at the basement level, and 10,307 square feet on both the first floor and second floor. The primary functions are to develop/maintain the effective public safety mission of the agency and ensure that the overall safety needs of the community are met through planning and practice.

GENERAL BUILDING INFORMATION

Address: 46 Chestnut Street
Square Footage of Building: 31,700 square feet with 11,086 square feet at the basement level, and 10,307 square feet on both the first floor and second floor.
Date Built: 2016
Primary Functions: Serves as a multi-use facility serving public safety and law enforcement needs
Main Interior Uses: A booking area, temporary detention area, police parking, fitness room, locker rooms, dispatch area, a large training area, interview rooms, and multiple administrative areas.
# of Employees: 86 total employees
Future Changes to # of Employees: No.
On-Site Visits with Public?: Yes
Roof material: Rubber (original from 2016)
Siding Material: Brick/Glass
Heating System Type: HVAC heating system. The building is heated by natural gas.
Heating System Age: Installed in 2016
Cooling System Type: HVAC cooling system. The fuel type is natural gas.
Cooling System Age: Installed in 2016 (20-year life expectancy)
Accessory Storage:
Asset Management Plan: No
Parking: On-site parking is mixed between the secure basement of parking garage (no accessible space) and the remainder of the public parking garage (has accessible space).

Recent Building Improvements
Prior to constructing a new police headquarters, the Dover Police Department was operating out of a 9,000 square foot area in the basement of City Hall. To increase efficiency and address the need for an upgraded facility, a new headquarters and parking garage was built on the site of the previous municipal parking area. The addition of a parking garage was included in the project scope to provide the City with the dual benefit of a Downtown Police Station and a

Public Parking Garage to serve the local business demand for premium downtown parking locations.

- The parking garage was completed in November 2015 and features five levels, 312 public parking spaces, and 35 police parking spaces.
- The three-story police headquarters was finished in March 2016. The new facility increased operations space, is more efficient, has the ability to house more departments, and creates a high-quality work environment.
- Featured in the new building are holding cells, two sally ports, and a workout room with space for defensive tactics training. The facility's evidence area is large enough to house all evidence at the facility eliminating the previous need for offsite storage Three refrigerated evidence lockers were added to the evidence process area, which is four times bigger than the previous lab. A number of offices and a state-of-the-art Emergency Operations Center were also constructed.
- The new facilities provide enough space for the Department to expand, most recently, opening up a Digital Forensic Evidence Unit.
- Specialized technologies include dispatch equipment in communications center., evidence processing equipment in evidence/lab area, AV equipment in training room/EOC and in conference rooms, recording equipment in interview rooms.

Building Deficiencies
- None.

Building Code Issues
- None.

Future Building Projects:
- Consider developing an Asset Management Plan for the Police Department building.


HORNE STREET SCHOOL
BOOK FAIR
NOV 6-9
EMPOWERING
ALL LEARNERS

3. SCHOOLS


WOODMAN PARK SCHOOL

DOVER SCHOOL SYSTEM

The City of Dover currently operates three elementary schools (Woodman Park, Garrison, and Horne Street), a middle school, and a senior high school with a regional career and technical center. All of these facilities are within a three-mile radius of City Hall. The Dover School District serves more than 4,000 students. The challenging academic program is complemented by a full array of extracurricular activities including music, sports, clubs, social events, drama, and service-learning opportunities. The school buildings and properties also support other community activities and contribute to the health, wellness, and social capital of the community.

The School Board has worked cooperatively with the City Council to fund and complete the following major capital improvements since the 2009 Community Facilities Chapter was adopted:

- **Renovation of the Horne Street School** – completed in 2011.
- **Renovation of Garrison Elementary School** – completed in August 2019; involved major retrofit of the building as well as the renovation of the Kindergarten wing, refinishing the gym floor, new AV system in gym; parking lot and drainage work, and the addition of parking lot play markings.
- **Dover High School and Career Technical Center** – occupied in August 2018; Phase II softball fields and demolition of previous High School was complete August 2019.

The largest of these projects was the construction of the new Dover High School and Career Technical Center (CTE). This facility is now a state of the art and fully integrated school that facilitates a broad range of educational delivery methods and inspires hands-on exploration and learning. The heart of the school is Town Square, a central dining common that unifies core spaces including the gym, auditorium, and

publicly focused CTE spaces, from culinary arts to cosmetology. Career technical programs have also been fully integrated into the academic wings and visible so that students are engaged and immersed in a culture of making. Along with classroom and specialized learning spaces, each wing contains a learning commons with social spaces and student-centered learning nodes. The design reflects the idea of a "future proof" school, one that is truly flexible and can be re-organized by department, grade levels, or subject while maintaining equal access to the CTE and social spaces.

INVESTING IN FACILITIES AND TECHNOLOGY

The City of Dover's existing Capital Improvement Plan, and additional materials provided by the School District represent a strong commitment to quality facilities and technology. This commitment will require continued investments in infrastructure to support student learning inclusive of facilities, technology, safety, and security. In 2011, the School District began to develop and implement a comprehensive capital improvement plan to guide the repair and maintenance of the District's facilities. This plan is updated annually.

Looking ahead, the District plans to contract with a provider to conduct a comprehensive facilities study to address and further inform the District's future facility needs to ensure they align with future community growth. This is programmed in the City's Capital Improvement Plan currently, but was recently cut from the budget. As a result, this project is still pending. Once a comprehensive facilities study is completed, the District intends to also complete a Master Plan to assist in the planning and prioritizing of future investments. In the meantime, District staff collaborate with the facilities/maintenance service provider to maintain clean, healthy and safe learning environments. The District also works with community-based groups to use school facilities for community activities and events, and collaborates with programs such as the Children's Museum, Woodman Museum, etc. for expanded student educational opportunities.

Specific to technology, the District has developed a robust technology infrastructure (i.e., networks, systems, software, and devices) that adequately supports and fully meets the needs of educators and students. Cited as one of the best in the region this includes 1:1 devices for students and staff, a new student information system, completely upgraded information technology infrastructure as of the 2021 school year, and a newly upgraded district-wide wireless platform. The District still plans to develop and implement a comprehensive long-range technology plan that will guide future improvements.

THE DOVER SCHOOL DISTRICT'S STRATEGIC PLAN (2018-2023):

The Dover School District's 2018–2023 Strategic Plan articulates the District's focus on four essential goals:

Goal 1: The Dover School District will improve educational outcomes for students by effectively engaging with the broader community.

Goal 2: The Dover School District will develop and sustain a culture that is characterized by optimizing social, emotional, civic, physical, and rigorous academic learning.

Goal 3: The Dover School District is committed to continued investments in infrastructure to support student learning inclusive of facilities, technology, safety, and security.

Goal 4: The Dover School District will recruit, hire, develop and retain effective and caring educators and support them in their growth as a strong school community.

ENROLLMENT AND FACILITIES STUDY

Over the past ten years, the Dover School District has experienced changes in student population. While it appears that the enrollment pattern is stable, the District needs data to better understand the enrollment trends that will impact space needs in the years ahead. Such a study has not yet received funding. With the onset of the COVID-19 pandemic, the 2020-2021 school year is not an effective indicator of enrollment. It

is also important to study the change of resident demographics related to homeowners, renters, and other attributes. The city's demographics have a direct impact on school district enrollment.

The Dover School District has over $100M in building assets that must be maintained to ensure a healthy and safe environment for students, staff, and members of the community. The purpose of an enrollment and facilities study is to determine the long-range enrollment trends, and to examine how to most effectively utilize the current facilities based on these enrollment figures and the distribution of students throughout the District. This project will identify long-term needs and a usage plan for all District facilities. The District will contract with a consultant to conduct this comprehensive facilities space/needs study that will include city growth projections and their potential impact on schools. It will also identify recommendations for building modifications, additions, and possible new facilities, as well as an evaluation of shifting attendance areas and/or changes in grade alignments for the current schools.

KEY ISSUES, CONSIDERATIONS, AND FUTURE PROJECTS

To collect information on future planning priorities for Dover's school facilities, a review of the most recent Capital Improvement Plan was completed and information was collected from the SAU. A summary of issues and needs are below.

- **Mechanical and ventilation system upgrades** to include, but not limited to, plumbing and electrical upgrades. The ventilation aspects of this work at Dover Middle School are going out to bid in 2021.
- **Roof and insulation projects** for the Garrison Elementary School and Dover Middle Schools are going out to bid in 2021.
- **Window replacement and life safety upgrades** are planned, but a timeline has not been set.
- **Paving and striping project:** The paving of the bus loop at Woodman Elementary is going out for bid 2021.
- **Improvements to grounds** are an ongoing effort that is addressed annually.
- **Energy efficiency upgrades:** Most recently a water heater replacement was completed for

Woodman Elementary in the spring of 2021.

- **Information Technology Replacement and Upgrades** including: replacement of Servers/Routers/Switches; Annual Replacement of Hardware, (Desktops, Laptops, IPads, Chromebooks, etc) on a 5 year lifespan cycle; Replacement of print solutions and other related hardware; Large scale replacement of software programs
- **Garrison Elementary School Renovations** including:
  - Upgraded accessibility standards
  - Administration Addition w/new main entrance & renovation
  - Bus Loop and addressing other site needs, such as drainage and parking
- **Middle School Improvements** including:
  - Relocating existing lockers to the hallways of three wings to create an open-concept student learning workspace.
  - Purchasing and installing an air conditioning/dehumidification system
  - Removing and replacing 65,000 square feet of 20-year-old asphalt architectural shingles
- **High School Turf Field & Track Replacement** will include new turf field and track replacement at the Dunaway Field. This will enhance the work completed on the softball fields in 2019 at the High School.
- **The Dover Recreation Department** would like to partner with the High School to engage students participating in agriculture/horticulture classes, athletic leadership, recreation activities and clubs, or community-based internships to assist the City with park maintenance.

4. PUBLIC FACILITIES

CITY HALL

Dover City Hall is a three-floor historic building constructed in 1935. Its 80-foot tall clock tower is highly visible, making it a prominent City landmark. The building contains one million bricks, 190 tons of steel, and 16 vaults, making the building completely fireproof. The only wood used in construction was for the interior finishing. In 2019, the Council Chambers underwent restoration work including installation of new carpeting and LED lighting, removal of the drop ceiling and a separation wall, and restoration of the dental molding. These renovations have restored this room to its pre-1987 configuration. Television cameras were also installed to video-record meetings and the ventilation system was updated to include air conditioning.

BUILDING LAYOUT

The police department, which used to be located in the ground floor of City Hall, was moved to a newly built facility in 2016. In 2017, the ground floor was renovated into the Customer Service Center and includes the City Clerk/Tax Collection Offices, Information Technology Department, Parking Bureau, and Water and Sewer Billing offices. The first floor of City Hall is where a number of municipal administrative offices on the are located, including the City Manager, Assessing, Economic Development, Legal Office, and Planning and Community Development. The second floor includes the Finance, Accounting, and Purchasing offices, a large auditorium (with a capacity of 900 people), and the City Council Chambers/conference room. Parking for City Hall is located both on-site and off-site. The parking lot at the McConnell Center also provides shared parking for City Hall, the Public Library, and the McConnell Center. There is also a small parking lot by the Customer Services Center entrance to City Hall that has 9 parking spaces. There is also on-street parking available for the public as well.

Departments	Square Footage of Building	# of Staff
Executive	4,000	20
Finance and Purchasing	6,900	30
Planning and Community Development	2,400	7

CITY HALL DEPARTMENTS

EXECUTIVE DEPARTMENT

OFFICE OF THE CITY MANAGER

The Office of the City Manager provides leadership and direction in the administration of policies established by the Mayor and City Council, and in the coordination and supervision of efficient operation of city departments. The City Manager's Office is a part of the Executive Department and is located on the first floor of City Hall.

OFFICE OF THE CITY ATTORNEY

The Office of the City Attorney provides quality, efficient, timely, and cost effective legal services, advocacy, and advice to the City Manager, City Council and City Departments. The Office represents and advocates for the City and all Departments in the District/Superior Courts in matters not covered by insurance, including enforcement actions and collections. They also draft resolutions and ordinances, update the City Manager, City Council, Department Heads and Boards, Commission and Committee members on legislation and recent legal decisions, and draft and review contracts, deeds, leases and other documents. The Office of the City Attorney utilizes three rooms for its operations. The Legal Assistant greets people and has seating for guests while they wait for the City Attorney or Deputy City Attorney. While no additional staff could be accommodated in the suite, staffing needs are met and should continue to be met over the next 5-10 years. In addition to the offices, the office maintains a vault for storage as well as two closet areas. The Office utilizes common conference room space for larger meetings. Technology needs are met through the issuance of lap top computers, land line phones and cell phones. The office has access to the shared City Hall vehicle if needed. No specific needs and issues were identified for this office.

OFFICE OF HUMAN RESOURCES

The Office of Human Resources provides services for City employees and promotes a work environment characterized by fair treatment of staff, open communications, personal accountability, trust, and mutual respect. Human Resources utilizes two rooms for its operations. The Administrative Assistant greets people and has seating for guests while they wait for the Human Resources Director. In addition to the offices, the office maintains two vaults for storage. The Office utilizes common conference room space for larger meetings. Technology needs are met through the issuance of lap top computers, land line phones and cell phones. The office has

access to the shared City Hall vehicle if needed. Human Resources seeks to provide solutions to workplace issues that support and optimize the operating principles of the organization. This Office is part of the Executive Department and is located on the first floor of City Hall within the City Manager's Office.

Primary services of the Office of Human Resources are recruitment and on-boarding of employees, labor relations, including labor negotiations, grievance issues, and as a consultant to department heads regarding labor issues, and workplace safety programming. This includes the Workers' Compensation Program and Joint Loss Management Program. They also provide employee benefits and ensure compliance of administrative regulations. This Office works to maintain competitive and innovative compensation and benefits programs, and promotes equity in the workplace through the fair treatment of every employee regardless of race, color, religion, age, sex, marital status, disability, ancestry, national origin, or veteran status.

Key Issues, Considerations, and Future Projects

The Office of Human Resources has prepared a Strategic Plan for 2017 through 2022 that documents the current status of service and other department needs and issues, as well as considerations for future actions to meet its mission. Additionally, stakeholder input was collected during the update of this Master Plan chapter regarding space needs. These issues related to this Master Plan chapter are summarized below.

- **Technological Infrastructure:** There is a lack of internal Information Systems to support and efficiently track a variety of human resources functions. Adding to the challenge is that the system is shared with the School Department, and the system has been ineffective in being able to clearly separate City and School employees effectively. The City of Dover currently has an inconsistent means for providing and tracking training and development as well, and these systems need to be improved in the future.
- **Staffing:** The space has room for an additional staff in the suite, which would be expected in the next 5-10 years.

OFFICE OF BUSINESS DEVELOPMENT

The Office of Business Development facilitates and encourages sustainable business growth in Dover. It provides leadership and coordination of activities that foster business development and improve quality of life. The Business Development office space in City Hall works for current staff levels. The office is located on the first floor, along the southerly side of the building and consists of three offices, in a suite shared with the Community Development Planner. Technology needs are met through the issuance of laptop computers, land line phones and cell phones, and the use of virtual technology for remote meetings. The shared conference room with smart screen technology is useful.

The Office of Business Development works closely with the adjacent Department of Planning and Community Development, with whom it shares resources such as conference space. The office collaborates with the Dover Business and Industrial Development Authority to promote a strong, healthy and desirable business community and local economy in Dover. Numerous public and private entities play a role in shaping and contributing to Dover's economic development process including the leadership of the City Council, the Dover Business and Industrial Development Authority, and the Dover Planning Board, along many other entities including the Greater Chamber of Commerce, Dover Main Street, and the Dover Housing Authority.

Key Issues, Considerations, and Future Projects

The Office of Economic Development has prepared a Strategic Plan for 2017 through 2022 that documents the current status of service and other department needs and issues, as well as considerations for future actions to meet its mission. Additionally, stakeholder input was collected during the update of this Master Plan chapter regarding space needs. These issues related to this Master Plan chapter are summarized below.

- **Staffing Needs:** There is a need for this Office to develop a long range staff succession plan and to identify staffing needs and develop roles and responsibilities for additional staffing as needed. This would require financial support form the City to hire

additional staff.

- **Technological Infrastructure:** Investigate software to allow in house design for the update and reprint of promotional materials. Replace each laptop and Ipad every five years.

OFFICE OF MEDIA SERVICES

The Office of Media Services works to provide and enhance the City of Dover's communications tools and resources, improve stakeholder relationships and public engagement, and deliver effective communication programs that help achieve these goals within the organization and the community. City communications should provide helpful information about government programs and services to the public, and include a comprehensive website, electronic newsletters, video content on the City's two access channels, public forums, social media, and news releases.

Key Issues, Considerations, and Future Projects

The Office of Media Services has prepared a Strategic Plan for 2017 through 2022 that documents the current status of service and other department needs and issues, as well as considerations for future actions to meet its mission. Additionally, stakeholder input was collected during the update of this Master Plan chapter regarding space needs. These issues related to this Master Plan chapter are summarized below.

- **Space Needs:** The Office of Media Services is at capacity with the addition of new staff. There is still the need for a permanent studio space in the future.

OFFICE OF INFORMATION TECHNOLOGY

The Office of Information Technology's (IT) mission is to promote the Dover community's connection to their local government through the use of easily accessible and accurate information services. IT staff support and assist other municipal staff by providing access to responsive, easy-to-use, secure, and reliable information technology systems and services. The City of Dover's Office of Information Technology works to provide accurate information to the Dover community via various media outlets including online communications, cable TV, social media, print and radio. They also collect, maintain, and distribute GIS-based information on infrastructure, facilities, and features within the municipality, and manage all information technology systems and services lifecycle through design, implementation, maintenance and replacement.

Key Issues, Considerations, and Future Projects

The Office of Information Technology (IT) has prepared a Strategic Plan for 2017 through 2022 that documents the current status of service and other department needs and issues, as well as considerations for future actions to meet its mission. These issues related to this Master Plan chapter are summarized below.

- **Needs and Perceptions of New Technologies:** A key challenge is addressing the concern that new technologies will increase workload or otherwise negatively impact an already busy operation. IT staff should remain open-minded and adaptable while educating, informing and working cooperatively with departments to increase comfort level with new technologies. The potential need for cloud-based services provided by vendors is a new trend and should be investigated in the future. Right now, it is unclear if there will be a shift to the cloud or if the City will remain on servers or whether there will be a move to virtual desktops. Cyber security needs are also increasing and requiring larger budgets to take care of issues. Consider investing in proprietary controls, such as alarm systems with alerts to indicate when equipment fails or there are security concerns.
- **Staffing Needs:** Public safety services have noted a significant increase in need for technology including field-based laptops and tablets, and other tools incorporated within building systems and infrastructure. As a result, the IT office reports a significant increase in supported systems and services. Specific new roles to consider include a business analyst, office secretary and Fire & Rescue Department IT technician. Also mentioned was the opportunity of delegating select IT administration and management work to departments thereby empowering

them to improve response time and offload work from core IT staff. There is also a desire for training and investment in City staff to avoid third party support contracts. IT staff also noted that there is need to develop a better system for prioritization of tasks, projects and services.

- **Accessibility of Information:** Making infrastructure information and work orders more accessible and easy to use by the departments themselves, and for staff both in the office and in the field. There is a need to improve public accessibility, search-ability of public records, and better integration of public bodies with municipal operations.
- **Database Management: I**T should invest in the creation of lifecycle plans that include future costs and security needs for all infrastructure.
- **Respond to Emerging Department Needs and Invest in Proactive Technological Infrastructure Planning:** An important function of the Office of Information Technology that requires ongoing effort of continuous data maintenance, refinement and controlled growth is asset management of municipal buildings and facilities, with a requested focus on utilities. Continue to improve processes to get the right information to the people in the field. Asset management staff should continue refining location information for utilities. The Department is also responsible for hardware and software inventory management, and proper planning should occur to improve efficiency of management processes.
- **Space Needs:** The Office of Information Technology space is at capacity for existing staff and storage needs. This will need to be addressed in the future.

DEPARTMENT OF FINANCE AND PURCHASING

MISSION STATEMENT

"To be a trusted safeguard of the City's financial resources and public records in an equitable, accurate, efficient and professional manner to meet all regulatory and fiduciary responsibilities while timely reporting the financial position and performance to stakeholders."

The Finance department serves Dover citizens through overseeing the City's annual municipal budget, audit and financial reporting, assessing property values, managing City purchases, the levying and collection of taxes and utility bills, and maintaining the official records of the City. This Department has a total of 23 staff members including a Director of Finance and a Deputy Director of Finance. This Department provides online motor vehicle registrations and dog licensing, online payment for property taxes and utility bills, tax assessment data, purchasing bids and quotes, annual public auction, financial statements, and other financial documentation.

Key Issues, Considerations, and Future Projects

The Finance and Purchasing Department has prepared a Strategic Plan for 2017 through 2022 that documents the current status of service and other department needs and issues, as well as considerations for future actions to meet its mission. Additionally, stakeholder input was collected during the update of this Master Plan chapter regarding space needs. These issues related to this Master Plan chapter are summarized below.

- **Technological Infrastructure:** There is a shift to automating and digitizing Finance Department processes and should continue its work utilizing online technology for acceptance of payments, billing, and data sharing. They should also work to enhance the effectiveness of GIS to support tax assessment mapping needs while providing customers with better access and use of tax assessment data. Time should be spent maintaining and keeping data current on the Department website. There's also a need to fund the replacement and implementation of a new CAMA (Computer Assisted Mass Appraisal) system.
- **Space Needs:** The Finance Department space is at capacity for existing staff and storage needs. This will need to be addressed in the future, particularly for property assessment records and City Clerk official records.

DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT

MISSION STATEMENT

"To be a trusted provider of innovative solutions and collaborate with stakeholders to pursue the community's vision."

The Department of Planning and Community Development guides the physical development of the city by preserving Dover's historic sites, guiding land use and development activity, and planning for the thoughtful and respectful construction of buildings and infrastructure. The Department provides staff support to a number of advisory and governing bodies of citizens who provide oversight as the city grows, needs arise, and technology changes. There are 8 staff members in this Department.

The Department is separated into two main divisions: the Planning Division and the Community Development Division. The Planning Division administers and updates the City's Land Use Codes, which contain regulations that govern use and design characteristics of defined districts and special overlays, and conducts code enforcement. Site plans, subdivision plans, rezoning requests, variances, sign, and use permits are all processed by Planning Division staff and the Planning Board. The Department also supports resilience planning, including energy, climate change and land conservation.

The Planning and Community Development Department oversee the Master Plan, which is updated and/or readopted every ten years by the Planning Board. The Master Plan is the long-range growth strategy for the city, addressing issues such as land use, housing, neighborhoods, public facilities, natural resources, and transportation. The Department develops one chapter a year within the overall Master Plan. The Division also coordinates activities under the Block Grant Program. In addition to the above listed responsibilities, all staff coordinate special projects when needed addressing the overall goals and tasks of the City.

Key Issues, Considerations, and Future Projects

The Department of Planning and Community Development has prepared a Strategic Plan for 2017 through 2022 that documents the current status of service and other department needs and issues, as well as considerations for future actions to meet its mission. Additionally, stakeholder input was collected during the update of this Master Plan chapter regarding space needs. These issues related to this Master Plan chapter are summarized below.

- **Communication and Collaboration:** The City of Dover prides itself on clear, transparent communication regarding the City's planning and permitting processes to provide the best customer service for its residents. This Department is working to ensure its permitting process is online, simplified, streamlined, and east-to-follow and is currently investigating the use of an electronic permitting system to improve efficiency.
- **Integration and Infrastructure:** A need identified by this Department is that Code Enforcement should be better coordinated with Inspections Services and the Engineering Department. The digital tracking program utilized by the Department, should also be better integrated with Code Enforcement filing and processes. There is also a need to identify technology solutions to improve operations (i.e. such as data maintenance), and for the purchasing of a second vehicle to be located at City Hall.
- **Information Sharing:** The website should be better organized to allow for easier navigation of documents, studies, projects, and reports. Additionally, planning is underway to implement a program to scan, archive and catalog old files to ensure thousands of these files and planning cases are more secure,

BUILDING PROFILE: CITY HALL / MUNICIPAL

Dover City Hall provides a number of governmental and municipal services for the Dover and is a critical structure for completing City duties. City Hall is a historical structure and remains an important landmark in Downtown. Services in this building include Customer Service, Finance, Planning and Community Development, and other governmental offices.

GENERAL BUILDING INFORMATION

Address: 288 Central Avenue
Date Built: 1935
Recent Renovation: 2019
Primary Functions: Provides customer service for general government functions and houses municipal departments.
Main Interior Uses: Executive Department (City Manager, City Attorney, Human Resources Business Development, Information Technology), Finance Services (Assessing, Clerk/Tax Collector, Purchasing/Accounting), and Planning and Community Development.
# of Employees: Executive (20), Finance (30), Planning (7)
Future Changes to # of Employees: Minor changes, maybe a net change of ~2 positions
On-Site Visits with Public?: Yes
Roof material: Rubbert flat roof (last replaced in 2015)
Siding Material: Brick and Clapboard
Heating System Type: Gas furnace for heating and hot water
Heating System Age: Base radiator system installed in 1930s, boiler replaced in 2020
Cooling System Type: Central AC Mini-Split System Electric Units
Cooling System Age: 2011
Accessory Structures: No
Asset Management Plan: No
Parking: On-Site Parking (9 total, 3 accessible), On-Street Parking, and Off-Site Parking at the McConnell Center

Recent Building Improvements

- 2017 renovation of Ground Floor to customer service center.
- 2019 renovation of Council Chambers/Conference space.
- AC was installed in the Council Chambers and adjoining conference room 2019.
- Mini splits through out the building vary in age with several installed between 2015 and 2020.
- Center of clock face (Central Ave facing) was replaced but the small sections around the numerals still need to be replaced.
- ADA first floor bathroom renovation project was completed in 2022 to provide better ADA wheelchair access.
- Flag pole replacement for uniform units (3) and lighting for proper illumination.
- Small back parking lot was repaved 2021

Building Deficiencies

- Heating and cooling deficiency - there is some improvement in zone balancing that could occur.
- The interior layout precluded many of the suites from being internally connected. This has some employee safety limitations.
- The interior layout lacks signage and wayfinding.
- Record storage in vaults is at capacity – high density storage or digitization is possible.
- Second floor offices experience leaks; this may be a copper flashing or repointing issue.
- The former sallyport door needs to be replaced.

Building Code Issues

- No fire suppression system; sprinkler and fire alarm improvements are needed on 1st and 2nd floors.
- Need to address the generator support for the building and ensure that the electrical room is properly laid out.

Energy Related Projects Completed:

- LED light installation on Ground Floor and in Council Chambers.
- First and Second floor offices have mini split units to improve AC efficiency.
- Windows have been replaced.
- 4 energy efficient condensing boilers were installed 2020.

Future Building Projects:

- 2021/22 CIP Project: Improve interior wayfinding signage and circulation.
- 2022 CIP Project: paint clock tower, paint exterior trim, installation of 1st and 2nd floor sprinkler systems, replacement of electrical service.
- Install electronic keycard and CCTV systems.
- Replace lighting with LED fixtures on 1st floor and remaining part of 2nd floor.

- Address air filtration at windows and doors to improve energy efficiency.
- Evacuation system needs upgrade to audible
- Review roof for possible green roof and/or solar panel installation.
- Add adding landscaping/shade feature to back side parking area.
- Paint interior corridors (has not been done in 23 years).
- Replace remaining drinking fountains with hands free water fountains and bottle refill stations.
- Improve interior storage and organization of files and documents. Explore high-density storage and digitizing existing/future files.
- The ceiling tiles in the Purchasing Suite on the second floor is damaged – replace ACT tile.
- Improve Main entrance on Hale Street by removing the existing utility pole, making it more of a prominent entrance, making necessary upgrades to stairs, brick, and granite plaza.

PUBLIC LIBRARY

MISSION STATEMENT

"The Dover Public Library supports lifelong engagement in reading, discovering, learning, and creating, and delivers what we call "Solutions and Delight" to the community."

The Dover Public Library is a three-floor, 20,000 square foot building built in 1905. It was constructed of brick and granite with a slate roof and is located in Downtown Dover. It represents a significant community hub in the City and offers diverse educational, informational, and entertaining programming. The Library building also serves as an important cooling and heating center for the public during necessary times. The Library supports a physical collection of 94,984 items and a digital collection of 26,207 items that can be borrowed by community members and cardholders. These items include books, e-books, audiobooks, newspapers, magazines, videos, music, and historical items. The Library also has an interlibrary loan program, facilitate book groups, offer discounted museum passes, and provides a myriad of technology for public use including 3D Printer, Memory Lab, computers, printers, WiFi, Children's Games, and Microfilm. The Library lends 334,277 items per year, and had 194,123 people visit the building in 2019. In 2019, the Library hosted 789 programs with 20,253 patrons attending. These programs ranged from lap sit story-times to lectures on local history. The Library is open six days a week, totaling 56.5 hours per week. Currently, the Library has 24 employees - 10 full-time and 14 part-time.

LAYOUT

The top floor of the Library building consists of the Director's office and three meeting rooms including the Trustees Room, the Learning Center (for tutoring), and the Lecture Hall that can be rented by non-profit groups and other community members. The main floor houses the bulk of the

Library's collection, a maker space, and the adult circulation desk. The lower level includes the Children's Room, Story Hour room, bathrooms, and the Technical Services office.

In 1988, a 6,000 square foot, 2-story addition was completed on the Library's parking lot side which included an enlarged Children's Room on the ground level, and an expanded periodical and seating area on the main floor. The original building was structurally reinforced and its electrical, heating and sprinkler systems were updated. Only the 1988 addition has central air conditioning.

KEY ISSUES, CONSIDERATIONS, AND FUTURE PROJECTS

The Library has prepared a Strategic Plan for 2017 through 2022 that documents the current status of service and other department needs and issues, as well as considerations for future actions to meet its mission. Additionally, stakeholder input was collected during the update of this Master Plan chapter regarding space needs. Key issues related to this Master Plan chapter are summarized below.

- **Reconfigure interior spaces for enhanced community engagement:** Convert mezzanine to be entirely for Teen Loft area. Design new signage and wayfinding markers. Replace outdated Adult Circulation Desk with a new service-oriented counter.
- **Expand all-ages programming for underserved populations to ensure diversity of broad programming.** Consider programming needs of developmentally disabled groups, senior citizens, teens, children, and families.
- **Offer new services, spaces, and programming.** Continue to grow the Children's Room Makerspace. Design and open a Family Place Library. Devise a flexible, adaptable area for classroom teaching. Create a "Quiet Zone" and group study spaces.
- **Increase capacity of shared municipal parking lot and improve navigability:** Reach consensus on "parking lot issues" from all agencies currently involved. Seek to fund and hire an engineer to develop a plan for an expanded lot, possibly with a second exit. Investigate the cost of adding a single-level parking desk atop the existing lot.
- **Repurpose existing spaces to accommodate new technologies and services:** Create flexible, comfortable, multipurpose study/teaching/learning spaces with A/C and determine new PC distribution patterns. Update and expand the Library's building-wide paging system. Move Friends' merchandise to the addition, freeing up prime space at main desk.
- **Staffing Needs:** Add to custodial staff and install more security measures. Hire a marketing/public relations/ graphic design professional. Increase the staff development budget for attendance at webinars, conferences, etc.
- **Improve the Library's interior spaces:** Repair and repaint ceilings and walls, where needed. Add electrical outlets and a charging station. Refinish/re-stain original interior woodwork. Change out "tired" locks and doors. Replace outdated Adult Circulation Desk to offer new services more effectively.
- **Connect with local groups & organizations in the wider community.** Grow relationships with other city agencies and organizations, to share resources, promote mutually beneficial services, and aid their mission and ours.

BUILDING PROFILE: PUBLIC LIBRARY

The Dover Public Library was built in 1905 and is an important community space in Dover. The Library provides educational, informational, and entertaining programming, and houses a physical collection of books, technological resources, magazines, and other items for use by Dover residents. The Library also provides learning resources for citizens including maps, ancestry information, and historical archives.

GENERAL BUILDING INFORMATION

Address: 73 Locust Street
Date Built: 1905
Recent Renovation: 2004
Primary Functions: Supports a physical collection of books and resources and digital collection of items for the community to use, provides for the community's informational and entertainment needs, offers meeting space for community groups
Main Interior Uses: The top floor consists of the Director's office, a Learning Center that seats 6 people, Trustees Room that seats 12 people, the Lecture Hall that seats 90 people, the Historical Room that houses historical archives, and a single person bathroom. The main floor houses the bulk of the Library's collection, a staff break room, maker space, and the adult circulation desk. The lower level includes the Children's Room, Story Hour room, a handicapped bathroom, 2 multi-person bathrooms, and the Technical Services office. The basement and attic are used for storage.
# of Employees: 24 employees (10 full-time, 14 part-time)
Future Changes to # of Employees: 2 positions are currently unfilled
On-Site Visits with Public?: Yes
Roof material: Original slate roof on 1905 part of building and rubber flat roof on 1988 addition.
Siding Material: Brick and granite
Heating System Type: 1905 portion of building has a gas boiler and forced hot water system; 1988 addition has unit ventilators and heat pumps (currently there is a redundant system (supplemental perimeter baseboard heat).
Heating System Age: Boiler replaced in 2010, heat pumps installed in 2018.
Cooling System Type: AC units in 1905 portion of building are electric mini split systems that provide AC and heat; 1988 addition has an air handling unit.
Cooling System Age: 1988 addition's cooling system was installed in 2018.
Accessory Structures: No
Asset Management Plan: No
On Site Parking: 216 spaces shared with McConnell Center (11 handicapped)
Off Site Parking: 11 (30)-minute on-street parking spaces

Recent Building Improvements

- Heat pumps and air handling unit installed in 2018
- Slate roof repaired in 2020

Building Deficiencies

- Building is often filled to capacity but patrons are demanding more services, lectures, and rooms for events/tutoring.
- The older portion of building has inadequate electrical outlets for modern technology.
- Poor restroom locations (near entrance and children's area) that are not supervised and have security issues. They also have ventilation issues. In general, restrooms are outdated and in need of renovations.
- There is a need for exterior security cameras to patrol the parking lot.
- Parking capacity is sometimes an issue (especially for staff); consider re-categorizing some spots for library use.
- The Library loses alot of heat/cool air when the outer doors are opened. Efficiency improvements are needed.
- Mini split AC units have issues with moisture leaking.
- Heating is not being circulated properly throughout building.
- Staff space on ground floor adequate, but cut up awkwardly and not accessible.
- Children's area disconnected and too small.
- No safety mechanisms in place in attic over glass skylight.
- Original iron shelving system limits accessibility of some stacks; cannot be made accessible because they're integral to the structure.
- Exterior wood trim is rotted.

Building Code Issues

- Existing accessible restroom not well positioned; must be kept locked.

- Many parts of the building are not accessible for those in wheelchairs and walkers. The original books stacks are too close to allow for wheelchair access. A Portion of the Lower Level and teen area loft are not universally accessible. The third floor bathroom, kitchenette, and 1 small conference room are not accessible to wheelchairs, the adult circulation desk does not have a low desk area for wheelchair access, the mezzanine area of the library is only accessible by a set of stairs.

Energy Related Projects Completed:

- LED lighting upgrades were installed on the first and second floor.

Future Building Projects:

- Slate Roof replacement
- Replacement of exterior wood trim
- Address parking capacity issues.
- Phased renovation planned for 2023 that includes improvements such as new flooring, lighting, millwork, and ceiling in lower level, new glass wall and door at browse room entryway, and new furniture. Restroom renovations should be included as part of this CIP project.
- Consider developing an Asset Management Plan to address building maintenance issues over time.
- Expand makerspace and digital services section.

MCCONNELL CENTER

MISSION STATEMENT

'"The goal of the McConnell Center is to provide an environment where health, education, recreation and cultural agencies can interact and provide programming for the citizens of Dover."

Dover's McConnell Center opened in 2006 in what was the former Dover Middle School building. This project demonstrates creative reuse of a 103,000 square foot former school facility into a multi tenant government and nonprofit collaborative and community center. Located in the center of downtown Dover along with the City Hall, Public Library and District Court, the building anchors the civic core. It is owned, maintained, and managed by the City and hosts several City and School offices and operations, as well as nonprofit agency tenants and community meeting spaces. The multi-faceted McConnell Center encourages a diversity of people to grow, connect, recreate and build lives of purpose and meaning by:

- Creating a collaborative environment for community-based nonprofit organizations, government, schools and volunteers to support each other's activities.
- Balancing opportunities and services to meet the interests and needs of area residents.
- Fostering creative partnerships between the McConnell Center, businesses, and health-related community services.

HISTORY

As the middle school transitioned to a new location, new uses were proposed and studied by the City. In 2004, the City Council assembled a reuse committee, comprised of city officials, human service representatives, school representatives, and community members. This committee was put together to define a vision and determine a use for the building.

By December of 2004, that committee submitted its report to the City Council. Acting on that report, the Council then appointed an Oversight Committee, which had a similar composition as the reuse committee, to determine the tenant mix, the financial structure for the building, and how it would be governed. The vision that the 2004 committee developed was one based upon a Community Center, whereby various human service agencies and non-profits would be housed in the building and would offer various health, education, and recreation opportunities to citizens. The 2005 Committee utilized that model and found tenants, such as the Dover Adult Learning Center of Strafford County, to occupy space within the building.

The rehabilitation of the building involved renovations ranging from life safety improvements to new trim and finishes. Upgrades to the electrical and plumbing system, installation of a sprinkler system and two elevators, completion of some interior finishing for common areas, and other site work were completed during this building conversion. Over 250 windows were replaced, which resulted in greater energy efficiency. In the 1904 and 1928 portions of the building, pictures from the era of construction were used to select appropriate window designs, and while vinyl windows were installed they reflect a color and design used in 1904. Additionally, while 2 elevators were installed in the structure, they were done with minimal impact to the exterior of the building. Including the fit out of the individual spaces, the total budget for the building was over $7.9 million, which was garnered through municipal operating budgets, Capital Improvement Budgets and Community Development Block Grant funds.

RECREATION DEPARTMENT

The Recreation Department provides a broad range of recreation programs for Dover citizens of varied ages, interests and abilities and operates several major facilities that serve the community with a variety of healthy activity options. This Department also facilitates the utilization of City parks and athletic facilities by affiliated organizations and individuals.

The Dover Recreation Department relocated to the McConnell Center from the former Butterfield Gym, which was renovated for occupancy by the Children's Museum. The main offices of the Recreation Department assist residents looking for any information regarding recreation, desiring to register for programs, or needing to speak with recreation leaders.

The McConnell Center's fitness rooms are equipped with Cybex machines, cardio and free weight equipment, and shower facilities. The second floor is home to Butterfield Gym, accommodating various sports such as basketball and volleyball. The Dover Community Senior Center is also located in the McConnell Center on the second floor and its services are managed by the Recreation Department as well.

OTHER MCCONNELL CENTER OCCUPANTS

The Dover School Administrative Unit moved into the McConnell Center in 2008 and occupies more than 5,000 square feet on the top floor. The Community Outreach Bureau, which includes a Teen Center (a division of the Police Department), also has space in the McConnell Center. In addition to the non-profits located within the building, public meeting rooms and conference space was created to assist in the public's ability to meet.

In keeping with the mission and vision for the building, tenants must be not-for-profit or have non-profit status and must serve a social or human service need within the community.

Organizations that have space in the McConnell Center include Dover Adult Learning Center of Strafford County, Kids Culture Childcare, Reach for the Top Therapy Services, NH Indonesian Community Support, Northeastern Ballet Theater, Community Partners, First Push Syndicate, and Community Solutions.

PUBLIC WELFARE DEPARTMENT

The Public Welfare Department provides general assistance to meet the genuine needs of all eligible residents in compliance with NH State Law and the City guidelines in a respectful and fiscally responsible way, which fosters dignity and self-sufficiency. The Department's staff includes a Director of Public Welfare, a Social Worker, and an Office Manager. The Public Welfare Department provides general assistance to the public, maintains accurate case plans/ records, verifies need for assistance, coordinates the Workfare program, complies with relevant laws, works with State and local agencies to improve the human service delivery system, and administers human service grants/subsidies to area agencies.

KEY ISSUES, CONSIDERATIONS, AND FUTURE PROJECTS FOR WELFARE

The Public Welfare Department has prepared a Strategic Plan for 2017 through 2022 that documents the current status of service and other department needs and issues, as well as considerations for future actions to meet its mission. Additionally, stakeholder input was collected during the update of this Master Plan chapter regarding space needs. Key issues related to this Master Plan chapter have been summarized below.

- **Technological Infrastructure:** There is a need to gain access to the Department of Health and Human Services (DHHS) web site to check the status of clients and to use GAP to check if someone has received assistance in another town. The Department also needs a direct line to DHHS and GAP.

KEY ISSUES, CONSIDERATIONS, AND FUTURE PROJECTS

The City of Dover completed an update of its Recreation Master Plan Chapter in 2020. Additionally, stakeholder input was collected during the update of this Master Plan chapter regarding space needs. A summary of identified key needs and issues are outlined below.

- **Improved Coordination:** The Recreation Department is hoping to improve coordination with other facilities within the McConnell Center in the future.
- **Desired programming improvements for the McConnell Center** include additional workout class options such as dancing, yoga, and Tai Chi, longer hours on weekends and at night; and more open gym time for indoor pickleball and basketball.
- **Desired programming improvements for the Community Senior Center** include longer hours, less expensive activities, evening workout classes, wider arrange of senior day trips, and mobility scooter rentals that could be used for the day.

BUILDING PROFILE: MCCONNELL CENTER

The McConnell Center, located at 61 Locust Street, is a three-story multi-purpose building that provides recreation, education, entertainment, and social services to the residents of Dover. The building, previously Dover High School and Dover Middle School, was converted into the McConnell It consists of a gym, fitness rooms, classroom space, offices, and a cafeteria.

GENERAL BUILDING INFORMATION

Address: 61 Locust St
Square Footage of Building: 103,000 sq. ft.
Date Built: 1904, 1928, 1981, 2006
Primary Functions: The building is a Multi-Use, Multi Tenant Government, and Nonprofit Collaborative and Community Center that is owned, maintained and managed by the City.
Main Interior Uses: Gym, dance studio, fitness area with cardio equipment, a cybex circuit, and free weights, offices, cafeteria, meeting rooms, classrooms, Recreation Department headquarters and check in services, Senior Center, Dover Adult Learning Center, non-profit tenant space
# of Employees: City Employees - Recreation (9), Police (4), Welfare (3)
Future Changes to # of Employees: No
On-Site Visits with Public?: Yes
Roof material: 50% asphalt shingle 50% rubber (Asphalt Shingles replaced in 2008 and should last to 2038 and Rubber is over 20 years old in all areas).
Siding Material: Brick and masonry products with some decorative wood infill on the 1904 section. The wood infill will need replacement in 2021 and is funded in the CIP. Re-pointing of some of the brick is needed as well.
Heating System Type: Natural Gas fired boilers and heat pumps in each space.
Heating System Age: The boiler room systems were replaced in 2006 along with the added HVAC systems that includes 64 heat pumps throughout the building to allow for heating and air conditioning.
Cooling System Type: Central Air Conditioning electrically powered.
Cooling System Age: The cooling system was installed in 2006.
Accessory Storage: An exterior masonry room for the storage of landscape tools and fuel for equipment.
Asset Management Plan: No
Parking: On-site parking; 224 spaces in a shared parking lot with the Library. There are 8 accessible spaces adjacent to the building.

Recent Building Improvements

- The building was renovated in 2006 and all new exterior windows and doors were installed. The entire building was upgraded to LED lighting in 2017.
- The replacement of 12 electrical transformers to high efficiency units
- Generator added

Building Deficiencies

- Exterior masonry storage room not sufficient. Need additional storage space.
- Parking capacity is an issue at times. Parking lot also needs repaving in the next 5 years as the previous overlay has begun to deteriorate.
- With the conversion of the building from being a school to a Community Center with many tenants presented the challenges to direct people to the easiest access doors and find their way in the hallways in the various wings and floors. A more robust signage system would help that can be changed easily.
- A camera system is in place and could expand that if funds were available to help with security.
- Heat pumps create a maintenance issue when they malfunction as they're distributed throughout the building – no central control; they fight with the perimeter heat and both can run at the same time.
- Heating/cooling in the gym not optimal; gets too hot with baseboard and requires additional cooling.

Building Code Issues

- None

Future Building Projects:

- Wood trim on exterior to be replaced per CIP 2021.
- Repave parking lot by 2026.
- The heat pumps and circulation systems will need to be rebuilt or replaced in the next 6 years.
- The rubber roof and boilers needs to be replaced in the next 6 years.
- Replacement of carpets and upgrades to entrance tiles are needed.
- Improve interior signage system for wayfinding.
- Develop an Asset Management Plan for the building.

OTHER CITY-OWNED BUILDINGS AND FACILITIES

The City of Dover owns, operates, and maintains a variety of buildings with different levels of complexity. Some buildings, like the McConnell Center, serve a variety of uses, departments, and members of the public, while other buildings are owned by the City but may be underutilized or are leased to a separate entity. As part of this chapter update, a comprehensive review of the existing conditions of each building was completed, and future needs, improvements, and deficiencies were identified so they may be addressed. These buildings include:

- Dover Ice Arena
- Indoor Pool
- Jenny Thompson Outdoor Pool
- Transportation Center
- Butterfield Building (Children's Museum of Dover)
- Bellamy Park Administrative Building
- Veterans Building

All buildings are maintained in some way by the City of Dover's Community Service Department's Facilities, Grounds, and Cemeteries Division. Additionally, Dover's Recreation Department staffs and oversees the Ice Arena, Indoor Pool, and the Jenny Thompson Outdoor Pool facility, with Community Services carrying out building maintenance tasks.

A comprehensive list of all city-owned properties is maintained by the City of Dover and updated regularly. This list as of 2022 is included in Appendix A.

BUILDING PROFILE: INDOOR POOL

Dover's Indoor Pool is a 6 lane, 25-yard lap pool that is 3-5.5 feet deep, and has a dive well that is 11.5 feet deep with a 1 meter diving board. It is located at 9 Henry Law Ave. next to the Children's Museum of New Hampshire. The Indoor Pool is used for a wide range of activities, including lap swim, therapy swim, lessons, competitive swimming, scuba classes, birthday parties and aqua-aerobics. Aside from the pool, the facility houses locker rooms, offices, and meeting rooms. The facility is 53 years old and remains a vital part of Dover's Recreation assets - it is very heavily used by the public. It requires constant attention to maintain safe and high quality usage.

GENERAL BUILDING INFORMATION

Address: 9 Henry Law Avenue
Date Built: 1968
Primary Functions: The building houses a 6 lane 25 yard lap pool that is 3 feet to 5.5 feet deep. It also has a separate dive well that is 11.5 feet deep with a 1 meter diving board.
Main Interior Uses: Public recreation in the pool and supporting locker rooms. Offices and meeting room are also on site. This facility also houses specific technology including a pool filtration and circulation system and a Siemens control system.
# of Employees: 3 Full-time and 23 Seasonal/Part-time
Future Changes to # of Employees: No
On-Site Visits with Public?: Yes
Roof material: Rubber membrane over wood (was replaced in 2016)
Siding Material: Brick veneer over cinder block
Heating System Type: Natural Gas fired boilers
Heating System Age: Installed in 2019 and should last 30 years
Cooling System Type: Lobby and offices have electrically powered central air conditioners
Cooling System Age: Installed in 2003 and partially modified in 2019
Accessory Structures: None
Asset Management Plan: No
Parking: 54 on-site spaces are shared with Henry Law Park and Children's Museum of NH visitors

Recent Building Improvements

- LED lighting upgrade in 2018.
- Boilers relocated and replaced with high efficiency natural gas fired boilers in 2019.
- Solar panel installation (shared with Children's Museum).

Building Deficiencies

- Facility needs additional parking.
- There is not enough spectator space for events.
- There is no natural lighting in the building.
- The HVAC system is barely adequate.
- The phone systems occasionally drop out, which is a critical feature in case of emergency.
- There is a lack of exterior security cameras.
- Occasionally, the pipes freeze.
- Building is located in a floodplain and has been subject to damage from flooding.

Building Code Issues

- None at this time.

Future Building Projects:

- Resurface pool deck.
- Replace pool filtration (last replaced 20-25 years ago).
- Repave existing parking area. More parking is needed but there are limitations due to the Henry Law Trust.
- Siding may need repointing in spots in future years.
- Installation of a camera system for surveillance around the building to decrease vandalism.
- The locker rooms should be reviewed for improvements for privacy concerns.
- Redesign lobby bathrooms.
- HVAC distribution system to the locker rooms and lobby needs replacement.
- Replacement of dehumidifier for the pool area.
- Removal of one exterior garage door for Solarium added to envelope to increase outside lighting and ventilation to the pool area. This project will also include the renovation of the family locker room area and the addition of two exterior entrance restrooms for use by the general public.

BUILDING PROFILE: JENNY THOMPSON OUTDOOR POOL

The **Jenny Thompson Outdoor Pool** is a six-lane, 50-meter competition pool located at 150 Portland Avenue next to the Dover Ice Arena. The pool is Olympic sized and is a tremendous asset and draw to the community, but needs regular maintenance work to keep it in good condition. This pool is mainly used for competitive and recreational swimming as well as occasional lessons during the summer. This facility also has a Bath House and Filter Building on-site to support pool activities.

GENERAL BUILDING INFORMATION

Address: 150 Portland Avenue
Date Built: 1977 for the Bath House and pool and 2003 for the Filter Building
Primary Functions: The Bath House building serves as the entrance to the pool, and the locker rooms and office for the pool are also in there. The Filter Building houses the pumps, filters, pool water heating, and chemical system and controller.
Main Interior Uses: Entrance check in desk, Mens and Womens Locker rooms and a Lifeguard Office in the Bathhouse. The Filter Building is one large open room with the mechanical equipment on the cement floor and in a pump pit.
# of Employees: 2 Full-time and 23 Part-time/seasonal staff in the spring and summer only
Future Changes to # of Employees: No
On-Site Visits with Public?: Yes
Roof material: Asphalt shingle on the Bathhouse and steel on the Filter building (Asphalt roof last replaced in 2015 and not be replaced until 2045, and the metal roof last replaced in 2003, and not to replaced until 2053)
Siding Material: Concrete masonry siding on the Bathhouse and brick over cinder block in the Filter Building
Heating System Type: Natural Gas fired hot water heaters and pool water heater
Heating System Age: The pool water heating system was replaced in 2020 and the Bath House water heating was replaced in 2015. The pool heater is going to last around 15 years and the water heaters should last another 10 years.
Cooling System Type: None
Cooling System Age: N/A
Accessory Structures: Yes, stores small tools.
Asset Management Plan: Yes
Parking: 120 on-site parking spaces

Recent Building Improvements
- LED lighting upgrades
- The pool water heater was just replaced in 2020. The Bath House heater was just replaced in 2020.

Building Deficiencies
- There is no way to allow for use of the restroom by the general public spectators for swim meets, or for park users. The facility must currently rely on Port o Lets.

Building Code Issues
- None at this time.

Future Building Projects:
- Storage building replacement in 2021.
- Pool relining and deck replacement is already funded.
- Replace accessory storage structure.
- There is a need for an attached public restroom.
- Continued upgrades to the locker rooms.
- Replacement of pumps and motors will help with some energy efficiencies.
- Interior bathroom partition replacements.

BUILDING PROFILE: TRANSPORTATION CENTER

Dover's Transportation Center is a multi-modal transportation facility that provides passenger and freight rail services through Amtrak and Coast/ Wildcat. The building was erected in 2001 for the inauguration of the Downeaster service between Boston and Portland. The station is served by five daily Downeaster round trips. An average of 150 passengers board at Dover daily, making it the second-busiest stop in New Hampshire. The facility has restrooms, an indoor waiting room, an open-air, covered waiting

GENERAL BUILDING INFORMATION

Address: 33 Chestnut Street
Date Built: 2001
Primary Functions: Serves as Dover's Transportation Center and hub for the Amtrak Downeaster, COAST Bus, Wildcat Transit, and public bathrooms for Community Trail. Also, home to Bubby's Deli as of Spring 2020.
Main Interior Uses: Deli/restaurant, bathrooms, transportation waiting area
# of Employees: 2 Full-time and 1 Part-time employee for leased tenant.
Future Changes to # of Employees: No
On-Site Visits with Public?: Yes
Roof material: Shingles removed and replaced in 2020 (expected 20-year lifespan)
Siding Material: Wood and cement board trim
Heating System Type: Hot air, natural gas
Heating System Age: Installed in 2001
Cooling System Type: Cooling coil in air handling unit located in attic; natural gas - the exterior condensing unit was damaged October 2020. The building currently has no air conditioning.
Cooling System Age: installed in 2001
Accessory Structures: Not for storage but accessory train platform. Ideally in future, accessory storage can be built for tenant's storage and the vestibule will be expanded.
Asset Management Plan: No
Parking: 402 total spaces (7 accessible, 143 leased spaces, 20 tenancy at will permits).

Recent Building Improvements

- New water heater was installed in 2020.
- Other improvements made to the building include a new roof, a new internal fit-out for a restaurant, new flooring, re-painting, repairs to the outside trim, and replaced lighting.

Building Deficiencies

- Limited storage.
- Lack of public space for waiting for transportation.
- The cooling system is undersized for the current space.

Building Code Issues

- None at this time.

Future Building Projects:

- Some of the cement board will need to be replaced within 10 years. The building should be considered for full paint within the next 3-5 years.
- Full repaving of the parking lot.
- Extend vestibule out to increase outdoor waiting area.
- Install security cameras.
- Investigate the feasibility of installing solar panels on the roof.
- Create additional storage space by erecting an exterior storage shed for tenant.
- Invest in replacement ductless mini split system to provide cooling for the space.
- Replace all exterior light fixtures with LED.
- Repair the columns at the train platform and passenger waiting area.
- Improve landscaping around Transportation Center.

BUILDING PROFILE: BELLAMY PARK BUILDING

Bellamy Park is a 33-acre public park operated by the Dover Recreation Department. The park includes walking trails and a disc golf course. The Park Building is a great resource to have on site to support the major uses of Bellamy Park. The building used to serve a summer camp, but now is partially leased to a Disc Golf Shop (lower level). The upper level is used for storage and organization by the Disc Golf Club.

GENERAL BUILDING INFORMATION

Address: 32 Knox Marsh Rd.
Date Built: 2000 (built by High School class)
Primary Functions: Disc Golf Shop and meeting space for the Disc Golf Club**.**
Main Interior Uses: The first floor is leased out to a Disc Golf shop which serves many customers that come to the park to play on the Bellamy Park Disc Golf Course. The second level has storage rooms, office space, bathroom and kitchen that is used by the Disc Golf Club for events.
# of Employees: N/A
Future Changes to # of Employees: N/A
On-Site Visits with Public?: Yes
Roof material: Asphalt Shingles (new as of 2000 and they are 30 year shingles so 2030 for replacement)
Siding Material: Hardy Board clapboards (partial replacement along the foundation in the front and back due to moisture)
Heating System Type: Hot water base boards and a Modine unit fed by an oil fired boiler.
Heating System Age: Installed in 2000 and should last another 5 years to 2025.
Cooling System Type: No cooling systems
Cooling System Age: N/A
Accessory Structures: No
Asset Management Plan?: No
Parking: 20 on-site parking spaces

Recent Building Improvements
- Parking lot was recently repaved.

Building Deficiencies
- Building is located in a floodplain and could experience damage from flooding during heavy rainstorms.
- It was designed for summer camp use and now is converted to other activities so the layout does not provide the most ideal circulation.

Building Code Issues
- None at this time.

Future Building Projects:
- A video camera system would work well with the building alarm system.
- Eventual upgrade of the oil fired boiler to a more efficient unit.

BUILDING PROFILE: BUTTERFIELD BUILDING

The Butterfield Building was originally built as a National Guard Armory and was later converted to use as the City of Dover Recreation Center. It is owned by the City of Dover, but most recently leased to the Children's Museum of NH (CMNH). This lease agreement began in 2007. The building is now an Energy Star Certified Building and hosts the programs and staff of the CMNH. There is a 60-year lease with the City for that use. The operational costs and infrastructure repairs are covered by CMNH. The basement has space for the boiler room for the attached Dover Indoor Pool.

GENERAL BUILDING INFORMATION

Address: 6 Washington St.
Date Built: Built in 1929 as National Guard Armory; partial demolition in 1938 due to hurricane; Rec Center court installed in 1992; moved out 2006.
Primary Functions: Currently leased to Children's Museum of New Hampshire and they are responsible for all building maintenance including the roof and envelope.
Main Interior Uses: The main area is the former gym which now houses many exhibits and activity areas for the Museum patrons. There are 2 meeting rooms and offices as well. There is a workshop and storage area in the basement that is very full.
# of Employees: 8 Full-time staff and 6-8 Part-time plus volunteers
Future Changes to # of Employees: No
On-Site Visits with Public?: Yes
Roof material: Rubber flat roof, asphalt on the pitches (the rubber was upgraded with new seam overlays in 2019 and shingles were replaced in 2018)
Siding Material: Brick on 95% of the building and a composite siding on an extension area on the river side.
Heating System Type: Natural Gas Hot Air system
Heating System Age: Installed in 2007 and should last until 2027
Cooling System Type: Rooftop York system, which is an electrical/ natural gas system
Cooling System Age: Installed in 2007 and should last until 2027.
Accessory Structures: No
Asset Management Plan: No
Parking: On street for patrons , 54 parking spaces in the adjacent lot that are shared with the Indoor Pool and Henry Law Park.

Recent Building Improvements
- Solar panels were installed on the roof.
- LED lighting conversion in 2020.

Building Deficiencies
- Building is located in a floodplain and has experienced damage from flooding during heavy rainstorms. The flooding potential of the Cochecho River impacts the building improvements on the riverside of the building.
- Some parking capacity limitations.
- The workshop and storage areas for display materials is very full but there are no other spaces inside the building to expand storage.
- The Children's Museum program is very diverse and includes on site and virtual programming. There may be a need to expand the capability of the virtual media production area.
- The sanitary sewer pump is located in the basement. This is not ideal, as the basement is prone to flooding.

Building Code Issues
- None at this time.

Future Building Projects:
- None at this time.

BUILDING PROFILE: VETERAN'S BUILDING/BACK RIVER RD. COMMUNITY CENTER

The City obtained a quitclaim deed for the **Veteran's Building/Back River Rd. Community Center**, a 2,522 square foot building, in 1978. The City has a lease with the Dover Veteran's Council and the Back River Community Club that expires Dec 31, 2025. The space is used for monthly meetings of the Dover Veteran's Council and the Back River Community Club. The building is also rented out for small events such as baby showers, birthday parties, rock and mineral shows, etc. Rentals are managed by a resident of the Dover Veteran's Council.

GENERAL BUILDING INFORMATION

Address: 156 Back River Rd.
Date Built: 1920s
Primary Functions: Currently serves as meeting space for Dover's Veteran Council and for the Back Road Community Club. Also serves as a rental space for events.
Main Interior Uses: A kitchen with appliances, men and women's restrooms (1 each), storage spaces and two large community rooms.
# of Employees: N/A
Future Changes to # of Employees: N/A
On-Site Visits with Public?: Yes
Roof material: Asphalt installed 2007; 30 year warranty
Siding Material: Vinyl siding and ½" of rigid insulation on the exterior added 2001
Heating System Type: Two natural gas heating units heat the large community rooms. 5 other electric baseboard heating units are located in the entrances and restrooms.
Heating System Age: Installed in 2007 (natural gas units)
Cooling System Type: None
Cooling System Age: N/A
Accessory Structures: No
Asset Management Plan: No
Parking: On site parking lot

Recent Building Improvements

- Vinyl siding (w ½" insulation) and seamless gutters where appropriate were completed in 2001.
- Roof replacement was completed in 2006/2007 which included stripping old shingles, applying Grace Ice and water shield (flashing) on edges and valley of roof, felt on remainder of roof and putting down 30 year architectural shingles and a new ridge vent.
- Carpet was replaced, walls were repainted and recessed trough lighting installed spring 2016.

Building Deficiencies

- Parking lot is unpaved and in poor condition.
- Need for cosmetic upgrades.
- Some windows not currently operable.

Building Code Issues

- Assess whether existing fixture count is sufficient for Assembly use

Future Building Projects:

- Pave parking area.
- Replace VCT flooring in half of building.
- Renovate existing restrooms.
- Repair/replace windows on original portion of building.
- Consider future use and value of building for community use.

BUILDING PROFILE: ICE ARENA

The Dover Ice Arena is a twin (200' x 85') sheet ice arena that is used for public skating, hockey, youth and adult programs, summer camps, and special events throughout the year. The Dover Arena is a great asset and has tremendous economic impact due to its ability to host many ice and non-ice related activities. It has the largest indoor activity space in the City. "The building is managed and maintained by the Recreation Department.

GENERAL BUILDING INFORMATION

Address: 140 Portland Avenue
Date Built: Original sheet 1976-77 second sheet 1999-2000
Primary Functions: This is a twin (200' x 85') sheet ice arena that is used by many hockey and figure skating programs. It has cement slabs under the ice that provides options for non ice related use when the ice is out.
Main Interior Uses: There are 2 large metal buildings joined by a central space that houses offices, meeting space, 15 locker rooms, and utility areas. The main buildings are the location of the ice rinks, locker rooms and spectator areas with supporting rest rooms and storage.
# of Employees: 4 Full-time, 23 Seasonal/Part-time
Future Changes to # of Employees: None
On-Site Visits with Public?: Yes
Roof material: Metal with a rubber membrane on the middle connector section. (replaced in 2000 with a lifespan of 20-30 years)
Siding Material: Steel
Heating System Type: Natural Gas fired heat pumps and roof top units.
Heating System Age: The majority of the heating system was replaced in 2000 and the heating for the locker room section of the Foster Rink was replaced in 2018.
Cooling System Type: Rooftop units electrically powered.
Cooling System Age: The system was installed in 2000 and is nearing the end of its life expectancy.
Accessory Structures: Yes, stores small equipment.
Asset Management Plan: No
Parking: 400 on-site parking spaces

Recent Building Improvements

- LED lighting conversion in 2017
- The change-out of the compressor systems was completed around 2012. The pumps and cooling tower were updated around the same time.

Building Deficiencies

- Accessory storage structure's capacity is not adequate (too small).
- Locker rooms are too small and have limited space. Interior storage for team equipment is limited and not sufficient.
- There are intermittent issues with dehumidification and heating of the rink spaces, and with the controls of the rest of the heating/cooling systems.
- The main deficiency of this facility is a lack of entry/lobby space. Entryway is not delineated well and lobby is small presenting possible safety issues during large events.
- Poor exhaust location on air handlers on roof; requires constant snow maintenance.
- Roof has leaked during storm events and snowload is an issue.
- Need overflow parking for large events.
- The second floor on the end of the Foster Rink can be improved and better utilized for activities, spectators, and storage.

Building Code Issues

- Upgrades needed to emergency lighting and sprinkler systems.

Future Building Projects:

- Identify improvements to lobby/entryway. Expand lobby area to allow for larger crowds that attend events. If possible, expand the gathering areas for spectators outside of the rinks it reduce congestion.
- Evaluate all rooftop HVAC units for replacement and create a timeline to do that.
- Add garage for truck/equipment and move storage out of building.
- Ideally add separate locker room for officials.
- Install snow rails at shed roof at rear of building to protect rooftop equipment.
- Identify an improved use of unused 2nd floor 'Foster' space (offices, storage, etc.)
- Provide new flooring for the camp/birthday area.
- Identify overflow parking solution.
- Add solar panels to improve energy efficiency add save on electrical operating costs.
- Create access road to the parking lot from the Softball field (to serve as an overflow parking area).
- The refrigeration system has been upgraded and is very efficient and needs to be maintained well and integrated with the controls and alarm systems so it can be remotely monitored and controlled.
- Designate additional office and storage space in the core of the building.

5. COMMUNITY SERVICES

OVERVIEW

The Community Services Department is responsible for maintaining public facilities in Dover that sustain a safe environment and quality of life for the community. They oversee many of the day-to-day services and infrastructure residents depend on, including streets and road maintenance, recycling and trash pick-up, facilities and grounds maintenance, wastewater treatment, engineering, environmental management, fleet services, and more.

The Community Services Department is organized into divisions, shown in the chart on the following page. Community Services, and most of the Divisions within this Department (except Facilities, Grounds, and Cemeteries), are housed in the Public Works Facility. This facility has offices for administration, engineering, environmental programs, fleet services, and public works and utilities. It also includes storage space for equipment and materials, a pole barn, and a salt shed. The Facilities, Grounds, and Cemeteries Division is located at a newly constructed facility located at 145 Court Street.

DIVISIONS

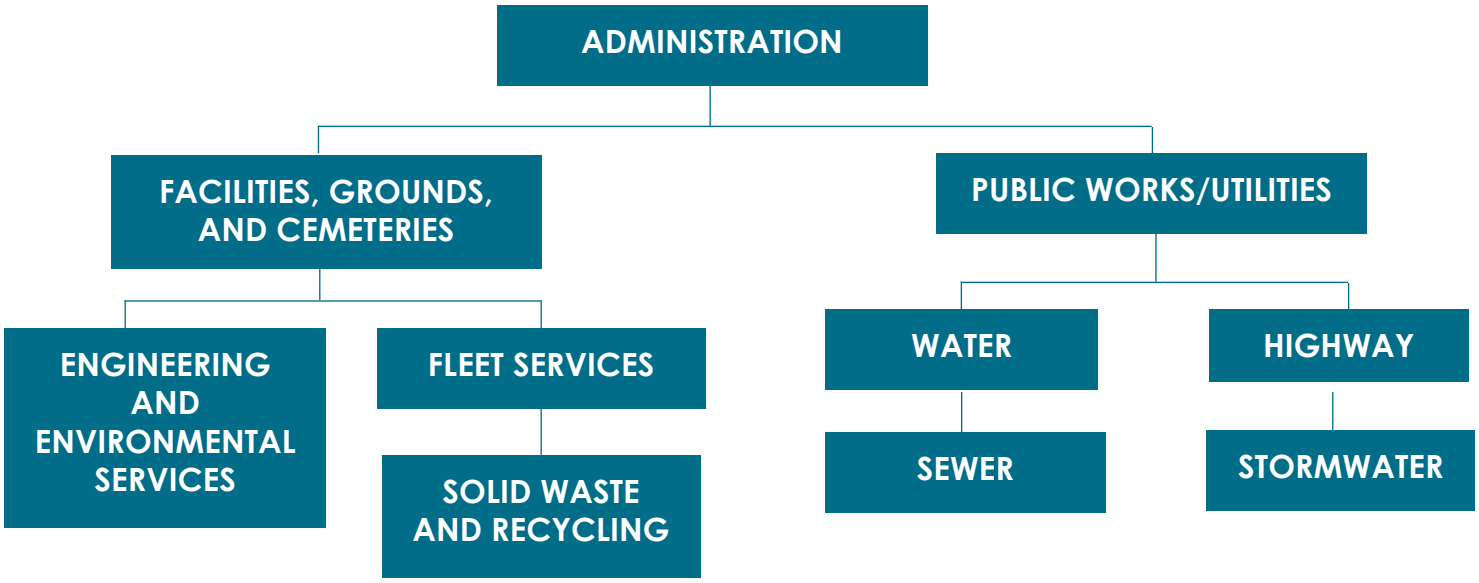
The Community Service Department includes the following Divisions:

- Engineering
- Environmental Services
- Facilities, Grounds, and Cemeteries
- Fleet Services
- Highway Maintenance
- Public Utilities including Water, Sewer, Wastewater Treatment, and Stormwater
- Solid Waste and Recycling

Engineering and Environmental Services

The Engineering Division provides professional engineering services for the City of Dover that ensures long-range comprehensive planning, sound project design, and quality construction management. They also provide technical engineering assistance to other City Departments and oversee Environmental Service staff. Staff in this Division maintain Public Works plans and records, identify needed capital projects, design and oversee CIP projects, review projects for the Planning Board and other City

COMMUNITY SERVICES DEPARTMENT ORGANIZATION



Departments, and inspect projects for compliance with ordinances and regulations. They also conduct septic review and provide cost estimates for City projects. The Environmental Services staff ensure compliance with Federal, State and local laws and assist the community with education to be as environmentally conscious as possible. They oversee environmental activities in the community, and ensure all environmental legislation is abided by within the City.

Facilities, Grounds, and Cemeteries

This Division is described in further detail in the Facilities, Grounds, and Cemeteries Section, which starts on page 54.

Fleet Services

The Fleet Services Division provides maintenance and repair of 130 city vehicles for Dover's departments including Engineering, Water, Sewer, Cemetery, Recreation, Facilities and Grounds, and Police. Fleet Services also performs vehicle maintenance and repair for external entities, including adjacent Towns and organizations. More about fleet maintenance can be found on page 64.

Highway

The Highway Division maintains all of Dover's roadways, sidewalks, the storm drainage system, and other infrastructure. Highway Division activities include annual State inspections of City vehicles, repair of all roads, sidewalks, catch basins, drainage pipes and swales in the City, maintenance of guard rails and bridges, sidewalk and street sweeping, supporting other Divisions as needed (such as water and sewer line breaks or building repairs). They also provide plowing, salting, and sanding of roadways, city parking lots, and designated sidewalks during snow and icing conditions.

Solid Waste and Recycling

This Division is described in further detail in the Waste Management Section, which starts on page 60.

Public Utilities

Dover's public utility divisions including water, sewer, wastewater treatment, and stormwater, is described in further detail in the Public Utilities Section, which starts on page 67.

BUILDING PROFILE: PUBLIC WORKS FACILITY

The Public Works Facility was built in 2001 and is located at 271 Mast Rd. The primary structure is a large metal building with a metal roof, and provides office space for Community Services activities such as fleet services, environmental services, utilities, and fleet maintenance. There is also a garage, pole barn, and salt shed on site as well.

GENERAL BUILDING INFORMATION

Address: 271 Mast Rd.
Date Built: 2001
Primary Functions: Houses administration, engineering, environmental programs, fleet maintenance services, and public works and utilities.
Main Interior Uses: 10,000 square feet area comprised of office space, parts/inventory room, paint booth and repair and lift bays.
# of Employees: 46 total
Future Changes to # of Employees: N/A
On-Site Visits with Public?: Yes
Roof material: Metal
Siding Material: Metal
Heating System Type: Fuel is natural gas / electric, HVAC System – combined heating /cooling: two Lochnivar boilers; numerous cabinet heaters and hydronic heat units
Heating System Age: Boilers commissioned in 2018, cabinet/hydronic heat units installed in 2001
Cooling System Type: Three air handling units (Bryant); one split system ac unit in the fleet offices/break room
Cooling System Age: 2001
Accessory Structures: Yes
Asset Management Plan: No
Parking: 14 visitor spaces, 11 regular and 3 ADA. 64 staff spaces clearly marked and delineated, with another 20 unofficial spaces.

Recent Building Improvements

- LED lights have been installed.
- The reception area was recently renovated for improvements in spring of 2021.
- The boiler was replaced in 2019.
- Former carpentry space has been converted to storage for police, traffic signage, and blockades.

Building Deficiencies

- Heating system is not adequate, especially in the fleet maintenance portion of the building, and ventilation complaints in office areas.
- Fleet area ventilation suck contaminated air back into the system; keeping temperature up is an issue.
- Floor drains/grates require replacement in main bay.
- De-icing system not adequate.
- Roof may be damaged due to walking/shoveling.
- Container storage currently in use is deficient; goods are damaged.
- Paint booth no longer in use.
- This building is at full capacity with no room left for growth. Any changes in staff could warrant a need for expansion. Interior storage does not have much capacity left.

Building Code Issues

- There are some life safety and ventilation issues that need to be addressed when vehicles start up in building.

Future Building Projects:

- Add additional toilet in shower location in Men's Room.
- Replace Reznor heater in brine tank room.
- Ventilation/HVAC upgrades. Replace heating system and improve heating in fleet maintenance area of building.
- Replace garage doors at either end of main bay area.
- Explore space solutions for additional interior storage.
- Address snow load issues on roof. Consider replacing flat roof with a peaked roof.

FACILITIES, GROUNDS, AND CEMETERIES

The Facilities, Grounds, and Cemeteries Division is responsible for providing and maintaining safe and clean city buildings, parks, playgrounds, ball fields, trails, equipment and other facilities for the safety and quality of life to the community.

In addition to the building maintenance of the City's public facilities, the Division is responsible for the grounds maintenance at each of these locations and 54 other public areas. This includes maintenance of park and playground equipment at Applevale Park, Bellamy Park, Henry Law Park, Garrison School Park, Garrison Hill, Guppey Park, Horne Street Park, Hancock Park, Longhill Park, Maglaras Park, Morningside Park, Park Street Park, Amanda Howard Park, and Woodman Park. A full list of buildings and parks maintained by Facilities, Grounds, and Cemeteries can be found on the following pages.

STAFFING

There are nine full-time personnel available to carry out the duties for this Division. There are also four part-time custodians, and numerous summer employees. This Division is housed in a newly built facility at 145 Court Street.

RESPONSIBILITIES

Specific responsibilities of Facilities and Grounds include:

- Maintenance of 20 public buildings providing cleaning, maintenance and repairs of the buildings inclusive of the building envelopes and all interior systems, flags, and flag poles. Also perform custodial duties and carpentry, mechanical, plumbing, electrical, sheet metal, and welding skills. Perform landscaping, brush and tree removal at all City facilities.
- Maintenance of 20 city parks - 14 of which have playgrounds - the Garrison Hill Tower, 15 ballfields (3 multi-purpose, 3 soccer, 2 softball, 7 baseball), 7 tennis courts, 4 pickle ball courts and 5 basketball courts. Groom, mow and line ball fields, maintain public turf areas and flower beds.
- Maintenance of the Community Trail and Riverwalk along Orchard Street and through Henry Law Park, 65 public turf areas, and 5 irrigation systems.
- Maintenance of the facilities and grounds of Pine Hill Cemetery, of which 75 acres are currently developed, preparing burial spaces, conducting burials, and installation of foundations for monuments and markers. Facilities and grounds of three other smaller public cemeteries are also maintained by the City.
- Oversees turf treatments and curb line weed control throughout the City.
- Maintain the equipment necessary to perform

BUILDINGS Maintained by Facilities and Grounds	
Building	**Address**
Bellamy Administration Building	Knox Marsh Rd.
Butterfield Building	6 Washington St.
Central Fire Station	9-11 Broadway
City Hall	288 Central Ave.
Facilities, Grounds, and Cemeteries Facility	145 Court St.
Garrison Hill Tower and Observatory	10 Garrison Hill
Guppey Park Bathhouse, Pool Store, and Pump Bldg	150 Portland Ave.
Ice Arena	110 Portland Ave.
Indoor Pool	6 Henry Law Ave.
Library	73 Locust St.
McConnell Center	61 Locust St.
Liberty North End Fire Station	262 Sixth St.
Jenny Thompson Outdoor Pool	150 Portland Ave.
Old Fire Station	Dover Point Rd.
Paddlesport Dock	Cochecho waterfront
Parking Garage	46 Chestnut St.
Pine Hill Chapel, Tomb, and Cemetery Barn	131 Central Ave.
Police Facility	46 Chestnut St.
Public Works Building, Salt Shed, and Pole Barn	271 Mast Rd.
Recycling Center	271 Mast Rd.
Shaws Lane Concession Building	Shaw's Lane
South End Fire Station	25 Durham Rd.
Transportation Center	33 Chestnut St.
Veterans Building	156 Back River Rd.
Wastewater Treatment Facility	48 Middle Rd.
Warming Center	30 Willand Dr. Somersworth, NH
150 Ft Prefab Communication tower	484 Middle Rd.
150 Ft Prefab Communication tower	10 Abby Sawyer Ln.
150 Ft Prefab Communication tower	308 Longhill Rd.
147 ft Monopole telecommunications tower	271 Mast Rd.
140 ft Monopole telecommunications tower	271/273 Mast Rd
PARKS Maintained by Facilities and Grounds	
**Please note that a description of park facility needs and priorities is included in the recreation chapter of Dover's Master Plan.*	
Alden Woods tot lot playground equip	
Amanda Howard playground equip	
Applevale playground equip	
Bellamy Park	
Cochecho Riverwalk (includes Orchard St Riverwalk-Joe b Parks Garden / Henry Law Park Riverwalk)	
Community Trail	
Dover Skateboard Park	
Emerald Lane tot lot playground equip	

Fish Ladder Park/Cochecho Falls (under design for reconstruction)	
Garrison (school) Park playground equip	
Garrison Hill Park playground equip	
Guppey Park	
Hancock Park playground equip	
Henry Law Park – Rotary Park – Adventure Park (playground equip water features)	
Horne St (school) Park playground equip	
Immigrant's Park	
Long Hill Park playground equip	
Maglaras Park	
Morningside Park playground equip	
Overlook Dr playground equip	
Park St Park playground equip	
Shaw's Lane	
Spruce Lane	
Sullivan Dr Field playground equip	
Waldron Courtyard	
Willand Pond	
Woodman Park (school) playground equip	
CEMETERY FACILITIES Maintained by Facilities and Grounds	
Austin Tuttle Cemetery	Old Dover Rd. and Gerrish Rd.
Cemetery Barn	35 South Pine St.
Pinkham Cemetery	Dover Point Rd. by New Bellamy Lane
Ricker Memorial Chapel	131 Central Ave.
Roberts Cemetery (First Settlers)	Dover Point Rd.

landscaping, field maintenance, construction, and tree maintenance.
- Maintenance of City street trees and other vegetation in the public cemeteries and public parks.
- Maintenance of the city traffic signal network at 35 intersections and city traffic signage, inclusive of all street name, warning, and regulatory signage.
- Maintenance of various memorial monuments and spaces throughout the City.
- Coordinate maintenance schedules with other divisions.
- Maintenance of the decorative lighting in the urban core and on community trails.

KEY ISSUES, CONSIDERATIONS, AND FUTURE PROJECTS

A summary of identified key needs and issues are outlined below.

- **Buildings, Roads, and Operations**
  - Upgrade vehicles and equipment as needed. Develop a computerized maintenance inventory schedule.
  - Restore power safely to the outlets used to decorate the downtown area during festivals and the holiday season.
  - Monitor Energy Management System for public facilities to improve efficiency and achieve cost savings.
  - Continue to assist in the revamping of the signage for the downtown and municipal parking areas.
  - Maintain LED fixtures on streetlights and décor lighting throughout the City.
- **Parks and Grounds Actions**
  - Continue working with Emery & Garrett in activating the Shaw's Lane well for athletic field irrigation.
  - Continue City wide tree maintenance program and tree replacement in the urban core.
  - Continue monitoring curb line weed

control program while exploring efficient and fiscally responsible organic alternatives.
    - Continue turf treatment program to improve quality of playing fields and public turf areas, implementing effective and fiscally responsible alternatives to synthetic treatments.
- **General Cemetery Actions**
    - Record and computerize burial information.
    - Perform interments.
    - Perform cement foundation work for memorialization.
    - Restore and reset fallen/damaged headstones.
    - Implement layout for new burial area.
    - Develop marketing plan to increase lot sales.
    - Work with volunteers on historic preservation project.
    - Proceed with GPS mapping of cemetery sections.
    - Install related landscaping for Columbarium.
    - Implement turf treatments in areas requiring attention.
    - Modification of Tomb to provide organized storage.
    - Continue to install trees to replace old trees and those decimated by storms.
- **Specific Cemetery Actions**
    - **Austin Tuttle Cemetery:**
        - Eradicate Japanese Knotweed and restore area by seeding with drought tolerant seed mix.
        - Prune existing trees and shrubs as necessary to enhance public visibility of cemetery to visitors and to deter vandalism. Retain buffer along adjacent residences.
        - Repair and or replace existing pipe rail fence delineating cemetery limits and or install granite monuments to establish cemetery limits.
        - Provide signage documenting historic significance.
        - Repair toppled monuments and record conditions of headstones.
    - **Pinkham Cemetery**
        - Remove existing vegetation engulfing headstones on the eastern (rear) portion of the cemetery to expose headstones. Restore the ground area allowing herbaceous vegetation and leaf litter to remain.
        - Prune existing trees and shrubs as necessary to enhance public visibility of cemetery to visitors and to deter vandalism.
        - Remove broken granite post and replace with new granite post or appropriate fencing to define limits of the cemetery.
        - Record condition of existing headstones.
        - Provide signage documenting historic significance.
        - Grind existing stumps where practicable.
    - **Roberts Cemetery (First Settlers)**
        - Record condition of existing headstones.
        - Grind existing stumps where practicable.
        - Provide signage documenting historic significance.
        - Evaluate existing soil to evaluate existing nutrient deficiencies and pH levels. Aerate compacted areas, provide fertilizer, lime as required and seed with a drought tolerant low maintenance grass seed mix.
    - **Pine Cemetery and Ricker Memorial Chapel**
        - Plans have been generated to rehabilitate and return the Ricker Memorial Chapel to its original use for funeral and ceremonial services. There are also plans to renovate the 1888 receiving tomb so it can be used as a cremation mausoleum. Implement the facilities building portion of the master plan prepared for Pine Hill Cemetery by Mitchell & Associates.
        - Prepare for the start of restoration of the Chapel.
        - Repair Main Avenue from Central Avenue to the Tomb, reconstructing sidewalk, curbing, road repair and repaving.

BUILDING PROFILE: FACILITIES, GROUNDS, & CEMETERIES

In December 2020, the Facilities, Grounds, and Cemeteries (FG&C) Division moved to its new headquarters at 145 Court St. Since the 1990s, FG&M used Ricker Memorial Chapel and a nearby building for its operations. It has also utilized the 1888 receiving tomb for dry storage. That space was deemed inadequate in the 2000 and 2009 Master Plan chapter updates reporting that the buildings were in poor condition, worthy of renovation, and have exceeded their useful life cycles. This was also reinforced in the 2018 Facilities, Grounds and Cemeteries Master Plan. The new, 12,000-square-foot building was built at the eastern edge of Pine Hill Cemetery, accessed at 145 Court Street.

GENERAL BUILDING INFORMATION

Address: 145 Court Street
Date Built: 2020
Primary Functions: Cemetery administration and operations are conducted from these offices, as are Facilities and Grounds maintenance operations.
Main Interior Uses: Houses 5 offices for staff, a break/training room, conference room, records room, men and women's restrooms (1 each) and additional men and women's restrooms with showers (1 each). Warm storage / work area, dedicated spaces for equipment repair and service and a sign making space. There is a mechanical room, an electrical room, and two storage closets.
# of Employees: Typically 9 full time staff with addition 4-10 seasonal staff during summer months
Future Changes to # of Employees: Seasonal employees could increase.
On-Site Visits with Public: Yes
Roof material: Standing seam metal
Siding Material: Metal panel
Heating System Type: Natural gas
Heating System Age: 2020
Cooling System Type: Air Conditioning
Cooling System Age: 2020
Accessory Structures: Yes
Asset Management Plan: Yes
Parking: On-site parking - 2 accessible spaces and 12 public parking spaces

Recent Building Improvements
- New building was completed in 2020.

Building Deficiencies
- None at this time.

Building Code Issues
- None at this time.

Future Building Projects:
- Consider the feasibility of installing solar panels on site for renewable energy production.

BUILDING PROFILE: RICKER MEMORIAL CHAPEL

The Ricker Memorial Chapel, located at Pine Cemetery, was built in 1911 and most recently served as office space for the Facilities, Grounds, and Maintenance Division. The structure is now vacant, since this Division moved to a newly constructed building on Court Street. According to a recently completed Building Assessment, the structure needs structural improvements and mechanical upgrades to meet code conformance and to accommodate current programming needs and modern use. There is interest in converting the office space to public ceremonial and reception space. This would require improvements to the site related to parking, exterior lighting, paving, landscaping and access requirements.

GENERAL BUILDING INFORMATION

Address: 131 Central Ave.
Date Built: 1911
Primary Functions: Currently vacant, will be renovated for ceremonial uses and events.
Main Interior Uses: Vacant, but will be used for public events and ceremonies.
# of Employees: N/A
Future Changes to # of Employees: N/A
On-Site Visits with Public: N/A
Roof material: Slate
Siding Material: Brick
Heating System Type: Oil fired 125,000 BTU furnace with forced air unit
Heating System Age: Forced air unit is 20 yrs. old and in need of replacement
Cooling System Type: Mini-split AC unit
Cooling System Age: Mini AC unit is 20 yrs. old and in need of replacement
Accessory Structures: Yes, cemetery tomb for records storage
Asset Management Plan: No
Parking: No delineated parking

Recent Building Improvements

- Facility has recently been vacated in 2020 by Facilities, Grounds, and Cemeteries and will be restored to its original purpose, as a church.

Building Deficiencies

- Exterior siding is deficient. Bricks are loose and there are structural concerns with tower.
- Structural and mechanical system issues have been recorded by Building Envelope Specialist and Bennett Engineering. The drainage systems in the building have deteriorated and flooding and leakage

is found throughout the building. The existing piping systems are also showing evidence of significant corrosion. Much of the wiring and electrical distribution equipment (panel) in the building has exceeded its service life and is in poor condition.

Building Code Issues

- The building does not have a fire protection system installed.
- There are very few emergency lights in the building.
- There are no illuminated exit signs at the main to comply with current codes.
- The building is currently not ADA accessible.

Future Building Projects:

- Restoration of Chapel for funeral services, weldings, special events, and others as identified.
- Upgrade of heating and cooling systems.
- Replace drainage and sanitary lines.
- Complete drainage improvements around building.
- Add exterior and interior emergency battery lighting and exit signs to the facility to meet NFPA 101 Life Safety Code.
- Upgrade lighting to LED fixtures.
- Replace all electrical wiring in the building.
- Make accessibility improvements throughout the building including bathroom and main entrance.
- Add fire alarm system to building.
- Mill and Fill deteriorated pavement sections as needed.
- Upgrade existing unpaved secondary travel lanes, regrade and supplement with increased gravel base and or bituminous reclaim to address erosion and rutting.
- Design and implement unified gateway entry to Main Avenue and Maple Avenue off East Watson Street.
- Develop unified signage plan for wayfinding, informational, historic and regulatory signs including implementation.
- Reclaim site of maintenance barn and storage for expanded burial and or columbarium.
- Construct traffic calming measures on Main Avenue.
- Complete and environmental assessment of wooded area for expanded limits of burial plots and or columbarium.

SOLID WASTE AND RECYCLING

The City's Solid Waste and Recycling Division distributes over 700,000 trash bags annually to local businesses for sale to residents. Annually, the City disposes of approximately 4,000-4,200 tons of residential solid waste and recycles approximately 2,600 tons of material through single-stream curbside services. The City also collects and transports 1,200 tons of leaves to a compost facility, and grinds over 900 tons of brush material annually.

The City also manages a recycling center at 265 Mast Road that services Dover and Madbury residents. The recycling center allows drop off of 33 different recyclable materials at no cost (including tires, metal, steel, electronics, fluorescent light bulbs, refrigerating items, and others), and collects construction debris from residents and local contractors.

The Division is also responsible for responding to resident complaints, illegal dumping issues, and other various problems resolving over 400 City of Dover work orders per year. As the City continues to grow in population, so does the need for trash, recycling, composting, and yard-waste disposal management.

The Solid Waste and Recycling Division is under the jurisdiction of the Community Services Department with oversight from the Solid Waste Advisory Committee. This program is controlled under Chapter 97 of the City's Code. At present, the City is under contract with Waste Management Inc to provide curbside residential waste services including trash, recycling and bulky non-metal items. Contracted waste management services are renewed every five years. The most recent contract with Waste Management Inc began in 2020. Large industrial and commercial generators are responsible to contract for their own waste collection.

STAFFING

Currently, the Recycling Center is open three days per week. This is largely due to staffing and funding limitations. The current Solid Waste/ Recycling Program is run entirely with two personnel including one Solid Waste Coordinator and one Solid Waste Assistant. While the Solid

Waste and Recycling Division is able to perform its duties with two staff members, there is limited available time to perform services such as enforcing violations (due to illegal dumping), regular pick up of trash and litter throughout the city, and other potential duties. If Dover wants to expand its Recycling Center hours and services, additional staff will be required.

SERVICES

The City developed a Bag and Tag program approximately 20 years ago where residents purchase City of Dover trash disposal bags and/or tags for waste that is collected curbside and disposed of in Turnkey Landfill in Rochester by Waste Management Inc. This is intended to be a pay-as-you throw enterprise program, where only the users of the service pay the cost. In addition, at no cost to the residents, the City provides collection of a variety of recyclable materials including glass, cans, newsprint, plastic and paperboard. Residents are responsible for placing the trash and recyclable materials at curbside for a once-a-week collection by Waste Management Inc. The Bag and Tag Program recently increased prices to keep pace with disposal costs, however those rising costs go directly to the costumers and can lead to more illegal dumping problems as residents look to avoid the cost to dispose of waste. The revenue generated from the bags make this program entirely self-sustaining.

Yard waste and leaf debris is also collected and managed through a year-round drop-off program at 265 Mast Road as well as an annual 6 week long curbside collection initiative. For 6 weeks in the fall, the curbside collection program allows residents to bag yard waste in biodegradable paper bags and leave at the curbside on the same day as trash and recycling collection. Lastly, the Division is also responsible for hosting an annual Hazardous Waste Collection that is free to residents from Dover and three surrounding communities.

In 2020, the Community Services Department launched a new composting program that provides bins for residents to drop off their food compost. The compost collection facility is located at the Recycling Center. The City of Dover has partnered with Seacoast-based Mr. Fox Composting to provide residents with a no-cost, composting option to divert waste and tonnage from the solid waste stream that gets landfilled. A variety of organic material is accepted through the composting program including meat, bread, produce, coffee grounds, pizza boxes, brown napkins, tea bags, and other items. Mr. Fox Composting processes the compost and converts it into soil.

Since 2009, the Solid Waste and Recycling Division also started converting from a hauling process to an on-site grinding process to manage the brush collected at the facility. A new office area was also constructed at the Recycling Center to accommodate administrative duties.

CHALLENGES IN THE WASTE MANAGEMENT INDUSTRY

The state and national recycling industries have experienced a number of challenges that effect the resilience of the recycling industry including the recycling capabilities, rate of recycling, and the economic return of recycling portions of the waste stream. In 2019, a legislative committee decided to study the state of recycling programs in New Hampshire and the challenges faced by the state and municipalities running waste and recycling programs

- **Contamination of recyclable materials:** A contaminated batch of recyclables is less valuable on the market and harder for municipalities to sell. Public outreach and education is key to reducing contaminated materials being deposited in the recycling stream.
- **Increased recycling and solid waste management costs:** In recent years, many towns have faced an increase in costs in order to support their recycling programs. This happened after China, the world's largest purchaser of scrap paper, stopped accepting many recyclables, including plastics, unsorted mixed paper and textiles in 2018.
- **Capacity of landfills:** Landfill capacity is finite and space for expansion or creation of new landfills is limited in the northeast. Turnkey Landfill in Rochester is where Dover's solid waste is hauled to. Turnkey applied for a permit to expand its facility in 2020 and is currently awaiting approval.

As part of the City's stormwater management work (per the US EPA MS4 permit), Dover is expanding its leaf collection program to reduce leaf litter on the roads and waterways. Waste Management is in need of a long-term disposal site for leaves and grass. This is the largest long term issue in the Department and is most important to rectify and come up with a solution for. The City also has 50 cigarette butt receptacles that were donated by Dover Main Street in an effort to keep this waste out of the stormwater system.

ZERO WASTE

Many communities across the country and around the world are working towards zero waste. While "zero waste" is defined differently depending on the community, many municipalities see zero waste as diverting a significant portion of waste from landfills and incinerators using a "whole systems" approach to evaluate and manage the flow of resources and waste generated in a geographic area. Zero waste impacts include reducing greenhouse gas emissions, reducing energy use, improving air quality, and reduced environmental impacts (due to less contributed materials to landfills). The zero waste approach seeks to maximize recycling, minimize waste, reduce consumption, and ensures that products are made to be reused, repaired or recycled back into nature or the marketplace. The following actions can be considered by the City to adopt a zero waste approach to waste management:

- **Collect additional data that can help the City identify where to focus zero waste efforts.** What proportion of waste is being deposited by the residential vs. commercial/ institutional sectors? What is the recycling rate among the residential vs. commercial/ institutional sectors? How much material is being deposited into the landfill from Dover residents and businesses that is recyclable or compostable?
- **Consider creating policies that ban products like plastic bags and polyestrene styrofoam, as these products are hard-to-reuse, recycle, or compost.** Provide education to business owners that promote alternative single-use-products, such as compostable dinner ware and utensils, etc.
- **Divert more reusable goods.** Convene existing reuse and surplus food donation businesses and nonprofit organizations to collaborate in identifying ways in which the City can support their efforts.
- **Promote and conduct public education campaigns on the City's zero waste goals programs.** Develop campaigns to increase waste-reduction behaviors including: promotional campaigns in multiple languages, use of advertisements, and public service announcements.
- **Expand commercial composting.** Promote collection of food and food-soiled paper from businesses and institutions. Encourage haulers to provide compostable materials collection services.
- **Educate Dover residents, businesses and visitors to recycle correctly.** Create how-to guides, uniform messages, universal recycling and trash signs, website resources, and mobile apps.
- **Lead by example at public facilities.** Set waste-reduction goals by department or building, and annually report diversion and waste reduction. Expand the number of recycling containers paired with trash containers at public facilities (e.g. City buildings, parks, schools) and with compost containers, if food is served nearby.
- **Expand Infrastructure for Recycling "Hard to Recycle" Materials.** Explore creating neighborhood drop-off centers for recyclables and hard-to-reuse, -recycle, or -compost materials. Make the new system more accessible, particularly to those who live in apartments or work in small businesses.
- **Require zero waste strategies for public events.** Develop best practice guidelines, and require managers of large venues and organizers of public events to start implementing them.

KEY ISSUES,CONSIDERATIONS, AND FUTURE PROJECTS

A summary of identified key needs and issues outlined through the master planning process are outlined below.

- **Consider hiring additional staffing to expand service hours.** If the City wishes to expand its waste management services and/or hours, additional staff will need to be hired.

- **Once the City's curbside waste service contract expires, evaluate the feasibility of managing curbside services in house.** The City typically renews its curbside waste services with an outside contractor every five years. Some municipalities in the Seacoast area have shifted to providing their own curbside services to residents in house. In 2019, there was an analysis completed that showed, if Dover were to manage curbside services, they would be competitive in terms of costs. The City should evaluate the cost-effectiveness of providing municipal curbside services every five years once a contract expires. Additional staff and equipment would be required to shift to this.
- **Reduce the amount of contaminated materials that enter the recycling stream.** The rising cost of solid waste management and recycling, as well as the high levels of contaminated recyclable materials that enter the waste and recycling stream, will put a strain on the financial viability of the waste management system. For example, the City is required to stay under 10% of contaminated recyclable materials collected to meet standards set by private waste management service companies, otherwise they are imposed a fee. Consider mechanisms to reduce the amount of contaminated materials that end up in the recycling stream.
- **Consider created a reuse area or "swap shop".** Swap shops intercept quality items and materials from entering the waste stream early in their life span. If the City were interested in this effort, Waste Management would need additional space and staffing to set this up.
- **Replace the Waste Management Division's roll off truck**, which is one of the most important pieces of equipment this Division uses. Its aging and is in need of replacement.
- **Replace the Bag and Tag bags with higher quality totes.** There has been some interest in replacing the bags that are part of the Bag and Tag program with higher quality totes. If the City moves forward with this initiative, the City would need to come up with an equitable, revenue generating fee-based system to ensure a profit was generated to support the program.
- **Consider hosting more household hazardous waste collection days.** It costs about $30,000 to coordinate and host a Household Hazardous Waste Collection Day. If the City is interested in hosting more than one Household Hazardous Waste Collection Day annually, this cost would need to be considered.
- **Identify and designate a long-term leaf disposal site.** The Solid Waste and Recycling Division is in need of a long-term disposal site for leaves and grass, as part of expanded leaf collection programs as a way to manage the City's stormwater.
- **Consider ways to expand composting services to Dover residents.** Contracting with a private company for composting services is a relatively new program in Dover and the City has not yet been able to quantify how much food waste is being diverted from landfills. Add compost receptacle bins in other locations of the City as needed. Consider ways to expand composting services to Dover residents through developing a public-private partnership.

FLEET SERVICES

The mission of Dover's Fleet Services Division, which is part of the larger Community Services Department, is to provide accurate and efficient maintenance and repair of the Engineering, Water, Sewer, Cemetery, Recreation, Facilities and Grounds, and Police vehicles. The Division provides annual State inspections on vehicles, preventive maintenance and repair of heavy equipment during snow, ice and other emergencies, maintenance of an inventory of parts and fluids for normal and emergency repairs to vehicles, and provide for scheduled and non-scheduled repairs to City vehicles – including body repairs, paint and reconditioning. They also implement and maintain a vehicle replacement plan.

City vehicles and equipment that are maintained by Fleet Services vary considerably and require specific maintenance activities to ensure their quality, longevity, and durability. Equipment ranges from plow trucks to electric vehicles to dump trucks to snow blowers. Specialized equipment and vehicles are required to perform City duties including road maintenance in the winter, servicing utilities, etc, and these vehicles can have expensive maintenance costs. However, these vehicles are necessary to perform these tasks.

The Fleet Services Division also performs maintenance and repair services for outside municipalities and departments such as: Dover Housing Authority, Somersworth Housing Authority, Town of Rollinsford, University of New Hampshire, Town of Durham, Strafford County Sheriff, Riverside Rest Home, Strafford County Attorney's office, Town of Madbury, and Town of Lee. Outside services are performed at an hourly rate plus the cost of parts. The Division provides quality vehicle repair services and implements vehicle management practices to all City of Dover vehicles at an economical cost.

STAFFING

The current Fleet Services personnel include one (1) Lead Mechanic, three (3) Heavy Equipment Mechanics, one (1) Fleet Supervisor, and one part-time inventory control person. Fleet Services operates out of the Mast Road Public Works Facility, which consists a 10,000 square foot area

comprised of office space, parts/ inventory room, paint booth, and repair and lift bays.

VEHICLE REPLACEMENT PROGRAM

The City of Dover's inventory of rolling stock (vehicles & equipment) consists of approximately 129 units with a replacement value of $8,900,000. Over the past 5 years, Fleet Services has made a conscious effort to identify and support replacing vehicles that have exceeded their life expectancy. The program provides for a 10-year planned replacement of all fuel-consuming vehicles and equipment. 10 years was identified as the ideal target because vehicles older than 10 years start to require more costly upgrades that outweigh the value of the vehicle at that point. Capital improvement funding should appropriately allocate funds for annual vehicle replacement so that vehicles do not exceed the target 10-year life span. In general, the City's fleet is on the older side and investing in new vehicles on an annual basis should save costs in the long-term. The City should be replacing approximately 10-15% of its vehicle fleet on an annual basis to meet these goals. Objectives of the vehicle replacement program include:

- Providing for timely acquisition and disposal of vehicles and equipment.
- Promoting standardization to improve efficiency and lower the total cost of ownership.
- Improving utilization by reassignment or elimination of underutilized vehicles and equipment.
- Maintaining accountability of fleet inventory assignments.
- Maximizing the financial return for the City at the time of resale.
- Reducing the City's maintenance costs by eliminating old and expensive to maintain vehicles and equipment.

Department/ Facility	Fleet Description	Average Age of Vehicles
Cemetery	1-ton dump with plow and sander, 1 mini excavator	16 years
Engineering	3 sedans	8 years
Facilities and Grounds	8 light-duty pickup trucks and vans, 2 medium-duty one-ton pickups and 1 3/4 ton pick-up bucket truck	21 years
Fleet Services	1 City Hall pool car, 1 All Electric car, and 1 Ford light-duty pickup truck, which is used for on-road repairs and the retrieval of parts	N/A
Ice Arena	2 zambonis, 2-ton truck with plow and sander	4.5 years
Inspection	6 sedans (of which 1 is electric),	6.6 years
Police	34 light and medium-duty units and 9 police cruisers, with an average vehicle life of	5 years
Recreation	3 light-duty vehicles and one medium-duty passenger bus	5.75
Recycling	1 medium duty van and 1 heavy-duty truck	12 years
Streets and Stormwater	2 light-duty units, 3 medium-duty units, 34 heavy-duty units used for plowing, street sweeping, construction, and snow removal	10 years
Sewer	3 light-duty units, 5 medium-duty units, and 1 heavy-duty unit	6.2 years.
Water	3 light-duty vehicles, 5 medium-duty vehicles, and 5 heavy-duty vehicles	4.7 years

The current vehicle inventory list can be found on the right.

KEY ISSUES, CONSIDERATIONS, AND FUTURE PROJECTS

A summary of identified key needs and issues outlined through the master planning process are outlined below.

- **Consider staffing needs.** If the City continues to expand its vehicle fleet, there will be an increased need for a full-time inventory clerk (or two part-time clerks).
- **Consider an additional bay if fleet grows.** Over time, increasing the number of vehicles in the City's fleet will trigger the need for an additional vehicle bay.
- **Replace vehicles on a 10-year rotation.** The consistent funding of the vehicle and heavy equipment replacement program is needed

to replace equipment in a timely manner which allows for reduced repair cost, better employee productivity, and increased fuel savings. To maintain high quality vehicles and reduce costs, the City should aim to replace vehicles on a 10-year basis annually.

- **Expand Dover's EV vehicle fleet and invest in necessary infrastructure to perform maintenance on EVs.** The Fleet Services Division has purchased three all electric vehicles for its vehicle fleet and plans to purchase three additional electric vehicles in the near future. Prioritizing electric vehicle purchases has led to Fleet Services evaluating maintenance and space needs for electric vehicles at the Mast Road facility. If the City continues to expand its EV fleet, the City will need to modify its operations by requiring specialized training and expertise and creating additional work space for maintenance of these vehicles.
- **Evaluate which vehicle maintenance services are more cost effective to perform in house versus outsourcing to an external vendor.** As part of this evaluation, Fleet Services would like to eliminate the paint booth from their facility due to it being more affordable to outsource these duties. Fleet Services would like to convert this space to house a medium-duty vehicle lift containing an alignment machine and an a/c recharge area. They would also like to update their tire mounting and balancing equipment to better handle todays newer tire sizes. These services are most cost effective to perform in-house.
- **Enhance inventory control.** Due to City procurement and purchasing policies, Fleet Services is actively working to tighten up inventory control to ensure parts and equipment are used and stored to their optimal ability. Fleet Services does have a need for expanding its inventory space and inventory control, as it is currently limited.
- **Purchase a second heavy lift.** To continue to support winter plowing, a second heavy lift is needed. This would keep winter equipment running to its optimum potential, and would enhance employee safety during vehicle maintenance.
- **Improve maintenance tracking.** Fleet Services would like to continue to improve their optimization of the CFA software program to improve maintenance tracking and inventory.
- **Monitor emission regulations and make necessary maintenance improvements to comply.** Part of the City's fleet is inactive during the summer months, due to some vehicles being primarily used for seasonal use in the winter. The City must comply with Diesel Emission Regulations which require the City taking these vehicles out during the summer on short trips to maintain them in order to meet emission requirements. There may be a time when Fleet Services has to include these emissions standards in their operations policy.
- **Be good stewards of the water supply.** The Public Works Facility is located over a drinking water aquifer. Fleet Services needs to prioritize protection of the aquifer by regularly updating and evaluating their policies and operations to ensure hazardous materials are stored properly and vehicles are not leaking fluids when parked outside. The City should utilize checklists and regular inspections to prevent contamination and ensure standards are being met.

Above One of the many city-owned vehicles that Fleet Services maintains.
Source: City of Dover

6. PUBLIC UTILITIES

WATER SYSTEM

Currently, the City of Dover's municipal water system provides treated or potable water to 9,008 customers. The Water Division is funded through user fees charged to customers based on their water consumption. 19 full time personnel, who are cross-trained, are responsible for the operation of both the water and wastewater systems. Additionally, the water system is State certified as grade two treatments for Dover's filter plants and wells, and grade three for the distribution system, which includes meter backflows, water mains, and hydrants. Anticipated repairs to the water system infrastructure are currently tracked through a software program called VueWorks, which includes a GIS component, and budgeted through the City's Capital Improvement Plan.

The City's water system includes:

- 4 bedrock aquifers including the Hopper Aquifer, Barbados Pond Aquifer, Willand Pond Aquifer, and Pudding Hill Aquifer
- 10 well pumping stations
- 2 active water treatment facilities including Lowell Ave Water Treatment Plant (WTP) and French Cross Road WTP
- 1 inactive water treatment facility (Griffin WTP)

Aquifer	Associated Facilities
Barbados Pond Aquifer	Hughes Well, Bouchard Well, French Cross Road WTP
Hoppers Aquifer	Calderwood Well, Campbell Well, Isinglass Recharge, Lowell Avenue WTP
Pudding Hill Aquifer	DPH-1 (inactive), Griffin Well (inactive), Ireland Well (inactive), Pudding Hill WTP (pending)
Willand Pond Aquifer	Smith Well, Cummings Well, Willand Pond Wells

- 1 future water treatment facility (Pudding Hill WTP)
- 2 artificial recharge facilities
- 2 water storage tanks
- 1 booster pumping station
- 1 historic water works building
- 173.5 miles of water main which includes: 34.4 miles of asbestos cement water main, 27.2 miles of cast iron water main,106.4 miles of ductile iron water main, and 5.5 miles of various other materials (note: cast iron pipe is the oldest, asbestos is the second oldest, and Ductile iron youngest and the preferred pipe material)
- 1,243 total hydrants (includes public and private)

The table on the following page provides information on the Dover's wells, water treatment

plants, recharge facilities, and other infrastructure.

WELLS

Water supply in the City is provided entirely from groundwater withdrawal. Surface water withdrawals from the Bellamy and Isinglass Rivers during certain times of the year supplement the recharge of two aquifer areas—the Pudding Hill and Hoppers Aquifers. Below are brief descriptions of the City's well pumping stations.

Bouchard Well

This well came online in 2007 is located off French Cross Road near the Bellamy Reservoir. The well is 180 feet deep and has a yield of 600 gpm (gallons per minute). This well is tied directly to the French Cross Water Treatment Plan to handle elevated levels of iron and manganese. According to the Water System Facilities Plan, the Bouchard Well is in good condition overall. However, a new media for filtration will be necessary in the future.

Calderwood Well

This well was originally constructed in 1972 and is located in the Hoppers Aquifer off Glen Hill Road near the Barrington line. This well has a sustained yield of 500 gpm, although it may produce up to 600 gpm for short periods of time. It has excellent water quality and high capacity.

In 2018, upgrades were made to the Calderwood Well including the construction of a new building adjacent to the existing well house for chemical storage. This building has heating, ventilation, emergency wash facilities, a propane fueled generator, and received electrical gear upgrades. This building also provides metering for both Calderwood Well and Campbell Well. The pump house also underwent retrofits including electrical upgrades, the addition of insulation to the exterior walls, resealing cracks, refinishing the interior concrete floor, repainting the interior, and replacing the doors and roof hatch.

TABLE 1: WATER SYSTEM FACILITIES

Facility	Status	Date Constructed	Capacity: Gallons Per Minute (gpm)
Wells			
Bouchard Well	Active	2007	600
Calderwood Well	Active	1972, renovated in 2018	600
Campbell Well	Active	1989, renovated in 2018	400
DPH-1 Well	Active	2017	780
Griffin Well - closed in 2015	Inactive	1960s	---
Hughes Well	Emergency Backup	1969, future renovations planned	350
Ireland Well - closed in 2018	Inactive	1960s	---
Lowell Ave/Bellamy	Active	2011	---
Smith and Cummings Well	Active	Smith - 2013, Cummings - 2019	600
Willand Pond Production Well	Active	2019	600
Willand Pond DWP-PW2	Active	2019	
Water Treatment Plants			
French Cross Water Treatment Plant	Active	2007	N/A
Griffin Water Treatment Plant	Inactive	---	N/A
Lowell Water Treatment Plant	Active	2018	N/A
Recharge Facilities			
Bellamy Recharge	Inactive	---	N/A
Isinglass Recharge	Active	---	N/A
Distribution/Other			
Garrison Hill Tank and Reservoir	Active	---	N/A
North End Tank	Active	2012	N/A
North End Booster Station	Active	2012	N/A
Old Water Works	Inactive	1888	N/A

Campbell Well
Developed in 1989, Campbell Well is located in the Hoppers Aquifer near the Calderwood Well. It has a sustained yield of 400 gpm. With recharge from the Isinglass River, the yield can be increased up to 600 gpm. It runs year-round and is only taken out of service for maintenance and repairs. It's a reliable water source and has excellent water quality, requiring only additions of alkali prior to being pumped into the system. In 2018, Campbell Well received significant upgrades, including new standby power. Campbell well ties into the newly constructed chemical building on the site of Calderwood Well. This building is where chemicals are added to both water supplies before it enters the distribution system.

Hughes Well
Located in the Barbadoes Aquifer and off Old Stage Road, the Hughes Well was originally installed in 1969. Since it's well water contains high levels of iron and manganese, it was used as a back-up well during high demand periods or when the Campbell or Ireland Wells were out of service. In 1996, the City began to add phosphate to stabilize the high iron and manganese, allowing the well to be used for up to eight months of the year. Upgrades to the Hughes Well pump station are planned. This facility is intended to become a year-round facility (rather than a back up). It will be tied into the French Cross Water Treatment Plant, which handles iron and manganese level stabilization. However, this treatment plant will receive additional upgrades to enhance its treatment of iron and manganese to meet new Environmental Protection Agency standards.

Smith and Cummings Wells
These wells are located in the Willand Pond Aquifer between Glenwood Avenue, Central Avenue, the Spaulding Turnpike, and Indian Brook Drive. Together, they have a sustained yield of 600 gpm. The water from these wells is pumped to the Lowell Avenue Water Treatment Plant where it is treated and then transmitted to the Garrison Hill reservoir tank for distribution to the system. The plant also has a clear well tank capacity of .5 MG for additional storage. Since 2009, the pump station building was renovated into a common motor control and metering building, with standby power. A new tank will be installed at the Smith site through the capital improvement planning process.

Willand Pond Wells
These wells are located in the Pudding Hill Aquifer and include the Willand Pond Production Well, which was constructed in 2019, and the DWP-PW2 well, which was constructed in 2017. The water from these wells is treated by the Lowell Water Treatment Plant. The combined production volume of these wells is 600 gpm. These two wells also have a common motor control and metering building. The control building is also part of the Dover-Somersworth interconnect. During an emergency, water can be pumped from Dover to Somersworth and from Somersworth to Dover. Eventually, 12 cities on the seacoast that will be connected through this interconnect. This was installed in 2019, and is used in case either city has a emergency.

WELLHEAD PROTECTION EFFORTS
A Groundwater Protection Ordinance seeks to protect the quantity and quality of the ground water within the area that each of the City's wells draws water. Primary and secondary groundwater protection zones have been established for each of the City's wells, and the ordinance regulates land uses that are appropriate within a specified protection zone to minimize the possibility of contamination.

WATER TREATMENT PLANTS
Dover's water treatment plants ensure the water that is supplied to Dover's residents is clean and safe to use. The capacity of the storage tanks located at the City's water treatment plants are currently adequate. Additional information on the municipal water treatment plants in Dover are below:

French Cross Road Treatment Plant
The WTP at French Cross Road was built in 2007 and has a capacity of 0.97 MG. According to the Water System Facilities Plan, the French Cross Road WTP is in good condition overall. However, once the Hughes Well is tied into the French Cross Water Treatment Plant, upgrades will need to be made to the facility to improve its ability to handle the iron and manganese levels without violating new EPA standards. The treatment plant also needs media upgrades for filtration.

Above: The recently constructed Lowell Water Treatment Plant
Source: Liz Kelly / Resilience Planning and Design

Garrison Hill Tank and Reservoir

The Garrison Hill Reservoir has a 4MG tank that provides the needed volumes of equalization, fire flow, and emergency storage for the existing service area. The Griffin Water Treatment Plan is currently inactive. All of Dover's wells and treatment plants are linked to the Garrison Hill reservoir tank for distribution to the system. The tank is inspected by scuba divers every 5 years without taking it out of service. Part of the facility plan is to rehab the interior and exterior of the tank. To complete these renovations, a new smaller tank is proposed and is currently under design off Smith Well Road. Once this new tank is online, the Garrison Hill Tank will be taken off line and renovated. This will include exterior distribution piping outside of the tank.

Lowell Avenue Treatment Plant

The Water Treatment Plant (WTP) at Lowell Avenue was re-constructed in 2018 as a larger facility and treats water from the nearby Smith and Cummings Wells, and Willand Pond Wells. The plant has a clear well capacity of 1200 gallons per minute, removes iron and manganese, and the water from this tank is directly pumped to the Garrison Hill Tank and Reservoir.

Pudding Hill Water Treatment Plant

The Pudding Hill Aquifer is located under approximately 100 acres and extends beneath multiple properties in Dover, producing one million gallons of water every day. The City is currently contracting design services to construct a new water treatment plant that will tie DPH-1 and Ireland Well into its system. DPH-1 is currently active, however Ireland Well (as well as Griffin Well) was taken offline from the water system due to water quality test results that showed contamination, including the presence of PFAS ---and 1.4 - dioxane and MtBE.

This new treatment plant will be constructed to clean up the City's critical Pudding Hill Aquifer and will allow the City to bring Ireland Well back online. Griffin Well will remain inactive. The treatment plant, when operational, will be able to treat 1.4 million gallons a day. The new treatment plant will use a granulated activated carbon (GAC) system to treat perfluoroalkyl and polyfluoroalkyl substances, also known as PFAS, (harmful chemicals) and an "advanced oxidation process" to treat the Mtbe and 1,4-dioxane. The Environmental Protection Agency describes 1,4-dioxane as "a likely human carcinogen." The project is expected to start construction in 2022.

AQUIFER RECHARGE STATIONS

Bellamy River Recharge

Provides fresh water pumped from the Bellamy River to a recharge basin which is located in the gravel pit. The Bellamy River recharge operated by the City became redundant when Dover Sand and Gravel resumed their washing operation using Bellamy River water in 2005. If and when Dover Sand and Gravel ceases washing operations, the City will reestablish an infiltration basin and begin recharging the aquifer with Bellamy River water. While Bellamy River Recharge is inactive currently, it will be a major part off the new Pudding Hill Water Treatment plant. The Bellamy Rover Recharge was recently rebuilt in 2020.

Isinglass River Recharge

The Isinglass River provides fresh water to Dover residents by being pumped to a recharge basin located in the Hoppers pit of Glen Hill Road. It provides recharge to Calderwood and Campbell Wells. The current pump house has been flooded twice and was taken out of service in 2007, but was restored and put back in service in the spring of 2008. Isinglass improvements are part of the Water Facilities Plan, specifically to rebuild the intake and to move it out of the flood plain. Additionally, a 401 permit will be required for the new facility.

OLD WATER WORKS BUILDING

Located on Lowell Avenue, the Old Water Works site has been utilized by the City to provide the residents of Dover clean water since 1888. One of the initial projects the Dover Water Commission took on during its formation in 1888 was the construction of a pump station at this site, now known as the Old Water Works Building. In 1908, a slow sand filter was also constructed at the site. This facility provided clean drinking water to the City until 1954. During a site survey, an opening to the underground Sand Filter was discovered. Given the age of the filter, a Section 106 process was initiated in accordance with the National Historic Preservation Act and was deemed eligible for listing in the National Register of Historic Places.

The current condition of this building is poor and it is in need of major repairs. It's currently being used for storage by the Water Division, however its long-term use is currently unknown. Short-term weather-tightness and safety improvements are needed, and a long-term plan for the rehabilitation of the building is also a priority. State and federal historic preservation grants could provide a funding mechanism for future improvements and an adaptive reuse project.

Above: Old Water Works Building
Source: Liz Kelly / Resilience Planning and Design

Above: The interior of the Old Water Works Building
Source: Liz Kelly / Resilience Planning and Design

IMPROVING THE CITY'S WATER SYSTEM

Upgrading aging infrastructure

Due to the aging infrastructure in the City, Dover has been investing in significant upgrades and improvements to its water system infrastructure in recent years. 16% of the city's water lines have a probability of failure greater than 80%. 24% of water lines have a severe consequence of failure. 16% of water lines have a high risk factor. About 52% of Dover's water lines are in poor condition. Upgrading aging infrastructure is a high priority for the City moving forward and many of the initiatives outlined below aim to achieve this goal.

Water Facilities Master Plan

In 2015, Underwood Engineers updated the City's Water Facilities Plan and identified a multi-phase program for recommended improvements to the City's water facilities and infrastructure. All of Dover's wellhead buildings, aside from Hughes Well, and the Isinglass Recharge Station, have been reconstructed to expand interior space and upgrade the buildings. In the wellhead building projects, creating separated and secure storage space for chemicals, improving energy efficiency, and bringing electrical systems up to code were priorities. Short-term health and safety upgrades were made to all facilities including correction of electrical code violations, repair or installation of chemical containment, and installation of chemical analyzers to monitor finished water quality.

Utility Mapping

Additionally, Dover has completed its utility mapping of the City's water system including a consequence of failure analysis for each pipe. Pipes are rated based on condition which helps staff to prioritize Capital Improvement projects.

Water Main Replacements

In the spring of 2021, the City began the replacement of approximately 3,000 feet of 133-year-old water mains on Main Street, Washington Street and a portion of Henry Law Avenue in the Downtown area. The project is necessary to provide reliable water service to the homes and businesses of this area of the City. The City also recently completed the North End Water Project, which extends from Abbey Sawyer Lane to Glenwood Avenue. This line was originally built in 1888 and 1920 and is in an important service area - the regional hospital ties in to this main.

Life-Cycle Costing

In 2019, the City's Water Division underwent a process to investigate the feasibility of instituting a program of life-cycle costing for all Water Division assets. This would help determine the annual expenditures required to maintain an efficient system of water service to the citizens of Dover. Based upon the results of the life-cycle costing program, prioritization and scheduling of the repair, maintenance, and, when necessary, the construction of water facilities should be part of the City's capital improvement planning process.

WATER DEMAND

The Water Facilities Master Plan included an analysis of existing and future water demands and concluded that, assuming all wells remain viable, existing water supplies are sufficient to meet current and future demands. Additionally, the City completes an annual water balance exercise to evaluate whether existing sources meet potential future water system demand, and the values have been well below what the state requires. There is some concern of the long-term viability of some wells (i.e. Hughes, Bouchard). Currently, Hughes Well is the only back up well in the City. All the other wells are productive wells except for Griffin. By the end off 2022, all other wells (Ireland and DPH1) will be online. The report recommended that the City maintain all feasible existing supplies and continue to pursue additional sources of supply at Willand Pond and the Pudding Hill Aquifer.

Dover's wells have a combined safe yield pumping capacity of 4.3 million gallons per day. Average daily demand represents the amount of water a community consumes in 24 hours when daily consumption is averaged through the year. During the period between 1994 and 2006, the average daily use of water remained relatively stable between 2.0 million gallons per day (mgd) and 2.2 mgd. Average daily water demand from 2008 to 2014 increased to 2.4 mgd. Based on the work completed in the Water Facilities Master Plan, Dover's average daily demand is expected to continue to increase to 2.62 mgd by 2035.

The maximum amount of water entering the water system during the course of one day within a particular year is the maximum day demand. Such a day is usually a direct result of weather conditions that result in increased use of water, typically during a hot dry summer period. Between 2008 and 2014, the average maximum day demand was 3.8 mgd, a slight increase from the 1994-2006 maximum day demand average of 3.5 mgd.

In recent years, the City of Dover has experienced periods of drought exacerbated by dry, hot weather, infrequent precipitation, and worsened by climate change. In 2018, the City created an emergency conservation ordinance, which may be implemented during periods of severe drought in order to conserve water to the greatest extent possible. During these times, the NH Department of Environmental Services urges communities to invoke water use restrictions to prevent community wells from going dry. Since 2020, the City has been in various stages of drought. Community Services continues to monitor ground water levels, which are below normal, and requests water users limit their water usage as much as possible.

KEY ISSUES, CONSIDERATIONS, AND FUTURE PROJECTS

A summary of identified key needs and issues outlined through the master planning process and through the Water System Facilities Plan process are outlined below.

- Based upon the results of the life-cycle costing program, prioritization and scheduling of the repair, maintenance, and, when necessary, the construction of water facilities should continue to be part of the City's capital improvement planning process.
- Phase 3 of the water facility improvement project is currently underway and should

continue to be integrated into capital improving planning.
- Continue reconstruction and renovations of the wellhead buildings - space is very limited, chemical storage is inadequate in some, and electrical services are out of code in some.
- Tie in Hughes Well to the French Cross Water Treatment Plant. Upgrade French Cross Treatment Center as Hughes Well is tied in to better meet the Environmental Protection Agency's iron and manganese regulations.
- Complete 401 permit process for th Isinglass recharge to prepare for rebuilding the intake and the facility out of the floodplain.
- In 2022, the EPA is requiring cities to remove all lead service parts in the water system. Identify old galvanized lines and invest in replacement of these lines to meet new EPA lead and copper standards.
- Replace the following water mains:
    - Central Avenue from Abbey Sawyer Memorial Highway to Broadway Street to Florence Street
    - Central Avenue from Broadway Street to Washington Street
    - Central Avenue from Washington Street to Silver Street
    - Central Avenue from Silver Street to Stark Avenue
    - Central Avenue from Stark Avenue to Mill Street
    - Mill Street from Central Avenue to the end (includes Charles Street)
    - Washington Street from Central Avenue to Taylor Lane
    - Arch Street from Washington Street to Silver Street
    - Locust Street from Silver Street to Washington Street
    - Littleworth Road, from Old Littleworth Road to French Cross Road to the French Cross Water Treatment Plant
    - Old Littleworth Road from Chandler Way to Littleworth Road
    - Continue with Broadway Street, Oak Street, Central Avenue water main replacement
    - 12 inch main from Garrison Hill tank to Broadway Street
- Complete water main extension project on Piscataqua road from Back River to City line.
- Install LED lighting fixtures at any remaining well pump stations that won't not have LED lighting.
- Continue to invest in the City's water meter systems. Currently, the utility has 3 types of meter transponders in the system, which should continuously be evaluated.
- Rehabilitate the interior and exterior of the Garrison Hill Tank.
- Security cameras have been added to all the well stations as rehabs occur. The City should plan to connect these cameras to the municipal communications infrastructure so that the Police Department can view footage.
- Create a plan for the Old Water Works Building. While it's currently being used for storage by the Water Division, its long-term use is unknown. Short-term weather-tightness and safety improvements are needed, and a long-term plan for the rehabilitation of the building is requires to make the building more usable.
- Dover has taken extensive steps to improve its security system to secure the physical premises of the water supply systems including installing cameras, alarms, fencing, etc. Additionally, the City has conducted vulnerability assessments and implemented software enhancements to address the threat of cybersecurity. Dover should continue to secure funding to continue improving its cybersecurity defense.
- Continue updating and ensuring the accuracy of Dover's water system maps in the city's Vueworks GIS System. This allows all maps to be accessed digitally which will ensure efficient, cost-effective project planning.
- Continue the ground water exploration program to identify potential future water sources. As Dover continues to grow and develop the number of potential new well locations dwindles. A public water supply well requires the protection of all land within a 400 foot radius around the well. Often times this requires the cooperation of multiple landowners willing to sell or provide protective easements on their property.

SEWER SYSTEM

Dover's wastewater collection system includes an extensive network of infrastructure including sewer gravity mains, sewer pump stations, and sewer force mains. The system delivers approximately 2 - 2.4 million gallons of wastewater per day to the Wastewater Treatment Facility (WWTF). The Dover WWTF treats wastewater and bio-solids generated by Dover residents and businesses. Currently, Dover's sewer system serves 7,825 customers and includes a collection system with 112 miles of collector pipe lines. These lines are composed of vitrified clay, reinforced concrete, cement asbestos, and more recently polyvinyl chloride (PVC). In addition, there are 23 pump stations located throughout the City to pump sewage through these lines to the WWTF.

STAFFING

The Utility System Division, which includes water distribution, drinking water treatment, wastewater collection, and stormwater has 18 total field staff. All personnel are cross trained in both water and sewer system maintenance, so additional personnel are available on projects when needed. 7of these full-time field staff are responsible for operating and maintaining the wastewater collection system.

OPERATIONS AND MAINTENANCE

Dover's wastewater collection facilities and infrastructure are mapped by through the City's Geographic Information System (GIS and are continuously updated as changes to the collection system occur. The maps include the location of system manholes and pipelines and their corresponding data tables, as well as characteristics of the structures such as material, size of pipe, identification number, and maintenance data (when a sewer line was last cleaned, etc.).

In 2017, the City created a Capacity, Management, Operations, and Maintenance (CMOM) Program, which establishes policies and procedures related to the efficient management of the wastewater collection system in Dover. The CMOM Manual includes extensive information

HISTORY OF DOVER'S SEWER SYSTEM

The first sewers in Dover were constructed in the 1840's and were made of wood. Gradual expansion of this wooden system took place until the late 1860's when the construction of the first brick sewer began on Court Street. By 1870, brick sewers on Washington Street and Central Avenue were built, and by 1874 the first cement pipe was laid into the ground. Use of the sewers for the conveyance of stormwater began around 1880. Within five years, the capacity of the system was insufficient and emergency relief sewers had to be constructed to reduce the load in many areas. The City continued to allow the connection of drainage lines to the Municipal Sewer System as recent as the mid 1960's.

Historically, industrial waste received little or no treatment prior to being dumped directly into the river, like many other New England cities. Several shoe and leather companies dumped waste containing dyes, oils, solvents, and various chemicals into the system. Industries producing insecticides, meat by-products, plastic, and paper products also contributed toxic material to the system. Between 1975 and 1980, the Cochecho Separation Project connected the entire sewer system north of the Cochecho River to a sewage treatment plant. During this same period, the South Side Sewer Project expanded the system to the Dover Point area.

In 1990, Dover replaced the primary treatment plant located at the end of River Street, which began operating in the early 1960's. The current secondary treatment plant, located off Middle Road, came on line in 1991. A pump station was constructed near the River Street site to transfer sewage, previously routed to the primary plant, to the new secondary plant. In 2004, the City of Dover was issued a consent order, to do additional testing at the WWTP, pump station upgrades, and to have a preventative maintenance program to address the collection system and pump stations.

about the condition of Dover's pump stations, maintenance needs, and operations issues facing system managers. The CMOM is used regularly by employees, providing guidance ranging from sewer cleaning to pump station operation. The Sewer Division's asset management program also provides recommendations for pump stations and sewer lines that need attention based on their age, location, and level of service. The Sewer Division has completed a large portion of its asset management program.

The City recently implemented a software-based hydraulic monitoring program to identify issues related to capacity. In 2020, the Community Services Department hired a second Assistant City Engineer that is focusing exclusively on water and sewer and maintenance of the hydraulic modeling software will now be maintained in-house through this staff person.

MAINTENANCE ACTIVITIES

Sewer maintenance activities (including sewer line cleaning, sewer repairs, cataloging trouble spots, and inventory control) are described in greater detail below.

Sewer Line Cleaning

Currently, the City cleans sewer lines according to need and availability of staff. Problem areas receive immediate attention with other areas determined by the Utility Supervisor. The Sewer Division is ensuring sewer cleaning be conducted in a more pro-active, systematic approach in the future.

Sewer Repairs

The City has an Inflow and Infiltration program, which identifies unwanted sources of water entering the wastewater collection system. Examples of sources are cross connections to storm sewers, broken and cracked pipes, leaking manholes, and roof drains and gutters. Reducing inflow and infiltration sources is a priority to ensure the wastewater collection system is not overburdened. The City has found numerous roof drains discharging into the sanitary sewer and is now working with owners of those buildings to redirect the roof drains and sump pumps to alternative locations where feasible. This program will be phased in concentrating on the larger buildings, areas with sewer capacity limitations, and available storm sewers.

Cataloging Trouble Spots

The Sewer Division maintains a database of trouble spots which receive regularly scheduled maintenance and annual cleaning of root spots. Examples include sewer line cleaning in pipes with slope issues and areas where grease accumulates. These activities are automated by VueWorks to issue work orders at predetermined intervals.

Inventory Control

The City maintains an inventory of spare parts that are used on a regular basis or are deemed critical for the wastewater sewer collection system and pump stations.

Equipment

The City also has equipment that needs to be maintained including a sewer jet combination unit, an Aries Saturn TV inspection unit, a smoke tester, a manhole tester, dump-trucks, pick-ups, and back-hoe.

Technology

The operation and maintenance of the wastewater collection system uses several different software programs for specific activities. These are described below:

- The **VueWorks software** is used for all maintenance activities for sewer collection and the pump stations.
- The **Capital Improvement Plan and VueWorks** catalog future anticipated repairs and replacements of collection pipes for planning and budgeting purposes.
- The City recently implemented a software-based hydraulic monitoring program to identify issues related to capacity.

DOVER'S PUMP STATIONS

Dover has a total of 23 pump stations located throughout the City of varying ages. Pump stations serve as the first location of treatment before being pumped to the Wastewater Treatment Facility. The City has several sewer pumping stations that are in need of upgrades and replacements. These stations must continue to be in top operating condition in order to prevent violations of the City's National Pollutant Discharge Elimination System (NPDES) permit. An inventory table that describes the basic characteristics of each of the pump stations in Dover is located on the following pages.

In 2019, the City worked with Process Energy Services with funding from the NH Department of Environmental Services' Clean Water State Revolving fund, to conduct energy use evaluations of three wastewater pump stations. These included the Varney Brook Pump Station, Cochecho Street Pump Station, and the Middle School Pump Station. The Energy Evaluation Report that was generated includes recommendations for energy saving opportunities and energy system upgrades to improve the efficiency of systems and provide cost saving benefits.

WASTEWATER TREATMENT FACILITY

Dover's Wastewater Treatment Facility (WWTF) is located on Middle Road and is classified as a secondary wastewater treatment system. The treatment process starts with wastewater being collected from the River Street pump station, which serves as a primary collecting area, and is then pumped 19,400 feet to the WWTF. The system delivers approximately 2.5 million gallons of wastewater per day to the Wastewater Treatment Facility (WWTF). The average daily design flow of the facility is 4.7 million gallons per day (MGD) with a peak flow of 16.8 MGD. This has been stable over the last few years however rain events cause excessive spikes in flow due to Dover's inflow and infiltration issues.

WASTEWATER TREATMENT FACILITY GOALS

- Process and properly treat wastewater
- Receive and bill for commercial septic dumping
- Receive domestic septage from residents and surrounding communities
- Perform inspections on industrial sewer users
- Clean and test wastewater to ensure compliance with State and Federal water quality standards
- Comply with Federal and State discharge permits
- Ensure biosolids are appropriately managed and processed.

PUMP STATION FACILITIES		
Pump Station	Date Built	Description
The facilities in this table are organized by alphabetical order.		
Boston Harbor	1976	This station is located at the intersection of Route 4 and Boston Harbor Road, the station handles lower Spur Road and homes in the Boston Harbor Road area. It has a fiberglass pre-fab hut and two (2), 4" Gorman Rupp pumps each with dedicated 3 HP electric motor. In 2004 a Cat 15KW propane fueled standby generator was added. The Boston Harbor pump station needs a new building and standby unit . Currently, only one pump can run at a time.
Brickyard	1986	This station consists of a concrete poured building with metal framed rubber roof. There are has two (2), 4" Super T series Gorman Rupp pumps each with dedicated 20 HP electric motor. This facility needs standby power and to eliminate watch dog.
Butterfield Building Pump Station (Children's Museum/Indoor Pool)		The pump station is located inside the maintenance shop of the Butterfield Building's Ground Floor. The City has had to replace the 2 3" submersible pumps twice over the last 20 years due to flooding. The station is old and will need upgrades or to be moved to its own separate building in the future.
Charles Street	1963	This pump station is Dover's second largest station and pumps wastewater from the Charles Street area basin to the Locus Street gravity sewer line. The station had a complete upgrade in 2005 which included flow metering, new pumps, 240KW natural gas Cat generator, VFD's, electric, mechanical, and life safety upgrades. The force main at this station will need replacing.
Clay Hill	2007	This station is located on Sullivan Drive, and handles flows from Sullivan Drive and Evergreen Valley Drive. It has a concrete block building has a wood framed asphalt shingled roof. The station has two (2), 4" Super T Series Gorman Rupp pumps each with dedicated 5 HP electric motors both also VFD controlled. This facility is sufficient for now, but it could be eliminated eventually with the north end sewer.
Cochecho	1974	This station handles flows from the Portland Avenue, Atlantic Avenue, and Cochecho Street areas. It has a brick cylindrical building rests mostly below grade. The roof is formed concrete. In 2003 both pumps were upgraded and replaced two (2), 4" 40 HP vertical AC 400 GPM pumps. This pump station was rehabbed in 2020 and is sufficient.
County Farm	1992	The County Farm pump station is enclosed by a prefab fiberglass building. It's located on County Farm Road, and handles the County complexes, Riverside rest home, County Jail, and Seacoast Hospice. Due to the additional capacity needed for the expansion of the County jail a new force main was installed in 2006. In 2014 the pumps were graded to two (2) 3" Gorman Rupp super "T" series with two 7 1 ½ HP electric motors. In 2016 both pumps were retro fitted with Eradicator knifes to help with pump clogging issues due to rag and garment discharges from the county jail. This pump station needs a new building and new generator. Currently, both pumps cannot be run at the same time. Other future improvements include eliminating the watch dog unit and creating a larger wet well.
Cranbrook	1957	This station is enclosed by a brick building handles flow for a portion of Old Rochester Road, Cranbrook Drive, Strafford Road, and Wellington Avenue area. In 1979 the station received new pumps and controls; the station has no standby power and is equipped with two four-inch Gorman Rupp pumps purchased in 2005 with a capacity of 200 GPM. This facility needs standby power. Eventually, it could be eliminated with the north end sewer.
Crosby Road	1982	This station is a pre-fab concrete structure with a stick built roof and asphalt shingles. It handles flows on Crosby Road, Faraday Drive, and residential development on Ezras Way and Emerald Drive. It's part of the Charles Street sewer-shed. The station has two (2), 4" Gorman Rupp pumps each with dedicated 5 HP electric motors. In 2016, a new updated ASCO transfer switch was installed. There are currently no issues with the Crosby Road pump station.

Hampshire Circle	1993	This station is enclosed in a stick build wood framed structure with vinyl siding and asphalt shingles. It handles the flows for Hampshire Circle, Pleasant View, Mineral Park Drive, and Addison Place. The station is equipped with standby power and has two (2), 4" Gorman Rupp pumps each with dedicated 7 ½ HP electric motor. Eventually, upsize the 3 inch force main to a 4 inch force main in order to use a grinder on the wear plates.
Leighton Way	1976	This pump station is located at Heaphy Lane and Leighton Way, and handles twelve to twenty homes in this area. This station is part of the Piscataqua sewer shed. It consists of a wood framed building with concrete clapboard siding and asphalt shingled roof. The station has two (2), 4" Super T series Gorman Rupp pumps each with dedicated 5 HP electric motors. This facility was rehabbed in 2019 and is sufficient.
Mast Road	1987	This station is enclosed in a concrete block building has a wood framed asphalt shingled roof. It's located in the intersection of Spruce Lane and Mast Road and is part of the Varney Brook sewer shed. The station has two (2), 6" Gorman Rupp pumps each with dedicated 25 HP electric motors. This pump station needs a new standby unit and to eliminate the watch dog. Additionally, a flow assessment is also needed since there might be an opportunity to reduce the pump size.
Middle School	1999	This pump station was constructed as part of the new Dover Middle School being constructed. It's located on Daley Drive, handles flows from the Middle School only, and is part of the Charles Street sewer shed. It consists of a concrete block building with a wood framed asphalet shingled roof. The station has two (2), 3" Gorman Rupp pumps each with dedicated 5 HP electric motors. The stations power source is fed through the Dover Middle School. The school has a Cat natural gas fueled standby generator which supplies the entire school as well as the pump station. There are currently no issues with the Middle School pump station.
Mill Street	1964	This station consists of a pre-fab fiber glass hut for above ground pump access. The existing accompanying brick building has a newly replaced rubber roof and houses the new Cat standby generator. It handles flows from the Stark Avenue, Elliott Park, and Mill Street areas and pumps directly into the Charles Street pump station. The station has two (2), 6" Super T Gorman Rupp pumps each with dedicated 25 HP electric motors. The Mill Street pump station has major cavitation issues. The force main needs to be evaluated, and the state needs pumps and stand by power in the same building. Crews currently have to work in the elements during emergencies. The station building old wiring, motor control system, and HVAC system.
Mount Pleasant	1886	This station is enclosed in a concrete block building with a metal framed asphalt shingled roof and handles flows from Back Road, Henry Law Avenue and Mulligan Drive. The station has two (2), 3" Gorman Rupp pumps each with dedicated 5 HP electric motors. Mount Pleasant needs standby power and to eliminate watchdog.
River Street	1991	This is Dover's largest station, handling 75% of sanitary flows with a capacity of 13,700 GPM. The station includes screening and grit removal and pumps all city wastewater flow from the collection system to the Dover WWTF. Preliminary treatment consists of a mechanical bar screen and a cyclone grit separation system as well as sodium hypochlorite injection. The 2011 upgrade of the facility included installations of new dry weather influent pumps, mechanical bar screen and wash press, new vortex grit system, new chemical tanks and pumps and a building addition for the screenings/ grit removal truck and chemical storage. Portions of the HVAC system and electrical/ instrumentation systems were also included in the upgrade work. In 2016, the underground storage for its fuel system underwent a substantial upgrade to its bulk storage, piping, and day tank system. This pump station is under contract for rehab scheduled for 2022.

Strafford	1950	This pump station is enclosed by a brick building and handles the northern portion of New Rochester Road and Old Rochester Road. New pumps and controls were installed in 1980. In 2005, two (2) 4" Gorman Rupp super "T" series pumps both powered by a single 7 ½ HP electric motor. In 2016, a remote generator hook-up and manual transfer switch were added to supplement operations during prolonged power failures. This facility needs standby power. Eventually, it could be eliminated with the north end sewer.
Spruce Drive	1978	This station is enclosed in a fiberglass pre-fab hut and is located on Spruce Drive and is part of the Varney Brook sewer shed and handles flows for the homes on Spruce Drive. The station's pumps were upgraded in 2004 and now has two (2), 4" Gorman Rupp pumps each with dedicated 5 HP electric motors. There is currently no standby power source so during an extended power outages it requires by-pass pumping. The Spruce Drive pump station needs a complete rehab including reconstruction of the building and installation of a new standby unit . A new wet well, suction, and discharge piping are also needed.
Stonewall Drive	2016	This station was constructed as part of the Stonewall drive development for commercial properties. The station has a concrete block building with a wood framed asphalt shingled roof. The station has two (2) 3" Super T Series Gorman Rupp pumps each with dedicated 15 hp high efficiency electric motors both VFD controlled. The duplex pump system alternates to split the stations average daily run time of 6 total hours per month. It has a 30,000 BTU natural gas fired Reznor heater. It's also equipped with a Cat 50 KW stand by generator with ASCO automatic transfer switch.
Tolend Landfill	2012	This station captures leachate from within the Tolend Road Landfill, and conveys it to the wastewater treatment plant. The duplex submersible station removes between 70 and 100 gallons of contaminated groundwater from the landfill area every minute. The pumps are rated for 215 gallons per minute, and 60 feet total dynamic head. They have variable frequency drives and are 6.5 horsepower.
Varney Brook	1979	Dover's third largest pump station, Varney Brook handles all flows from the southern sewer basin of the City, roughly 750,000 gallons per day of the 2.4 million gallons annually. It pumps directly to the WWTP, which was accomplished in 2007 by rerouting the force main. All three pumps were replaced in 2002/03 with 100 HP Vertical Flow Serve pumps. This facility was rehabbed in 2021 and is sufficient.
Watson Road	2003	This station consists of a concrete building with wood construction and an asphalt roof and handles flows for Sandpiper Drive and the Cardinal/Lennon Drive development. The station has two (2), 3" Gorman Rupp pumps each with dedicated 5 HP electric motors. There are currently no issues with the Watson Road pump station.
Wentworth Terrace	1979	This station has a wood framed building with wood clapboard siding and an asphalt shingle roof. The station has two (2), 40 HP 800 GPM Flow Serve pumps which were a new upgrade in 2003 along with new check valves. It has a BTU oil fired furnace. The station is also equipped with a White 100KW diesel fueled generator. The station has two different types of force main that should eventually be rehabbed to make one constant type of pipe. Wentworth Terrace also needs a new standby unit, motor control center, and HVAC.

The two major buildings on-site are the process building and the administrative building. The process building serves as the dewatering, generator, and maintenance area for the WWTF. The process building recently had LED lighting installed, a new HVAC system added in 2015, building envelope weatherization in 2012, and a new roof replacement in 2015. The administrative building provides space for all administrative functions related to the WWTF and laboratory space.

Wastewater Facilities Study

In 2013, Wright Pierce Engineering worked with the City of Dover to develop a Wastewater Facilities Study. This study identifies needs and upgrades for the WWTF, such as upgrading it's conventional activated sludge facility to achieve nitrogen removal and reduce nutrient loading into the Great Bay Estuary. Excess nitrogen in water can lead to algae blooms and harm the eelgrass beds that hold the bay's sediment in place, degrading it's ecosystem and making it less resilient to storms and other impacts.

The recommended upgrades in the Plan were broken out into three phases. Phase 1 facility upgrades were completed between 2014 and 2016. Phase II/III upgrades are currently underway. In 2015, the City was recognized and honored for exceptional work in operating and maintaining the facility, receiving the "Regional Wastewater Treatment Plant Excellence Award" from the US Environmental Protection Agency.

Phase 1 Upgrades

Phase 1 of the WWTF upgrade included major improvements to the facility's primary and secondary treatment systems and aeration tanks, as well as the installation of a new Biofilter Odor Control system. Other improvements included:

- New pumps, actuated valves, and air blowers were added to the facility's primary sedimentation tank. Septage receiving and pumping facilities were upgraded.
- Conversion to an Modified Ludzak-Ettinger (MLE) nutrient removal process by investing in new instruments, modulating air control valves, diffused aeration, and nitrate recycling pumping systems were constructed.
- New stainless steel secondary clarifier mechanisms were added, as well as new Return Activated Sludge pumps and Waste Activated Sludge pumps.
- A 13,500 SCRM biofilter and a Huber Inclined Screw Press dewatering technology were also added to the facility.
- VFDs (Variable Frequency Drive) and SCADA (Supervisory Control Data Acquisition) programs were installed.

GREAT BAY NITROGEN REMOVAL

Due to water quality concerns in Great Bay and a need to reduce total nitrogen in the Great Bay Estuary, the City has been investing in ways to reduce nutrient loading into the estuary. These improvements help Dover comply with the Environmental Protection Agency's Great Bay Total Nitrogen General Permit (GBTN Permit) requirements. The GBTN Permit creates a framework for meeting regulatory compliance through collaboration with neighboring communities. An intermunicipal agreement was established known as the Municipal Alliance for Adaptive Management (MAAM), which allows the participating communities to create an Adaptive Management Plan (AMP) set forth by the GBTN Permit.

CATCH BASIN AND WET WELLS CLEANING FACILITY

The Dover WWTF is the collection point for the City's street sweepings, catch basin cleanings, and wet well cleanings. As part of the city's MS4 compliance efforts, the volume of grit laden street waste from the City's catch basins and streets to manage has increased. To meet this need, the City has invested in the design and construction of a catch basin and wet wells cleaning facility for handling and disposal of these wastes. The proposed facility will be built in an existing, partially enclosed canopy structure formerly used to store amendments for biosolids composting. The new facility will consist of three distinct operating zones - a wet well and sewer cleanings station, catch basin pre-treatment or storage area, and an automated catch basin cleanings treatment system. The facility will also be used to help clean out the 23 pump stations in the City. This project is being financed through the low-interest State Revolving Loan Fund.

MAAM allows member municipalities to share expertise and monetary resources to reduce nitrogen loads in Great Bay and work collaboratively. Activities include regular water quality monitoring, establishing a method to track total nitrogen reductions and additions, creating and executing a plan for source reductions of total nitrogen, and building an objective, transparent, and inclusive scientific record that will help guide future decisions promoting the health of Great Bay. As part of the plan for source reduction of total nitrogen, communities are required to reduce nitrogen pollution not only from wastewater treatment facilities but also from non-point sources (NPS).

The City is currently creating an optimization study of the WWTF and developing a nutrient control plan for the entire City to meet permit goals. The City of Dover will take a proactive and opportunistic approach to reducing NPS pollutants through a variety of different ways including incorporating Best Management Practices (BMP's) into all of their capital improvement projects, enhancing operations such as leaf litter

removal and street sweeping, and looking for opportunities to remove private septic systems from the watershed. The City is also planning to look at creating a large watershed scale BMP within the downtown area (potentially Henry Law Park) to provide pollutant removal from up to 120 acres of highly urban area.

Additionally, the WWTF is seeking alternative mechanisms and technologies for more efficient biosolid drying. PFAs chemicals are concentrated in biosolids and there is a cost associated with handling that. Drying biosolids decreases PFAs levels, making this process an important mechanism for reducing these contaminants.

KEY ISSUES,CONSIDERATIONS, AND FUTURE PROJECTS

A summary of identified key needs and issues are outlined below. These have been informed by this master planning process.

- **Continue Wastewater Treatment Facility Upgrades:** Based on an EPA mandate to other New Hampshire seacoast communities, the City anticipates potentially having to further upgrade their treatment facility to achieve a 3 mg/L TN limit within 15 years, and will use the operational experience gained from the Modified Ludzak-Ettinger (MLE) conversion process to base the design of the next upgrade. Specific projects that will be included as future upgrades include:
  - **A new ultraviolet disinfection system:** The facility's current UV system is approaching the end of its useful life. The City will need to start the design of an updated system to meet future needs.
  - **A third secondary clarifier:** With the MLE Process designed and constructed for current flows and loads, both of the City's existing secondary clarifiers are utilized and on line most of the year. A third unit would allow for better maintenance and operation rotation. Having three Clarifiers would also give buffering capacity in dealing with inflow and infiltration due to the increased rain events that Dover has been experiencing.
  - **Replacement of the two remaining HSI Turbo Blowers.** After the failure of one of the WWTF's three turbo blowers, the City looked into updated Aeration technology. After an extensive evaluation, the Hybrid Screw Blower technology was selected and installed to replace the failed unit.
  - **Explore alternative biosolids drying technologies:** Explore and pilot alternated technologies and systems for biosolids drying to more effectively decrease contaminants in biosolid material.
- **Great Bay Nutrient Removal:** The City should continue to work towards compliance with the GBTN Permit and participate in the Municipal Alliance for Adaptive Management to reduce nitrogen loading into the Great Bay. Implementation will likely require extensive data collection, water quality monitoring, and studies to assess the recovery of the estuary. Installing a third secondary clarifier is one implementation action for reducing nutrient loading into Great Bay.
- **Inflow and Infiltration Mitigation:** During periods of heavy rainfall and snow melt, clean water enters the wastewater collection system and occasionally causes surcharging of the system resulting in the bypass of untreated sewage to the Bellamy and Cochecho rivers. This stormwater is known as "Inflow and Infiltration" and must be reduced so as not to overload the sewer system. It enters the systems through leaking maintenance holes, pipes, roof leaders, basement drains and catch basins discharging to the sewer system. Dover should continue to invest in its Inflow and Infiltration program and should continue with activities such as flow monitoring, grouting, sealing, roof gutter removal. Consider providing a cost share program to remove sump pumps (which can glean significant cost savings).
- **Pipeline/Sewer Assessments:**
  - Washington Street, Henry Law Avenue, and River Street are showing hydraulic issues, as well as aging issues. The assessment of these lines are under contract for 2022 to determine if pipeline replacement or rehab is necessary.
  - Conduct pipeline assessment on the main line running from Charles Street pump station to Rutland Street.
  - Conduct a sewer assessment on Cambridge Tool. 12" line from Washington Street to Cambridge Tool.

    - Sewer assessment of 24" gravity main on Locust Street from Central Avenue to Washington Street.
    - Complete assessment of all sewers in Morningside and Tanglewood areas for rehab options.
- **Sewer Line Replacements:** There are sections of sewer mains throughout the City that are in need of replacement due to their poor condition. Areas to be addressed first are Atkinson Street, Hanson Street, Richmond Street, Grove Street, and Central Avenue. Another major project includes the sewer main replacement on Horne Street, which will replace a section of old VCP clay pipe with PVC pipe. These are sections in dire need of repair and have high potential for Inflow and Infiltration. Specific upgrade projects that should be prioritized include:
    - Replace or rehab Charles Street sewer from Central Avenue to Mill Street.
    - Replace force main from Mill Street pump station to Charles Street.
    - Replace Charles Street force main from Pump station to Locust Street.
    - Replace sewer main on Richmond Street from Washington Street to West (one of the oldest sewer lines).
    - Replace sewer main on Central Avenue from Williams Street to George Street (ones of the oldest sewer lines)
    - Extend sewer to the North End of the City, possibly removing 3 pump stations if service is extended.
    - Complete Phase C design of sewer line replacement in the Elliott Park and Stark Avenue area and secure funds for repairs.
- **Pump Station Upgrades:** The City has a number of pump stations that require upgrades and replacements. Currently slated for renovation, the Mill Street pump station last had major work completed in 1980. This project is proposed in the 2022-2027 Capital Improvement Plan and would include the replacement of the original force main that dates back to 1957. Additionally, the pumps are outdated and becoming inefficient and the brick pump house needs to be replaced. The highest priority pump station upgrades include the following below. More about specific upgrades can be found in Pump Station Facilities Table on page 78.
    - River Street Pump Station, which is currently under contract for rehab in 2022.
    - Mill Street Pump Station
    - Wentworth Terrace Pump Station
    - Charles Street Pump Station
    - Children's museum Pump Station , currently inside the building - concerned about odor, hydrogen sulfite as, etc.
    - County Farm Pump Station
- **Pump Station Construction**: New pump stations should be added at the intersection of Back River and Mast Road and Leathers Lane. There is currently a sewer main on Leathers Road and on the hill of Back River Road. Adding a pump station would remove 20 homes from leach fields that are over 20 years old.
- **Needed Equipment:**
    - Purchase an excavator with Brush cutter attachment, to clear easements (many of these areas are where main lines are running through).
    - Purchase a sewer main easement cleaner. This is a costly item but necessary to complete maintenance work.
- **Stream Crossing Replacement:** Replace stream crossing from Knox Marsh Road to Crosby Road - small crossing under the railroad tracks under the Bellamy River.

STORMWATER INFRASTRUCTURE

Dover is responsible for the operation and maintenance of an extensive stormwater system. Stormwater runoff is rainfall or snowmelt that flows over land and does not soak into the ground. Impervious surfaces, such as rooftops, driveways, and parking lots create the most runoff. As it travels, stormwater runoff picks up oil, chemicals, bacteria, sediment, and other pollutants that are then carried into local water bodies.

In Dover, stormwater runoff has contributed to the impairment of Willand Pond and the Bellamy, Cochecho, Salmon Falls, and Piscataqua Rivers. Additionally, heavy rainfall can lead to excess stormwater runoff, which can overwhelm the capacity of storm drains, causing water to inundate roads and public and private property. The City is tasked with maintaining the public stormwater system to convey stormwater runoff away from private property and public right-of-ways to prevent flooding and control erosion, as well as to prevent polluted stormwater runoff from entering local water bodies.

STORMWATER DRAINAGE NETWORK	
Infrastructure Type	Quantity
Closed drainage pipe	65 miles
Open drainage	101 miles
Stormwater Discharge Locations	450
Culverts	140
Drainage manholes	100
Catch Basins	3,200

Historically, stormwater in Dover was managed through the use of an underground storm sewer system with direct outfalls to surface waters. The existing stormwater infrastructure in the city consists of a mix of new structures installed as part of development activities during the last 25 years, and very old structures and pipes that served as a combined sewer system until the 1970's. Portions of the city's stormwater system date back as far as the late 1800s. The system is aging and in need of rehabilitation and replacement.

STAFFING

The Stormwater System is managed by 7 full-time employees of the Community Services Department. The staff is responsible for maintenance of the City streets and drainage as well all snow removal operations. The Environmental Projects Manager is responsible for stormwater National Pollutant Discharge Elimination System (NPDES) permitting. The Engineering Division provides drainage design, construction oversight, inspection, and plan review services for all proposed public and private development projects in the city. In response to the regulatory requirements and the development growth, the City continues to grow the stormwater management infrastructure and operations both in size as well as in complexity. This growth may necessitate additional staffing as needed to keep up with maintenance

MAINTAINING THE CITY'S STORMWATER INFRASTRUCTURE

Many of the drain lines in Dover's stormwater system have exceeded their life expectancy and are in need of replacement. Failure of stormwater infrastructure manifests in a variety of ways such as flooding, erosion, cross-contamination (infiltration into the sewer system) and ultimately, pollution of waterways and/or damage to infrastructure and property. The infrastructure is regularly in need of upgrades and improvements, to meet the expected level of service and applicable federal permit requirements. The City recently completed an asset management study of the downtown area to assess the age and condition of the system and to serve as a tool that will inform system maintenance. The City's VueWorks program and GIS mapping help the City maintain existing data related to the stormwater system.

STORMWATER MANAGEMENT

Historically, stormwater runoff has been treated as a problem that needs to be transported from the property as quickly as possible and often empties into local water bodies after it has collected pollutants and contaminants. Waterbodies are often unable to handle the increased water volume and pollution, which leads to negative impacts such as erosion, loss of habitat and aquatic life, and increased flooding and property damage.

SILVER STREET RE-CONSTRUCTION PROJECT

The Silver Street Reconstruction Project was completed in 2016 and included a redesign of the road's right-of-way to reduce traffic speeds, improve pedestrian safety, and enhance water, sewer, and traffic management infrastructure. Among these comprehensive streetscape improvements, stormwater management and treatment was also a top priority. A large bioretention rain garden with an outdoor classroom was installed at the Woodman Park School and other improvements were made within the street right-of-way.

Above: Rain garden that was constructed as part of the Silver Street Improvement Project

Stormwater runoff capture and infiltration techniques (e.g., rain gardens, infiltration basins, permeable pavers, and other types of green infrastructure) have been proven to prevent flooding, improve water quality, reduce demand on the City's water supplies, and improve drought conditions by allowing stormwater to recharge groundwater supplies.

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PERMIT

The Environmental Protection Agency's MS4 Permit is also a driving force behind Dover's municipal stormwater management. The MS4 permit, which is also referred to as the National Pollutant Discharge Elimination System (NPDES) permit, requires the City to implement minimum control measures that minimize harmful pollutants entering local waterbodies. As part of the permit requirements, Dover has development a stormwater management program that

describes stormwater control practices that will be implemented consistent with permit requirements to minimize the discharge of pollutants from the sewer system. The permit specifically requires that communities address six areas to comply with the NPDES permit. This includes:

- A **Public Education** program to promote public awareness of stormwater pollution and behaviors for individuals to reduce their contribution to stormwater pollution
- **Public Outreach** to encourage public participation in the program
- An **Illicit Discharge Detection and Elimination program** to effectively find and eliminate illicit discharges within the MS4
- A **Construction Site Runoff Control program** to effectively control construction site stormwater discharges to the MS4
- A **Post-Construction Runoff Control program** to ensure that stormwater from development projects entering the MS4 is adequately controlled by the construction of stormwater controls
- A **Pollution Prevention/Good Housekeeping program** to ensure that stormwater pollution sources on municipal properties and from municipal operations are minimized

Implementation actions that correspond with each of these six areas are summarized in the City's Stormwater Management Plan and Illicit Discharge and Elimination Plan. Currently, this City is in Year 2 of its 5 year plan to meet Phase 2 permit requirements.

ACCOMPLISHMENTS

The City of Dover's 2020 Annual Stormwater Management Report outlines recent accomplishments that the City has completed to reduce stormwater pollution, improve stormwater infrastructure, and promote low impact development (including green infrastructure). Additional research was also compiled on other projects that have been completed beyond what was included in the Annual Report. A few highlights of these are summarized below:

Public Participation and Outreach

- Annual public outreach about pet waste, leaf and grass clippings, septic system. maintenance, and fertilizer/pesticide use
- Tours of watershed management projects to citizens, leaders, schools, etc.
- Leading and participating in the Seacoast Stormwater Coalition and the Municipal Alliance for Adaptive Management.
- Created an educational stormwater management webpage on the City's website.

Illicit Discharge Detection and Elimination

- Completed Phase 1 Stormwater System Mapping.
- Completed an initial outfall and interconnection inventory and a priority ranking matrix to assess illicit discharge potential based on existing information.
- Completed regular inspections of all outfalls/

HELLMAN AVENUE RAIN GARDEN PROJECT

Rain gardens are small, landscaped depressions that are filled with a mix of native soil and compost, and are planted with trees, shrubs and other garden-like vegetation. They are designed to temporarily store stormwater runoff and reduce runoff pollutant loads. In 2020, the City of Dover Community Services Department partnered with the New England Water Environment Association to complete a rain garden service project along the right-of-way of Hellman Avenue. In this project, the City utilized a filtering catch basin to collect and direct polluted stormwater to a rain garden. This project demonstrated the power of partnership and incorporated collaboration, education, and outreach with the Youth Education Committee.

Above: Volunteers help create a rain garden at
Source: City of Dover

interconnections for the presence of dry weather flow.
- Completed dry weather assessments of all outfalls and pollutant testing at seven (7) outfalls showing signs of dry weather flow.

Municipal Parks, Open Space, Buildings, and Facility Inventory

- Developed a Municipal Parks and Open Space Inventory and Municipal Building and Facilities Inventory of all properties located within the MS4 area. Corresponding operations and maintenance procedures were established to ensure stormwater best management practices are integrated into all activities on municipal properties.

Policy and Regulations

- Implemented the Complete Streets/Green Streets policy in Dover to encourage low impact development stormwater solutions.
- Created regulatory language and processes that guide the integration of landscaping, stormwater management, sediment and erosion control, and other site elements in the site plan and subdivision regulations. For example, the City of Dover requires all new development and redevelopment projects with impervious expansions over 1,000 sf or disturbance over 20,000 sf to be reviewed by the Technical Review Committee. As part of the Technical Review process, projects are required to meet the stormwater erosion control and post development standards.

Maintenance

- A schedule for catch basin cleaning (which ensures effective functioning of catchment systems) has been established with the goal of ensuring that a catch basin should not be more than 50% full.
- A street sweeping program has been developed so that all streets with curbing and/or catch basins and permittee-owned parking lots are swept in accordance with permit conditions. Street sweepings are properly stored and disposed of so that they do not discharge to receiving waters. Targeted street sweeping in Downtown or high-load areas is ongoing and all publicly owned parking lots, including schools, are swept at a minimum once a year. Additionally, Dover has a sidewalk sweeper that sweeps in downtown areas throughout the warmer months.

MUNICIPAL RAIN BARREL PROGRAM

Dover is participating in the Great Bay Rain Barrel Project program which invited 42 New Hampshire towns, and 10 in Maine along eight rivers that feed the Great Bay Estuary to be part of a rain barrel initiative. This program purchases a bulk supply of rain barrels and provides them to local groups to sell to property owners for a reduced cost. Rain barrels are a stormwater management mechanism, keeping stormwater from transporting excess nutrients into waterbodies.

Above: Rain barrel system
Source: Dover NH Democrats

Infrastructure Upgrades

- Examples of green infrastructure projects that have been completed in Dover since 2009 include:
  - The Silver Street Reconstruction project
  - Rain garden installation as part of flood and erosion control at the end of Chelsey Street.
  - New filtering catchbasins locally called "Boulanginators" installed as part of several road reconstruction capital improvement projects.
  - Dover High School upgrades include construction of stormwater mitigation practices.

BERRY BROOK WATERSHED RESTORATION PROJECT

Dover's Community Services Department and the University of New Hampshire Stormwater Center collaborated on a multi-year project to install green infrastructure systems in the Berry Brook watershed, which culminated in 2016. Most of the watershed is in densely populated neighborhoods where runoff from the watershed, such as excess lawn fertilizer, pet waste, heavy metals and oil from automobiles, and road salt, flowed into Berry's Brook during rain events. The City invested in green infrastructure improvements including rain gardens, a gravel wetland edge, and retention ponds to help divert and filter runoff from local driveways, roads, and parking lots, reducing the amount of polluted stormwater entering the brook. These systems were designed with efficient maintenance in mind and to be highly adaptable for densely developed areas. Additionally, Berry's Brook was "daylighted," or removed from underground piped systems for the first time in decades. Dover is seeing success in reducing this runoff from impervious cover by these simpler green infrastructure installations that are less costly to maintain than conventional systems. This project was nationally recognized by the U.S. Environmental Protection Agency for its design and construction of an integrated stormwater treatment system.

KEY ISSUES, CONSIDERATIONS, AND FUTURE PROJECTS

A summary of related needs and issues outlined through the master planning process are outlined below.

- **Asset Management and Upgrading Dover's Stormwater Infrastructure:** The City plants to continue investing in upgrading its stormwater infrastructure system.
- **Green Infrastructure and Best Management Practices:** Dover plans to continue investing in green infrastructure systems and best management practices to manage stormwater at the source and reduce negative impacts on the City's water system. Most recently, the City has applied for grants and funding opportunities to construct a large BMP, targeting nitrogen removal, that would be constructed in the prominent Henry Law Park area and provide opportunities to educate about stormwater management, pollution, and flood risk.
- **Funding:** The City currently allocates approximately 1 million dollars per year toward stormwater management. Although Dover has a robust stormwater management program, diversifying funding streams for projects can improve the sustainability of this program into the future. The City is currently investigating the creation of a Stormwater Utility to fund the retrofitting of existing properties with low-impact development design features. The Ad-Hoc Stormwater Committee recently completed the review and made the recommendation to the City Council to pursue a stormwater utility.
- **Nitrogen Reduction:** As part of the city's accepting the Great Bay Total Nitrogen General Permit rather than focusing solely on upgrades at the WWTF, the city has committed to reduce non-point source loading in a meaningful way. This means that the city needs to continue to proactively take advantage of nitrogen reducing opportunities as they become available.
- **GIS Mapping:** Complete GIS mapping to identify all pipes Dover's drainage area.
- **Stormwater Asset Replacements:** The following areas may need replacement of stormwater assets in the coming years:
  - Culvert on Bellamy Road

- Outer Sixth Street culvert
- Pipe line on Central Avenue from New York Street to Old Rollinsford Road
- New York Street to railroad tracks
- Mount Vernon Street from Sixth Street to Lowell Avenue
- Grove Street from Sixth Street to Ash Street
- Ash Street from Central Avenue to Horne Street
- Maple Street from Sixth Street to Ash Street
- Hough Street from Central Avenue to Hull Avenue
- Horne Street from Sixth Street to Glenwood Avenue
- Third Street from Central Avenue to railroad tracks
- Third Street from railroad tracks to Grove Street
- Fourth Street from Chestnut Street to Bridge Street
- Chapel Street from Main Street to Portland Avenue
- Portland Avenue from Main Street to Atlantic Avenue
- Chapel Street – all
- Saint Thomas Street from Walnut Street to Belknap Street
- Locust Street From Washington Street to Silver Street
- Kirkland Street –all
- Central Avenue from Williams Street to George Street
- Angle Street
- Academy Street
- Church Street
- Atkinson Street
- Belknap Street to Washington to Silver
- Cushing Street
- Lexington Street
- Richmond Street
- Arch Street From West Concord Street to Silver Street
- Washington Street from Arch Street to Taylor Lane
- Towle Avenue
- Rutland Street –all
- Box Culvert from River Street to Henry Law Avenue
- Box Culvert from Henry Law Avenue to Court Street
- Preble Street from Twombly Street to Peirce Street
- Park Street –all
- Ham Street - all
- Dover Street –all
- East Street - all
- Box culvert from 35 Broadway Street to Ham Street
- Box Culvert from Ham Street to Baker Street
- Box Culvert from Baker Street to Hill Street
- Box Culvert from Hill Street to Florence Street
- Box Culvert from Florence Street to Pearl Street
- Box Culvert from Ham Street to Baker Street
- Box Culvert from Baker Street to Hill Street
- Box Culvert from Hill Street to Pearl Street
- Broadway from 35 Broadway Street to Oak Street
- Box Culvert from 35 Broadway Street to Twombly Street
- Baker Street from East Concord Street to Gully on Baker Street
- Hill Street
- Florence Street
- Pearl Street–all
- Ela Street –all
- Coolidge Avenue – all
- Coolidge Avenue – Box Culvert and Pipe in back yards easement to Oak Street
- Oak Street – Central Avenue to Broadway Street

7. PRIVATE UTILITIES

Dover's private utilities include natural gas, electricity, telecommunications, and internet/cable TV, all of which are provided to the City's residents by private companies. This section of the chapter assesses existing service conditions and distribution areas of private utilities and determines any future needs and projects.

Utility	Customers Served	Services Provided
Unitil Corporation	6,600	Natural Gas
Eversource	17,812	Electricity
Consolidated Communications	25,000	Telephone
Comcast	19,560	Internet/Cable TV

NATURAL GAS

The City of Dover is serviced by Unitil Corporation for natural gas. The company services approximately 6,600 customers in Dover. This number of customers served has more than tripled in the last decade from 1,900 customers in 2009. According to Unitil, this increase is largely from increasing residential demand. At present, there is 400 pounds per square inch (psi) major transmission line that services Dover, Somersworth and Rochester. Over time this six-inch line in Dover is being upgraded to a 12-inch line to provide added capacity in Dover and for the communities to the north.

There are two locations where the City taps into this line through district regulator stations. At these stations the pressure is reduced to 60 psi to feed the intermediate pressure system that supplies gas to much of the City. Four additional regulator stations take the pressure from this intermediate pressure system to a low pressure system that serves most of the downtown area. This low-pressure system is adequate for the residential demand in this area, but would not be suitable for high demand industrial use. These intermediate and low-pressure lines in the Downtown are older and are being replaced over time. Typically, this is done when other infrastructure projects are underway in the area and the lines can be accessed at the same time. The industrial areas—Crosby Road and Enterprise Park are supplied by the 60-psi intermediate pressure system that meets demand and can sustain growth.

Unitil Corporation has updated its system maps into a digital format, and these are available to the City to utilize in planning for future projects. Aside from the upgrades to the system mentioned above, Unitil is also working to expand service to the Cochecho Waterfront Development, and adding some short extensions of gas lines into residential areas. Like other utilities, Unitil likes to partner with the City and State when roadway projects are taking place. However, there is no formal process for advanced notification of these projects. Sometimes they are triggered by Dig Safe notifications or by communications between staff members. A recommendation of this Chapter should be to establish a notification process early on (maybe during the budgeting process) to all Utilities so they can plan accordingly and track potential infrastructure projects. Its also important to note that there are gaps in service because the gas lines are not within easy or affordable reach of every property owner.

ELECTRICITY

Eversource is New England's largest energy delivery company, with approximately 4 million customers in Connecticut, Massachusetts and New Hampshire. As a major utility, Eversource is responsible for ensuring distribution facilities are adequate for system load levels. Distribution maintenance, distribution planning, restoration of electrical service during and after storm events, residential, commercial, and industrial development and design, are all functions provided. The City of Dover is interconnected to the transmission system (primary voltage above 34.5kV) through the New England Power grid. The New England Power grid is regulated by the Independent System Operator (ISO-NE) based in Holyoke Massachusetts. Planning, ensuring adequate transmission facilities, and ensuring adequate generation capacity for the New England area are all regulated through the ISO-NE. The Dover area distribution system is then operated and maintained by Eversource, and is regulated through the New Hampshire Public Utilities Commission (NHPUC).

Dover is served by major 115kV/34.5kV distribution substations located at: Cochecho Street; Stark Avenue; Drew Road; and Littleworth Road. The largest of these substations is the one located on Cochecho Street and Eversource is currently working on a plan to rebuild this facility in the next five years. As those plans solidify Eversource will contact the City and proceed with the necessary building and land use approval processes. Dover also has several smaller primary voltage substations located throughout the city. Dover now requires that applicants communicate with Eversource during the approval process and document this in a "letter to serve". This ensures that needed electrical connections and infrastructure improvements are clearly documented, and the costs associated are known. This process is necessary for larger development projects, and the customers pay for the necessary infrastructure improvements.

As Eversource continues to work with the City to improve the electrical system in Dover efforts have been made to move distribution lines underground. This underground infrastructure includes sections of Washington Street, the area around the parking garage, in the vicinity of City Hall, and other sections of the Downtown.

This infrastructure investment is made as new infrastructure or development projects are underway, and are not funded by Eversource. However, once in place Eversource takes over the management of the underground infrastructure. While this shift to underground electrical service in Dover's Downtown improves the aesthetics, it also resolves potential safety code issues related to new buildings and clearance to overhead transmission lines. Over the coming years, efforts should be made to move more of the overhead infrastructure underground as opportunities present themselves. One area where this is likely to happen is along River Street and in the new Cochecho Waterfront Development Project.

In the previous master plan, deregulation was the issue being navigated by electric utilities in New Hampshire. Since that time that process has been completed. Eversource no longer owns electric generation facilities.

Dover also has a power-producing dam that is also an energy generator - Cochecho Falls Dam. The City owns the land around the dam, and the dam itself. Dover has a lease with Southern New Hampshire Hydroelectric, which operates hydropower activities.

Additionally, there are 186 residential parcels in Dover that have solar arrays of varying sizes. There are also 7 non-residential parcels that have solar arrays with a total of 5,075 panels. Expanding solar energy production, on public and private properties, remains a significant way for Dover to increase its sustainability and resiliency.

DATA AND COMMUNICATION SERVICES

Consolidated Communications

Consolidated Communications, formerly Fairpoint Communications, currently has the franchise responsibility to provide telephone services in Dover. Over time, the types of services offered by Consolidated have expanded and now include internet and satellite television (Directv). Consolidated Communications now provides these services to some 25,000 customers in Dover. The system also includes fiber optic cables on the major feeder routes—Route 16 (Spaulding Turnpike) north and south, Route 9 and Route 108. The fiber optic network provides a strategic system that allows Consolidated to expand its system as demand requires—including both residential and business growth.

Comcast

Dover is also serviced by Comcast of Maine/ New Hampshire, Inc which provides a variety of services to all residences and businesses in the City. This includes Xfinity television, internet, land lines, and wireless services. Comcast now provides these services to some 19,560 customers in Dover. Other features of the City's agreement with Comcast include government and education access channels. The current government access channel, commonly known as Channel 22, broadcasts government programming, including live municipal meetings. The education channel, Channel 95, contains local education programming. Comcast provides free cable television to schools and municipal buildings, as well as internet access at some locations. Comcast also pays an annual $25,000 grant to the city's technology fund, and a total of $425,000 annually to the City in franchise fees.

Land Mobile Radio

Dover has a secure dedicated wireless network that serves the City's First Responder and municipal voice and data needs. The network spans the city and is comprised of five main tower sites interconnected by high-speed microwave links in the licensed 11GHz band. The network is redundant in design with its primary purpose being to provide connectivity between the five municipal towers, where various wireless technologies are leveraged, including Police, Fire/EMS and Community Services voice radio systems, smart street lighting, traffic monitoring/ control, and SCADA. Future use of the network may include private LTE data/voice service for municipal users, expansion of the School voice, data and security systems including interoperability with First Responders, distance learning connectivity, public Wi-Fi and more.

Other Service Providers

As telecommunications services continue to expand and provide additional options to

residents, businesses and city government it is important to recognize that the City is also serviced by Atlantic Broadband/Breezeline and Verizon Wireless. A Franchise Agreement with Atlantic Broadband/Breezeline was approved in 2022 and mirrors the Comcast agreement. The City of Dover currently relies on Verizon Wireless heavily for all cellular communications supporting public safety and other connectivity needs.

In the near future the federal government will also be providing a competing product called FirstLight. This alternative will be supported by AT&T and managed by the State of New Hampshire. The timeline for this new service is currently unknown.

TOWERS AND UTILITY POLES

Cell/Radio Towers

Currently, there are twenty parcels with cell or radio towers in Dover. They are located at:

- Finch Lane
- Garrison Hill
- Long Hill Road
- Main Street - antennas on smoke stack at mill
- Mast Road
- McCone Lane
- Middle Road
- Parsons Lane

Utility Poles

In recent years obsolete utility poles have become an issue in Dover and other communities. When a new pole is installed right next to an older pole, the old pole can't be removed until all of the utility companies have relocated their lines to the new pole. This has resulted in many locations where there are two adjacent poles left standing for months or years.

The City considers this both a safety and aesthetic issue. From a safety perspective, two poles increase the chances of a vehicle striking them in an accident and increases the risk of injury or death for drivers. Double poles could impact sight lines for drivers and they double the potential obstructions when installed in sidewalks, causing ADA issues. Having two poles right next to each other is an unnecessary eyesore that

creates an aesthetic issue, as the City works to improve the attractiveness of downtown and gateways into the City. The City has been working to persuade the utilities to timely remove these obsolete poles using all means available including legal avenues.

8. IMPLEMENTATION

PLANNING FOR THE FUTURE

To help support the resilience initiatives underway by the City and integrate a holistic facilities planning and development process, Dover has identified this decision making framework composed of five critical areas: Energy, Water, Materials, Ecology, and Equity, (see graphic below).

Each of these topic areas are described in greater detail below and should be considered when making decisions in site design, building renovations, facility improvements, and infrastructure upgrade projects:

Energy: According to the 2018 Climate Adaptation Chapter, the City of Dover should reduce energy consumption and greenhouse gas emissions. Prioritize reducing energy use in municipal buildings, facilities, and operations and increase renewable energy supply.

Water: Be good stewards of Dover's water resources through stormwater management best practices and innovations in buildings, landscapes, and infrastructure. Consider water conservation strategies, rainwater harvesting, and green infrastructure.

Materials: Reduce waste in facility improvement and construction projects. Create healthy indoor environments through the selection of interior materials that are non toxic and are manufactured through responsible sourcing practices.

GOALS FOR DOVER'S MUNICIPAL FACILITIES AND INFRASTRUCTURE

- Plan, develop, and provide for high-quality public facilities and utilities for Dover property owners, business owners, and residents.
- Coordinate maintenance of all facilities and utilities to increase efficiency of maintenance activities, utilize best practices such as asset management tracking, and to ensure the longevity of Dover's buildings and infrastructure.
- Adopt a sustainability and resiliency framework to guide all design, construction, renovations, and maintenance of Dover's facilities and utilities.
- Promote collaboration between departments, relevant partner organizations, and neighboring municipalities to enhance efficiency and ensure different perspectives are integrated into facility projects.

Ecology: The City should ensure the protection and regeneration of ecosystems and the services they provide. Buildings and their grounds can incorporate green space through green roofs, green walls, and ecological landscaping, and thoughtful building siting during construction projects should ensure the natural systems on site are protected to the greatest extent possible.

Equity: Dover's municipal facilities should be accessible and inclusive to all members of the community. All public building, site design, and management should ensure that residents and visitors have easy access physically, can navigate to their destination, feel safe and secure, and feel welcomed.

Moving forward, the City will prioritize defining metrics and design standards to guide all City building projects, including construction and renovation.

IMPLEMENTATION MATRIX

The implementation matrix below includes all actions identified in this document by Department and facility. This should guide the City's municipal infrastructure and building upgrades over the next 5-10 years. Each action item is nested organized by chapter section and include information on timeframe (short term actions, which should be undertake in 1-2 years, mid-term actions, which should be undertake in 3-5 years, long-term actions, which will take more than 5 years to initiate and complete, and ongoing actions), responsible party(ies), and reference within the document for more information. Please note that a trackable version will be maintained by Dover's Department of Planning and Community Development.

#	ACTION ITEMS	TIMEFRAME	RESPONSIBLE PARTY(IES)	REFERENCE
PUBLIC SAFETY				
A. Fire Department				
A1	Consider hiring a Fire & Rescue Department IT technician to serve the Department's increasing information technology needs.	Mid	Fire Department	Pages 13-14
A2	Digitize all Fire Department records. Assess whether the Fire Department's record management systems are sufficient for proper data analysis at the local level. If not, investigate other potential systems or improvements.	Mid	Fire Department	Pages 13-14
A3	While the radio communications and control infrastructure is adequate due to recent improvements, it would be worthwhile for the Department to inventory its internal processes to ensure they are well-thought out, easy to understand, and lean.	Mid	Fire Department	Pages 13-14
A4	Assess ways to reduce operational and utility costs at Central Station and the South End Station.	Mid	Fire Department	Pages 13-14
A6	Monitor the growth along Dover Point Road between the area of Pointe Place and Middle Road, as this will be the next area needing a Fire and Rescue facility if it continues.	Mid	Fire Department	Pages 13-14
North End Fire Station				
A7	Assess deed and building lot for North End Station, and determine feasibility of additional parking.	Mid	Fire Department	Page 15
A8	Complete renovations for separating Inspection Services and Fire Department Administration and creating additional office space. Improve physical workflow of Inspection Services. Reduce noise in renovation of Inspection Services reception area. Consider how to reconfigure space to better facilitate plan review and short-term plan storage to better meet service demand.	Mid	Fire Department	Page 15
A9	Equip building with inter-station teleconference capability.	Mid	Fire Department	Page 15
A10	Construct accessory storage on-site.	Mid	Fire Department	Page 15

#	ACTION ITEMS	TIMEFRAME	RESPONSIBLE PARTY(IES)	REFERENCE
A11	Complete interior finish upgrades and replace carpet.	Mid	Fire Department	Page 15
A12	Heating and cooling management system is inadequate. Investigate possible improvements.	Mid	Fire Department	Page 15
A13	Assess building for solar installation to reduce electricity costs and increase resiliency. Determine if solar installation is feasible.	Long	Fire Department	Page 15
South End Fire Station				
A14	Complete building renovation projects that should include the following: • Construction of one additional bay with drive-thru capacity • Sprinkler system upgrades • Replacement of lighting with LED bulbs, • Rooftop cooling unit to increase energy efficiency	Mid	Fire Department	Page 16
A15	A structural analysis of the hose tower is needed to determine its end-of-life so that repair or replacement can be incorporated in future budget.	Mid	Fire Department	Page 16
A16	Assess building for solar installation to reduce electricity costs. Determine if solar installation is feasible.	Mid	Fire Department	Page 16
A17	Equip building with inter-station teleconference capability.	Mid	Fire Department	Page 16
A18	Provide new exterior shed for lawn equipment (or utilize existing unheated storage).	Mid	Fire Department	Page 16
A19	Develop plan to improve insulation of apparatus bay.	Mid	Fire Department	Page 16
A20	Consider adding lift to Mezzanine in new mechanic's bay.	Mid	Fire Department	Page 16
Central Fire Station				
A21	FY2023 architect assessment of building and 2024 renovation of building. Renovation should include: • Addition of 1 bay in FY2024 • Improve insulation of apparatus bay areas • Repointing of exterior brick • Energy conservation upgrades including window replacements and replacement of cooling system • Assess building for solar installation to reduce electricity costs and increase resiliency. Determine if solar installation is feasible. • Install LED lighting. • Equip building with interstation teleconference capabilities. • Ensure space needs for additional staff are considered during the renovation	Mid	Fire Department	Page 17

#	ACTION ITEMS	TIMEFRAME	RESPONSIBLE PARTY(IES)	REFERENCE
A22	Create a plan for addressing Information Technology System needs.	Mid	Fire Department	Page 17 - Central Fire Station Building Profile
B. Police Department				
B1	Continue CALEA accreditation to ensure that staff demonstrate policing best practices in the community.	Ongoing	Police	Page 19
B2	The increase in calls for service as well as an increase in right-to-know and other records requests are taxing police staff and increasing demands. Consider whether the addition of administrative staff is necessary.	Short	Police	Page 19
B3	Continue to maintain a sufficient inventory of equipment and high-quality training facilities and programs to provide efficient professional police services.	Ongoing	Police	Page 19
PUBLIC FACILITIES				
C. City Hall				
Office of Human Resources				
C1	An additional staff member is anticipated for this Department in the next 5-10 years. There is enough room for additional staff person in the current suite.	Long	Human Resources	Pages 27-28
Office of Business Development				
C2	Develop a long range staff succession plan. Identify staffing needs and develop roles and responsibilities for additional staffing as needed.	Short	Business Development	Pages 28-29
C3	Investigate software to allow in house design for the update and reprint of promotional materials. Replace each laptop every five years.	Short	Business Development	Pages 28-29
Office of Media Services				
C4	Investigate opportunities for a permanent studio space in the future.	Short	Media Services	Page 29
Office of Information Technology				
C5	Continue to educate, inform, and work cooperatively with departments to increase comfort level with new technologies.	Ongoing	Information Technology	Pages 29-30
C6	Continued rollout of municipally-owned telecommunications infrastructure to support municipal telecommunication needs.	Ongoing	Information Technology	Pages 29-30
C7	Evaluate the potential need for cloud-based services.	Short	Information Technology	Pages 29-30

#	ACTION ITEMS	TIMEFRAME	RESPONSIBLE PARTY(IES)	REFERENCE
C8	Cybersecurity needs are increasing and requiring larger budgets to take care of issues. Consider investing in proprietary controls, such as alarm systems with alerts to indicate when equipment fails or there are security concerns.	Mid	Information Technology	Pages 29-30
C9	Public safety services have noted a significant increase in need for technology including field-based laptops and tablets, and other tools incorporated within building systems and infrastructure. As a result, the IT office reports a significant increase in supported systems and services. Create a plan for adding additional IT staff such as a business analyst, an office manager, and Fire & Rescue Department IT technician.	Mid	Information Technology	Pages 29-30
C10	The Office of IT space is at capacity for existing staff and storage needs. This will need to be addressed in the future.	Mid	Information Technology	Pages 29-30
C11	Consider delegating select IT administration and management work to departments thereby empowering them to improve response time and offload work from core IT staff. There is also a desire for training and investment in City staff to avoid third party support contracts.	Mid	Information Technology	Pages 29-30
C12	Develop a better system for prioritization of tasks, projects and services.	Short	Information Technology	Pages 29-30
C13	Improve public accessibility, searchability of public records, and better integration of public bodies with municipal operations.	Short	Information Technology and Media Services	Pages 29-30
C14	Invest in the creation of lifecycle plans that include future costs and security needs for all infrastructure.	Mid	Information Technology	Pages 29-30
C15	Continue to improve internal asset management processes to get the right information to the people in the field.	Ongoing	Information Technology	Pages 29-30
Department of Finance and Purchasing				
C16	Continue to automate and digitize Finance Department processes.	Short	Finance	Page 30
C17	Maintain and keep data current on the Department website.	Ongoing	Finance	Page 30
C18	Continue to utilize online technology for acceptance of payments, billing, and data sharing.	Ongoing	Finance	Page 30
C19	Enhance the effectiveness of GIS to support tax assessment mapping needs while providing customers with better access and use of tax assessment data.	Mid	Finance and Information Technology	Page 30
C20	Fund the replacement and implementation of a new CAMA (Computer Assisted Mass Appraisal) system.	Mid	Finance and Information Technology	Page 30

#	ACTION ITEMS	TIMEFRAME	RESPONSIBLE PARTY(IES)	REFERENCE
C21	The Finance Department space is at capacity for storage needs. This will need to be addressed in the future for property assessment records and City Clerk official records.	Mid	Finance	Page 30
Department of Planning and Community Development (Page 31)				
C22	Continue to improve the permitting process to ensure its simplified, streamlined, and east-to-follow.	Ongoing	Planning Department	Page 31
C23	Implement an electronic permitting system to improve efficiency.	Short	Planning Department	Page 31
C24	Identify technology solutions to improve operations (i.e. such as data maintenance).	Ongoing	Planning Department	Page 31
C25	Purchase a second vehicle to be located at City Hall.	Mid	Planning Department	Page 31
C26	Better organize the Planning and Community Development webpage to allow for easier navigation of documents, studies, projects, and reports.	Short	Outreach Coordinator/ Media Services	Page 31
C27	Implement a program to scan, archive and catalog old files to ensure thousands of these files and planning cases are more secure, accessible, and organized.	Short	Planning Department	Page 31
C28	Prioritize defining sustainability and resilience metrics and design standards to guide all City building projects, including construction and renovation.	Ongoing	Resilience Coordinator	Page 31
City Hall Facility				
C29	Develop an operations and maintenance plan for the City Hall facility.	Short	Facilities and Grounds	Pages 32-33
C30	2022 CIP Project: Improve interior wayfinding signage and circulation.	Short	Facilities and Grounds	Pages 32-33
C31	2022 CIP Project: paint clock tower, paint exterior trim, installation of 1st and 2nd floor sprinkler systems, replacement of electrical service.	Short	Facilities and Grounds	Pages 32-33
C32	Install electronic keycard and CCTV systems.	Mid	Information Technology	Pages 32-33
C33	Replace lighting with LED fixtures on 1st floor and remaining part of 2nd floor.	Mid	Facilities and Grounds	Pages 32-33
C34	Replace tower lighting.	Short	Facilities and Grounds	Pages 32-33
C35	Address air filtration at windows and doors to improve energy efficiency.	Mid	Facilities and Grounds	Pages 32-33
C36	Evacuation system needs upgrade to audible	Short	Brand Awareness/ Management Committee	Pages 32-33
C37	Review roof for possible green roof and/or solar panel installation.	Long	Resilience Coordinator	Pages 32-33
C38	Add additional landscaping/shade feature to back side parking area.	Short	Facilities and Grounds	Pages 32-33
C39	Paint interior corridors (has not been done in 23 years).	Short	Facilities and Grounds	Pages 32-33
C40	Replace remaining drinking fountains with hands free water fountains and bottle refill stations.	Mid	Facilities and Grounds	Pages 32-33

#	ACTION ITEMS	TIMEFRAME	RESPONSIBLE PARTY(IES)	REFERENCE
C41	Improve interior storage and organization of files and documents. Explore high-density storage and digitizing existing/future files.	Short	Facilities and Grounds	Pages 32-33
C42	The ceiling tiles in the Purchasing Suite on the second floor are damaged – replace ACT tile.	Short	Facilities and Grounds and Finance	Pages 32-33
C43	Improve Main entrance on Central Avenue by removing the existing utility pole, making it more of a prominent entrance, and making necessary upgrades to stairs, brick, and granite plaza. The interior terrazzo stairs also need attention.	Short	Community Services	Pages 32-33
C44	Heating and cooling deficiency - there is some improvement in zone balancing that could occur.	Short	Facilities and Grounds	Pages 32-33
C45	The former sallyport door needs to be replaced.	Mid	Facilities and Grounds	Pages 32-33
C46	Second floor offices experience leaks; this may be a copper flashing or repointing issue.	Short	Facilities and Grounds	Pages 32-33
D. Library				
D1	Develop an operations and maintenance plan for the Public Library facility.	Short	Facilities and Grounds	Page 35
D2	Expand all-ages programming for underserved populations to ensure diversity of broad programming. Consider programming needs of developmentally disabled groups, senior citizens, teens, children, and families.	Ongoing	Library	Pages 35
D3	Offer new services, spaces, and programming. Continue to grow the Children's Room Makerspace. Design and open a Family Place Library. Devise a flexible, adaptable area for classroom teaching. Create a "Quiet Zone" and group study spaces.	Short	Library	Pages 35
D4	Repurpose existing spaces to accommodate new technologies and services: Create flexible, comfortable, multipurpose study/teaching/ learning spaces with A/C and determine new PC distribution patterns. Update and expand the Library's building-wide paging system. Move Friends' merchandise to the addition, freeing up prime space at main desk.	Long	Library	Pages 35
D5	Connect with local groups & organizations in the wider community. Grow relationships with other city agencies and organizations, to share resources, promote mutually beneficial services, and aid their mission and ours.	Ongoing	Library	Pages 35
D6	Increase capacity of shared municipal parking lot and improve navigability: Reach consensus on "parking lot issues" from all agencies currently involved. Seek to fund and hire an engineer to develop a plan for an expanded lot, possibly with a second exit. Investigate the cost of adding a single-level parking deck atop the existing lot.	Long	Library and Community Services	Pages 35

#	ACTION ITEMS	TIMEFRAME	RESPONSIBLE PARTY(IES)	REFERENCE
D7	Add to custodial staff and install more security measures. Hire a marketing/public relations/ graphic design professional. Increase the staff development budget for attendance at webinars, conferences, etc.	Mid	Library	Pages 35
D8	Expand makerspace and digital services section.	Short	Library	Pages 36-37
D9	Reconfigure interior spaces for enhanced community engagement.	Short	Library	Pages 36-37
D10	Convert mezzanine to be entirely for Teen Loft area.	Mid	Library	Pages 36-37
D11	Design new signage and wayfinding markers.	Short	Media Services	Pages 36-37
D12	Repair and repaint ceilings and walls, where needed.	Short	Library	Pages 36-37
D13	Add electrical outlets and a charging station.	Mid	Library	Pages 36-37
D14	Refinish/re-stain original interior woodwork.	Mid	Library	Pages 36-37
D15	Replace outdated Adult Circulation Desk with a new service-oriented counter.	Short	Library	Pages 36-37
D16	Change out "tired" locks and doors and replace with card swipes.	Short	Library	Pages 36-37
D17	Renovate restrooms.	Mid	Library	Pages 36-37
D18	Replace furniture.	Mid	Library	Pages 36-37
D19	Replace slate roof.	Short	Library	Pages 36-37
D20	Replace exterior wood trim.	Mid	Library	Pages 36-37
D21	Add lighting to front yard.	Short	Library	Pages 36-37
D22	Consider adding electric vehicle charging space and infrastructure.	Short	Library	Pages 36-37
E. McConnell Center				
E1	The Recreation Department looks to improve coordination with other facilities within the McConnell Center in the future.	Ongoing	Recreation Department	Page 40
E2	Explore the feasibility of implementing desired programming improvements noted during the outreach phase of this project for the McConnell Center include additional workout class options such as dancing, yoga, and Tai Chi, longer hours on weekends and at night; and more open gym time for indoor pickleball and basketball.	Short	Recreation Department	Page 40
E3	Explore the feasibility of implementing desired programming improvements noted during the outreach phase of this project for the Community Senior Center include longer hours, less expensive activities, evening workout classes, wider arrange of senior day trips, and mobility scooter rentals that could be used for the day.	Short	Recreation Department	Page 40

#	ACTION ITEMS	TIMEFRAME	RESPONSIBLE PARTY(IES)	REFERENCE
McConnell Center Facility				
E4	Parking capacity is an issue at times. Parking lot also needs repaving in the next 5 years as the previous overlay has begun to deteriorate. Repave parking lot by 2026.	Mid	Recreation Department	Page 41
E5	The heat pumps and circulation systems will need to be rebuilt or replaced before 2026.	Mid	Recreation Department	Page 41
E6	Address heating issues. Heat pumps create a maintenance issue when they malfunction as they're distributed throughout the building – no central control; they fight with the perimeter heat and both can run at the same time. Heating/cooling in the gym not optimal; gets too hot with baseboard and requires additional cooling.	Short	Recreation Department and Community Services	Page 41
E7	Add air conditioning to the McConnell Center gymnasium. It's currently the only space in the building without air conditioning and it gets extremely hot.	Mid	Recreation Department and Community Services	Page 41
E8	The rubber roof and boilers needs to be replaced before 2026.	Short	Recreation Department	Page 41
E9	Flooring changes, replacement of carpets, and upgrades to entrance tiles are needed.	Mid	Recreation Department and Community Services	Page 41
E10	Improve interior signage system for wayfinding. Many tenants presented the challenges to direct people to the easiest access doors and find their way in the hallways in the various wings and floors.	Short	Media Services	Page 41
E11	Exterior masonry storage room not sufficient. Need additional storage space.	Mid	Recreation Department	Page 41
E12	A camera system is in place and could expand that if funds were available to help with security.	Short	Information Technology	Page 41
OTHER PUBLIC FACILITIES AND MUNICIPAL OWNED BUILDINGS				
F. Indoor Pool				
F1	Resurface pool deck.	Mid	Recreation Department	Page 43
F2	Replace pool filtration (last replaced 20-25 years ago).	Mid	Recreation Department	Page 43
F3	Repave existing parking area. More parking is needed but there are limitations due to the Henry Law Trust.	Mid	Recreation Department	Page 43
F4	Siding may need repointing in spots in future years.	Short	Recreation Department	Page 43
F5	Installation of a camera system for surveillance around the building to decrease vandalism.	Short	Information Technology	Page 43

#	ACTION ITEMS	TIMEFRAME	RESPONSIBLE PARTY(IES)	REFERENCE
F6	The locker rooms should be reviewed for improvements for privacy concerns.	Short	Recreation Department	Page 43
F7	The locker room and lobby areas need to be improved.	Mid	Recreation Department	Page 43
F8	Renovate lobby bathrooms.	Mid	Recreation Department	Page 43
F9	HVAC distribution system to the locker rooms and lobby needs replacement.	Mid	Recreation Department	Page 43
F10	Replacement of dehumidifier for the pool area.	Short	Recreation Department	Page 43
F11	Removal of one exterior garage door for Solarium added to envelope to increase outside lighting and ventilation to the pool area. This project will also include the renovation of the family locker room area and the addition of two exterior entrance restrooms for use by the general public.	Mid	Recreation Department	Page 43
G. Jenny Thompson Outdoor Pool				
G1	Replace accessory storage structure.	Short	Recreation Department	Page 44
G2	There is a need for an attached public restroom outside of locker rooms.	Long	Recreation Department	Page 44
G3	Continued upgrades to the locker rooms.	Mid	Recreation Department	Page 44
G4	Replacement of pumps and motors will help with some energy efficiencies.	Mid	Recreation Department	Page 44
G5	Interior bathroom partition replacements.	Short	Recreation Department	Page 44
H. Transportation Center				
H1	Cement board will need to be replaced within 10 years.	Long	Community Services	Page 45
H2	The building should be considered for full paint within the next 3-5 years.	Mid	Community Services	Page 45
H3	Full repaving of the parking lot is needed within 10 years.	Long	Community Services	Page 45
H4	Extend vestibule out to increase outdoor waiting area.	Long	Planning Department	Page 45
H5	Install additional security cameras.	Short	Information Technology	Page 45
H6	Investigate the feasibility of installing solar panels on the roof.	Short	Planning Department	Page 45
H7	Create additional storage space by erecting an exterior storage shed for tenant.	Mid	Tenant	Page 45
H8	Invest in replacement ductless mini split system to provide cooling for the space.	Short	Community Services	Page 45
H9	Replace all exterior light fixtures with LED.	Short	Community Services	Page 45
H10	Repair the columns at the train platform and passenger waiting area.	Short	Community Services	Page 45
H11	Improve landscaping around Transportation Center.	Short	Community Services	Page 45
H12	Screen dumpster.	Short	Community Services	Page 45

#	ACTION ITEMS	TIMEFRAME	RESPONSIBLE PARTY(IES)	REFERENCE
H13	Add roll down gate for public bathrooms to be used after hours.	Short	Community Services	Page 45
I. Bellamy Park Administrative Building				
I1	Coordinate a video camera system that works with the building alarm system.	Short	Information Technology	Page 46
I2	Eventual upgrade of the oil fired boiler to a more efficient unit.	Mid	Community Services	Page 46
J. Veteran's Building				
J1	Pave parking area.	Mid	Community Services	Page 48
J2	Replace VCT flooring in half of building.	Mid	Community Services	Page 48
J3	Renovate existing restrooms.	Mid	Community Services	Page 48
J4	Repair/replace windows on original portion of building.	Mid	Community Services	Page 48
J5	Consider future use and value of building for community use.	Short	Community Services	Page 48
K. Ice Arena				
K1	Identify improvements to lobby/entryway. Expand lobby area to allow for larger crowds that attend events. If possible, expand the gathering areas for spectators outside of the rinks it reduce congestion.	Long	Community Services and Recreation Department	Page 49
K2	Evaluate all rooftop HVAC units for replacement and create a timeline to do that.	Short	Community Services and Recreation Department	Page 49
K3	Add garage for truck/equipment and move storage out of building.	Long	Recreation Department	Page 49
K4	Add separate locker room for officials.	Long	Recreation Department	Page 49
K5	Install snow rails at shed roof at rear of building to protect rooftop equipment.	Mid	Recreation Department	Page 49
K6	Identify an improved use of unused 2nd floor 'Foster' space (offices, storage, etc.)	Mid	Recreation Department	Page 49
K7	Provide new flooring for the camp/birthday area.	Short	Recreation Department	Page 49
K8	Identify overflow parking solution.	Mid	Recreation Department	Page 49
K9	Add solar panels to save on electrical operating costs.	Mid	Recreation Department and Planning Department	Page 49
K10	Create access road to the parking lot from the Softball field (to serve as an overflow parking area).	Mid	Recreation Department and Planning Department	Page 49
K11	The refrigeration system has been upgraded to be efficient. Needs to be maintained well and integrated with the controls and alarm systems so it can be remotely monitored and controlled.	Short	Recreation Department	Page 49

#	ACTION ITEMS	TIMEFRAME	RESPONSIBLE PARTY(IES)	REFERENCE
K12	Designate additional office and storage space in the core of the building.	Long	Recreation Department	Page 49
L. COMMUNITY SERVICES				
L1	Develop Asset Management Plans for the remaining buildings and facilities that do not currently have one.	Short	Community Services	Page 9
Public Works Facility				
L2	Add additional toilet in shower location in Men's Room.	Mid	Community Services	Page 53
L3	Replace Reznor heater in brine tank room.	Mid	Community Services	Page 53
L4	Ventilation/HVAC upgrades. Replace heating system and improve heating in fleet maintenance area of building.	Mid	Community Services	Page 53
L5	Replace garage doors at either end of main bay area.	Short	Community Services	Page 53
L6	Explore space solutions for additional interior storage.	Short	Community Services	Page 53
L7	Address snow load issues on roof. Consider replacing flat roof with a peaked roof.	Short	Community Services	Page 53
L8	Install Electric Vehicle charging station(s).	Short	Community Services	Page 53
M. Facilities, Grounds, and Cemeteries				
Buildings and Roads				
M1	Upgrade vehicles and equipment as needed. Develop a replacement prioritization list for equipment and vehicles.	Ongoing	Community Services	Page 56
M2	Restore power safely to the outlets used to decorate the downtown area during festivals and the holiday season.	Mid	Community Services	Page 56
M3	Monitor Energy Management System for public facilities to improve efficiency and achieve cost savings.	Short	Community Services	Page 56
M4	Continue to assist in the revamping of the signage for the downtown and municipal parking areas.	Short	Community Services and Planning Department	Page 56
M5	Maintain LED fixtures on streetlights and décor lighting throughout the City.	Short	Community Services	Page 56
M6	Replace black décor lights poles between the railroad tracks and Central Ave bridge and other nearby locations nearby. They're currently rusting at the base.	Short	Community Services	Page 56
Parks and Grounds				
M7	Continue working on activating the Shaw's Lane well for athletic field irrigation.	Short	Community Services	Page 56-57

#	ACTION ITEMS	TIMEFRAME	RESPONSIBLE PARTY(IES)	REFERENCE
M8	Continue City wide tree maintenance program and tree replacement in the urban core.	Short	Community Services	Page 56-57
M9	Continue monitoring curb line weed control program while exploring efficient and fiscally responsible organic alternatives.	Mid	Community Services	Page 56-57
M10	Continue turf treatment program to improve quality of playing fields and public turf areas, implementing effective and fiscally responsible alternatives to synthetic treatments.	Mid	Community Services	Page 56-57
Cemeteries				
M11	Record and computerize burial information.	Short	Community Services	Page 57
M12	Perform cement foundation work for memorialization.	Mid	Community Services	Page 57
M13	Restore and reset fallen/damaged headstones.	Short	Community Services	Page 57
M14	Implement layout for new burial area.	Short	Community Services	Page 57
M15	Develop marketing plan to increase lot sales.	Mid	Community Services	Page 57
M17	Proceed with GPS mapping of cemetery sections.	Short	Community Services	Page 57
M18	Install related landscaping for Columbarium.	Short	Community Services	Page 57
M19	Implement turf treatments in areas requiring attention.	Mid	Community Services	Page 57
M20	Modification of Tomb to provide organized storage.	Mid	Community Services	Page 57
M21	Continue to install trees to replace old trees and those decimated by storms.	Ongoing	Community Services	Page 57
Austin Tuttle Cemetery				
M22	Eradicate Japanese Knotweed and restore area by seeding with drought tolerant seed mix.	Ongoing	Community Services	Page 57
M23	Prune existing trees and shrubs as necessary to enhance public visibility of cemetery to visitors and to deter vandalism. Retain buffer along adjacent residences.	Ongoing	Community Services	Page 57
M24	Repair and or replace existing pipe rail fence delineating cemetery limits and or install granite monuments to establish cemetery limits.	Short	Community Services	Page 57
M25	Provide signage documenting historic significance.	Mid	Community Services and Heritage Commission	Page 57
M26	Repair toppled monuments and record conditions of headstones.	Mid	Community Services	Page 57
Pinkham Cemetery				
M27	Remove existing vegetation engulfing headstones on the eastern (rear) portion of the cemetery to expose headstones. Restore the ground area allowing herbaceous vegetation and leaf litter to remain.	Short	Community Services	Page 57

#	ACTION ITEMS	TIMEFRAME	RESPONSIBLE PARTY(IES)	REFERENCE
M28	Prune existing trees and shrubs as necessary to enhance public visibility of cemetery to visitors and to deter vandalism.	Short	Community Services	Page 57
M29	Remove broken granite post and replace with new granite post or appropriate fencing to define limits of the cemetery.	Mid	Community Services	Page 57
M30	Record condition of existing headstones.	Mid	Community Services	Page 57
M31	Provide signage documenting historic significance.	Mid	Community Services	Page 57
M32	Grind existing stumps where practicable.	Mid	Community Services	Page 57
Roberts Cemetery (First Settlers)				
M33	Record condition of existing headstones.	Mid	Community Services	Page 57
M34	Grind existing stumps where practicable.	Mid	Community Services	Page 57
M35	Provide signage documenting historic significance.	Mid	Community Services	Page 57
M36	Evaluate existing soil to evaluate existing nutrient deficiencies and pH levels. Aerate compacted areas, provide fertilizer, lime as required and seed with a drought tolerant low maintenance grass seed mix.	Mid	Community Services	Page 57
Pine Hill Cemetery and Ricker Memorial Chapel				
M37	Plans have been generated to rehabilitate and return the Ricker Memorial Chapel to its original use for funeral and ceremonial services. There are also plans to renovate the 1888 receiving tomb so it can be used as a cremation mausoleum. Implement the facilities building portion of the master plan prepared for Pine Hill Cemetery by Mitchell & Associates.	Mid	Community Services	Page 57
M38	Prepare for the start of restoration of the Chapel.	Mid	Community Services	Page 57
M39	Repair Main Avenue from Central Avenue to the Tomb, reconstructing sidewalk, curbing, road repair and repaving.	Mid	Community Services	Page 57
M40	Upgrade heating and cooling systems.	Mid	Community Services	Page 57
M41	Replace drainage and sanitary lines.	Mid	Community Services	Page 57
M42	Complete drainage improvements around building.	Mid	Community Services	Page 57
M43	Add exterior and interior emergency battery lighting and exit signs to the facility to meet NFPA 101 Life Safety Code.	Short	Community Services	Page 57
M44	Upgrade lighting to LED fixtures.	Short	Community Services	Page 57
M45	Replace all electrical wiring in the building.	Long	Community Services	Page 57
M46	Make accessibility improvements throughout the building.	Long	Community Services	Page 57
M47	Add fire alarm system to building.	Long	Community Services	Page 57

#	ACTION ITEMS	TIMEFRAME	RESPONSIBLE PARTY(IES)	REFERENCE
M48	Mill and fill deteriorated pavement sections as needed.	Mid	Community Services	Page 57
M49	Upgrade existing unpaved secondary travel lanes, regrade and supplement with increased gravel base and or bituminous reclaim to address erosion and rutting.	Long	Community Services	Page 57
M50	Develop unified signage plan for wayfinding, informational, historic and regulatory signs including implementation.	Long	Community Services	Page 57
N. Solid Waste and Recycling				
N1	Consider hiring additional staff to expand waste management services and/or hours. If the City wishes to expand its waste management services and/or hours, additional staff will need to be hired.	Mid	Community Services	Page 62
N2	Once the City's curbside waste service contract expires, evaluate the feasibility of managing curbside services in house. Additional staff and equipment would be required to shift to this.	Short	Community Services	Page 63
N3	Consider mechanisms to reduce the amount of contaminated materials that end up in the recycling stream.	Short	Community Services	Page 63
N4	Consider creating a reuse area or "swap shop".	Short	Community Services	Page 63
N5	Replace the Waste Management Division's roll off truck, which is one of the most important pieces of equipment this Division uses.	Short	Community Services	Page 63
N6	Replace the Bag and Tag bags with higher quality totes.	Mid	Community Services	Page 63
N7	Host additional household hazardous waste collection days.	Ongoing	Community Services	Page 63
N8	Identify and designate a long-term leaf disposal site. The Solid Waste and Recycling Division is in need of a long-term disposal site for leaves and grass, as part of expanded leaf collection programs as a way to manage the City's stormwater.	Short	Community Services	Page 63
N9	Consider ways to expand composting services to Dover residents.	Short	Community Services	Page 63
O. Fleet Services				
O1	If the City continues to expand its vehicle fleet, there will be an increased need for a full-time inventory clerk (or two part-time clerks).	Mid	Community Services	Page 65
O2	Consider an additional bay if fleet grows. Over time, increasing the number of vehicles in the City's fleet will trigger the need for an additional vehicle bay.	Long	Community Services	Page 65
O3	Replace vehicles on a 10-year rotation.	Ongoing	Community Services	Page 65
O4	Expand Dover's electric vehicle fleet and invest in necessary infrastructure to perform maintenance on electric vehicles.	Mid	Community Services	Page 66

#	ACTION ITEMS	TIMEFRAME	RESPONSIBLE PARTY(IES)	REFERENCE
O5	Evaluate which vehicle maintenance services are more cost effective to perform in house versus outsourcing to an external vendor.	Mid	Community Services	Page 66
O6	Eliminate the paint booth from the facility due to it being more affordable to outsource these duties. Convert this space to house a medium-duty vehicle lift containing an alignment machine and an a/c recharge area.	Mid	Community Services	Page 66
O7	Update tire mounting and balancing equipment to better handle todays newer tire sizes. These services are most cost effective to perform in-house.	Short	Community Services	Page 66
O8	Due to City procurement and purchasing policies, Fleet Services is actively working to tighten up inventory control to ensure parts and equipment are used and stored to their optimal ability. Fleet Services does have a need for expanding its inventory space and inventory control, as it is currently limited.	Short	Community Services	Page 66
O9	Improve maintenance tracking. Fleet Services would like to continue to improve their optimization of CFA software program to improve maintenance tracking and inventory.	Short	Community Services	Page 66
O10	Purchase a second heavy lift. To continue to support winter plowing, a second heavy lift is needed.	Mid	Community Services	Page 66
O11	Monitor emission regulations and make necessary maintenance improvements to comply. This includes taking high emission vehicles out during the summer on short trips to maintain them in order to meet emission requirements. There may be a time when Fleet Services has to include these emissions standards in their operations policy.	Ongoing	Community Services	Page 66
PUBLIC UTILITIES				
P. Water System				
P1	Based upon the results of the life-cycle costing program, prioritize and schedule the repair, maintenance, and, when necessary, the construction of water facilities. Ensure these are integrated into capital improvement planning.	Mid	Community Services	Page 73
P2	Phase 3 of the water facility improvement project is currently underway and should continue to be integrated into capital improvement planning.	Short	Community Services	Page 73
P3	Continue reconstruction and renovations of the wellhead buildings. Space is very limited, chemical storage is inadequate in some, and electrical services are out of code in some.	Long	Community Services	Page 74

#	ACTION ITEMS	TIMEFRAME	RESPONSIBLE PARTY(IES)	REFERENCE
P4	Tie in Hughes Well to the French Cross Water Treatment Plant. Upgrade French Cross Treatment Center as Hughes Well is tied in to better meet the Environmental Protection Agency's iron and manganese regulations.	Mid	Community Services	Page 74
P5	Complete media upgrades for filtration at French Cross Water Treatment Plant.	Short	Community Services	Page 74
P6	Complete 401 permit process for the Isinglass recharge to prepare for rebuilding the intake and the facility out of the floodplain.	Mid	Community Services	Page 74
P7	In 2022, the EPA is requiring cities to remove all lead service parts in the water system. Identify old galvanized lines and invest in replacement of these lines to meet new EPA lead and copper standards.	Short	Community Services	Page 74
P8	Schedule and plan for the replacement of the water main pipes identified on page 74.	Short	Community Services	Page 74
P9	Complete water main extension project on Piscataqua Road from Back River to City line.	Mid	Community Services	Page 74
P10	Install LED lighting fixtures at any remaining well pump stations that don't have LED lighting.	Short	Community Services	Page 74
P11	Continue to invest in the City's water meter systems. Currently, the utility has 3 types of meter transponders in the system, which should continuously be evaluated.	Ongoing	Community Services	Page 74
P12	Rehabilitate the interior and exterior of the Garrison Hill Tank.	Short	Community Services	Page 74
P13	Security cameras have been added to all the well stations as rehabs occur. The City should plan to connect these cameras to the municipal communications infrastructure so that the Police Department can view footage.	Short	Community Services	Page 74
P14	Create a plan for the Old Water Works Building. While it's currently being used for storage by the Water Division, its long-term use is unknown. Short-term weather-tightness and safety improvements are needed, and a long-term plan for the rehabilitation is required to make the building more usable.	Mid	Community Services	Page 74
P15	Secure funding to continue improving its cybersecurity defense.	Ongoing	Community Services and Information Technology	Page 74
P16	Continue updating and ensuring the accuracy of Dover's water system maps in the city's Vueworks GIS System. This allows all maps to be accessed digitally which will ensure efficient, cost-effective project planning.	Ongoing	Community Services	Page 74

#	ACTION ITEMS	TIMEFRAME	RESPONSIBLE PARTY(IES)	REFERENCE
P17	Continue the ground water exploration program to identify potential future water sources.	Ongoing	Community Services	Page 74
P18	The City's Community Services Department should ensure their operations are in aligned with being good stewards of its water supply. Prioritize protection of the aquifer by regularly updating and evaluating their policies and operations to ensure hazardous materials are stored properly and vehicles are not leaking fluids when parked outside. The City should utilize checklists and regular inspections to prevent contamination and ensure standards are being met.	Ongoing	Community Services	Page 74
Q. Sewer System				
Q1	Continue Wastewater Treatment Facility Upgrades.	Ongoing	Community Services	Page 82
Q2	Continue to work towards compliance with the Great Bay Permit and participate in the Municipal Alliance for Adaptive Management to reduce nitrogen loading into the Great Bay.	Ongoing	Community Services	Page 82
Q3	Continue to invest in the Inflow and Infiltration program and with activities such as flow monitoring, grouting, sealing, roof gutter removal.	Ongoing	Community Services	Page 82
#	ACTION ITEMS	TIMEFRAME	RESPONSIBLE PARTY(IES)	REFERENCE
Q4	Consider providing a cost share program to remove sump pumps (which can glean significant cost savings).	Mid	Community Services	Page 82
Q5	Complete pipeline and sewer assessments for the areas of Dover identified in this plan.	Mid	Community Services	Page 82
Q6	Complete sewer line replacements for the areas of Dover identified in this plan.	Ongoing	Community Services	Page 82
Q7	Complete the highest priority pump station upgrades: • River Street Pump Station, which is currently under contract for rehab in 2022. • Mill Street Pump Station • Wentworth Terrace Pump Station • Charles Street Pump Station • Children's museum Pump Station • County Farm Pump Station	Short	Community Services	Page 83

#	ACTION ITEMS	TIMEFRAME	RESPONSIBLE PARTY(IES)	REFERENCE
Q8	New pump stations should be added at the intersection of Back River and Mast Road and Leathers Lane. There is currently a sewer main on Leathers Road and on the hill of Back River Road. Adding a pump station would remove 20 homes from leach fields that are over 20 years old.	Mid	Community Services	Page 83
Q9	Purchase an excavator with brush cutter attachment, to clear easements (many of these areas are where main lines are running through).	Short	Community Services	Page 83
Q10	Purchase a sewer main easement cleaner.	Mid	Community Services	Page 83
Q11	Replace stream crossing from Knox Marsh Road to Crosby Road - small crossing under the railroad tracks under the Bellamy River.	Long	Community Services	Page 83
R. Stormwater Infrastructure				
R1	Complete GIS mapping to identify all pipes in Dover's drainage area.	Mid	Community Services	Page 88
R2	Continue investing in upgrading the stormwater infrastructure system.	Ongoing	Community Services	Page 88
R3	Over time, prioritize and fund the replacement and upgrade of aging stormwater infrastructure assets noted in this Plan.	Long	Community Services	Page 88-89
R4	Continue investing in green infrastructure systems and best management practices to manage stormwater at the source and reduce negative impacts on the City's receiving waters.	Ongoing	Community Services	Page 88
R5	Implement the stormwater utility.	Short	Community Services	Page 88
R6	Improve tracking of long term operation and maintenance of green infrastructure installed on private property as part of site plan approval process. Potentially implement fines or other consequences for lack of proper maintenance.	Short	Community Services	Page 88
R7	As part of the city's accepting the Great Bay Total Nitrogen General Permit, continue reducing non-point source loading in a meaningful way. Continue to proactively take advantage of nitrogen reducing opportunities as they become available.	Ongoing	Community Services	Page 88
S. Private Utilities				
S1	Establish a notification process early on to all private utilities so they can plan accordingly and track potential infrastructure projects.	Mid	Community Services	N/A
S2	Over the coming years, efforts should be made to move more of the overhead infrastructure underground as opportunities present themselves.	Ongoing	Community Services	Page 94
S3	Expand solar energy production on public properties in Dover.	Short	Community Services	Page 93
S4	Consider the creation of a Dover Community Power Program.		Community Services and Planning Department	N/A
S5	Remove obsolete utility poles.	Ongoing	Community Services	Page 94

APPENDIX: CITY-OWNED PROPERTIES

CITY-OWNED PROPERTIES				
Parcel ID #	**Street #**	**Street Name**	**Acres**	**Specific Use/Location**
02001-000000	288	CENTRAL AV	1.29	City Hall
02013-000000	320	CENTRAL AV	0.12	Front portion of Belknap Parking Lot
02015-000000	18	LOCUST ST	0.05	Rear portion of Belknap Parking Lot
02083-000000	46	CHESTNUT ST	1.26	Police Station and Parking Garage
02083-001000		ORCHARD ST	1.85	Orchard St Parking Lot
03023-001000		MAIN ST	0.06	Immigrants Park
03025-000000	8	SCHOOL ST	0.16	School St Parking Lot (CDBG Purchase & DTC Lease)
03026-000000		SCHOOL ST	0.22	School St Parking Lot (CDBG Purchase & DTC Lease)
03027-000000	2	MECHANIC ST	0.22	School St Parking Lot (CDBG Purchase & DTC Lease)
03055-000000	13	BROADWAY	0.12	Central Fire Station Parking Lot
03056-000000	9	BROADWAY	0.12	Central Fire Station
06054-A00000		THIRD ST	0.35	Third St Parking Lot (remaining portion)
06054-C00000		CHESTNUT ST	0.415	Chestnut St Parking Lot
08019-000EMT	12	LEIGHTON RD	0	Easement for Sewer Pump Station
08037-000000	10	WENTWORTH TR	0.234	Wentworth Terrace Pump Station
09057-000000	61	LOCUST ST	3.4	McConnell Center
09059-000000	22	ATKINSON ST	0.091	McConnell Center day care related play area
10034-000000		ALONG B & M RR	1.61	Landlocked, abuts RR with Cocheco River frontage across from Trans Center Lot
10040-000000		WASHINGTON ST	1.46	Community trail - Trestle Bridge to Washington St
12126-000000		FISHER ST	2.6	Community trail urban portion - Silver to Fisher
12126-A00000		SILVER ST	0.45	Community trail urban portion - Silver St Tunnel
13004-000000		WOODMAN PARK DR	13.29	Woodman Park School and park/ballfield
13004-A00000	11	TOWLE AV	4.15	Woodman Park School
16030-A00000	60	MILL ST	0.02	Mill St Sewer Pump Station
17081-000000		SOUTH WATSON LN	0.14	ROW to 3 landlocked houses off South Watson Ln

18001-000000		EAST WATSON ST	42	Pine Hill Cemetery "New Section"
19052-001000	131	CENTRAL AV	33	Pine Hill Cemetery "Old Section"
21026-054000		BACK RD	2.37	Woodland/Drainage Area for Mt Pleasant Development
21026-055000	18	BACK RD	0.01	Back Rd Sewer Pump Station
22001-000000	31	RIVER ST	0.37	River St Pump Station
22001-001000		RIVER ST	4.3	Waterfront Park incl. Dock/ Butler Building
22001-002000		RIVER ST	4.07	Waterfront - Phase I
22001-003000		RIVER ST	5.32	Waterfront - Bluffs
22001-004000		RIVER ST	8.16	Waterfront - Phase II
22042-000000		TOWNE DR	28.4	Maglaras Park/ballfield
23015-000000	6	WASHINGTON ST	6.5	Indoor Pool and Children's Museum
24024-A00EMT		FOREST ST	0	Utility Easement over 24-61 (1 Forest Street)
24057-000000		PORTLAND AV	0.293	Waldron Cemetery
24078-000000		HANCOCK ST	0.73	Hancock Park
24095-000000		PORTLAND AV	0.84	Arena Park & Ride Parking Lot (State DOT)
24105-A00000	20	COCHECO ST	0.159	Cocheco St Sewer Pump Station
25022-000000		FAIRVIEW AV	0.187	Amanda Howard Park
25023-000000		FAIRVIEW AV	0.19	Amanda Howard Park
25034-000000		ELMWOOD AV	0.12	Amanda Howard Park
26001-000000	140	PORTLAND AV	0.34	Guppy Park ballfield
26002-000000	100	PORTLAND AV	39	Guppey Park Pavilion, Arena and Jenny Thompson Pool
27112-000000	45	PARK ST	1.07	Park St Park
28032-000000	10	ABBEY SAWYER MEMORIAL DR	11	Garrison Hill Park
28034-A00000		FLORAL AV	0.08	Unbuildable lot opposite High Ridge Dr
31003-A00000		FOURTH ST	2.04	Along Cocheco River Fourth to Transportation lot - Sewer trunk line
31004-B00LSE	33	CHESTNUT ST	0.3	Transportation Center (School St lot lease agreement)
32039-B00000		FOURTH ST	4.3	Along Cocheco River behind Cederbrook Dr properties

33059-A00000		AVON AV	0.09	Unbuildable lot adjacent to unnamed cemetery off Washington St near Avon Ave
33109-000000		ARCOLA ST	0.28	Buildable lot at end of Arcola St
33110-000000		ARCOLA ST	0.09	Unbuildable lot beyond end of Arcola St ROW
33111-000000		ARCOLA ST	0.05	Unbuildable lot beyond end of Arcola St ROW
33112-000000		ARCOLA ST	0.17	Unbuildable lot beyond end of Arcola St ROW
34020-B00000		WHITTIER ST	14	Cassily conservation land (LCHIP purchase)
34021-000000		AUTUMN ST	8.4	Cassily conservation land (LCHIP purchase)
34022-000000		HILLSIDE DR	8.08	Parking area adjacent to Cassily Land and Beckwith Field
36030-000000	78	HORNE ST	13.6	Horne Street School and Park
37018-000000		HALL ST	0.09	Unnamed Cemetery off Hall St
37035-A00000		PAGE AV	1	Woodland adjacent to Lowell Ave Water Treatment Plant - Berry Brook headwaters
37040-000000	11	LOWELL AV	6.3	Lowell Ave Water Treatment Plant
37053-000000		PAGE AV	0.08	Woodland adjacent to Lowell Ave Water Treatment Plant - Berry Brook headwaters
39015-000000		WILLAND POND RD	1.18	Willand Pond Park (Willand Pond Rd entrance)
39020-000000		NEWTON ST	0.12	Unbuildable lot end of Newton St - snow storage
40010-000000		LAKEVIEW DR	0.182	Along Willand Pond - Future recreation access
40010-A00000		LAKEVIEW DR	0.544	Along Willand Pond - Future recreation access
40013-000000		EARLE ST	0.17	Unbuildable lot with access to Willand Pond Park land
40017-000000	24	HOOPER DR	8.28	Willand Pond Park and well house (Rt 108 entrance)
40043-A00000	56	NEW ROCHESTER RD	0.06	New Rochester Rd Sewer Pump Station

A0023-002000		BLACKWATER RD	11.6	Future Cotton well site along Blackwater Rd
A0029-A00001		SPAULDING TRNPK	42.26	Future Cotton well site adjacent to Spaulding Tpke
A0043-D00000	308	LONG HILL RD	4.5	Northend water tower
B0004-000000		COTTONWOOD DR	0.33	Alden Woods Playground
C0005-000000		COUNTY FARM RD	0.46	Along Cocheco River at pedestrian/pipe bridge (former covered bridge)
C0007-000000		ROCHESTER NECK RD	21	Hoppers - aquifer recharge basin from Isinglass River pumphouse
C0008-000000	110	GLEN HILL RD	9	Calderwood Well pumphouse
C0012-000000	140	GLEN HILL RD	12	Campbell Well pumphouse
C0015-000000		TOLEND RD	1	Woodland near Tolend Landfill along Green Hill Rd
C0016-000000		TOLEND RD	11	Woodland adjacent to Tolend Landfill along Green Hill Rd
C0017-000000		TOLEND RD	3.4	Woodland adjacent to Tolend Landfill along Green Hill Rd
C0018-000000	610	TOLEND RD	42	Tolend Landfill - Superfund site
C0019-000000		TOLEND RD	8	Woodland opposite Green Hill Rd
C0020-000000		GLEN HILL RD	38	Buildable land - former Minachello property/ building location. May have well head restrictions.
C0021-000000		TOLEND RD	23	Open Space Land along Cocheco River
C0022-000000		GLEN HILL RD	5	Woodland w/ frontage on Tolend Rd and Glen Hill Rd
C0024-000000		TOLEND RD	21	Woodland adjacent to Tolend Landfill
C0025-000000		TOLEND RD	4	Woodland adjacent to Tolend Landfill
C0027-000000		TOLEND RD	34	Woodland adjacent to Tolend Landfill
C0028-A00000		TOLEND RD	3.42	Woodland adjacent to Tolend Landfill
C0031-000000		TOLEND RD	26	Woodland near Tolend Landfill

C0032-000000		TOLEND RD	16.2	Woodland near Tolend Landfill (aquired from Souther)
C0041-000000		TOLEND RD	0.69	Woodland along Cocheco River (landlocked?)
C0046-000000		TOLEND RD	37	Woodland - deeded recreation use
D0001-000000	40	SMITH WELL RD	45.22	Smith Cummings well house
D0005-000000		SULLIVAN DR	26.369	Sullivan Drive ball field (LWCF Protected)
D0005-033000	31	SULLIVAN DR	1.63	Sullivan Drive sewer pump station
D0005-A00000		SIXTH ST	17.95	Woodland adjacent to Spaulding Tpk and Enterprise Business Park
D0010-A00000	32	LONG HILL RD	14.26	Long Hill Park (LWCF Protected)
D0061-A00000	16	CRANBROOK LN	0.11	Cranbrook Ln Sewer Pump Station
E0020-D00000		SIXTH ST	1.45	Woodland - future Northend Fire overflow lot
E0024-001000	262	SIXTH ST	3	Northend Fire Station
F0014-000000	104	FRENCH CROSS RD	25.5	Bouchard Water Treatment Plant
F0015-000TOT		EMERALD LN	0.04	Emerald Woods Park
F0042-000000	19	OLD STAGE RD	10	Hughes Well pumphouse
F0064-000000		FRENCH CROSS RD	0.935	Adjacent to Bouchard Well Treatment Plant
G0001-000000	182	CROSBY RD	0.01	Crosby Rd Sewer Pump Station
G0019-B00000		TOLEND RD	14.222	Woodland adjacent to Spaulding Tpk and Stocklan Cirle (sewer main)
G0032-C00000		CROSBY RD	5.01	Buildable lot off Crosby Rd
G0035-D00000		LITTLEWORTH RD	49.9	Buildable lot behind Crosby Rd off Littleworth Rd (sewer main)
H0002-000000	275	DURHAM RD	13.92	Buildable lot near high voltage lines off Durham Rd
H0011-001000	16	DALEY DR	20.03	Dover Middle School
H0011-A00000		DURHAM RD	0.38	Unbuildable lot Bellamy River frontage across from Back River Rd off Durham Rd

H0011-B00000	25	DURHAM RD	0.91	Southend Fire Station
H0012-000000	25	ALUMNI DR	24.83	Dover High School
H0017-000000		BELLAMY RD	30	Bellamy Park
H0018-D00000	19	BELLAMY RD	1.15	Adjacent to Bellamy Park
H0056-000000		BELLAMY RD	5.4	Former Gravel Pit adjacent to Ireland Well and along Bellamy River
H0058-000000	271	MAST RD	57.28	Community Services Facility
H0063-000000		MAST RD	11	Woodland along Bellamy River
I0002-G00000	50	GARRISON RD	19	Garrison Elementary School and park (portion LCWF purchase)
I0002-G00001		GARRISON RD	2.88	Shaw's Lane Parking Lot
I0002-H00000	32	SHAWS LN	6.6	Shaw's Lane concession building and softball fields
I0028-000EMT	5	SPRUCE DR	0	Spruce Drive Sewer Pump Station (easement)
I0032-A00000	135	MAST RD	0.212	Mast Rd Sewer Pump Station
I0036-000000		SPRUCE LN	1.28	Woodland adjacent to Spruce Ln park
I0036-U00000		SPRUCE LN	0.449	Unbuildable Lot off Spruce Lane near Danielle
I0037-000000		SPRUCE LN	0.98	Spruce Lane Park
I0047-002000		DANIELLE LN	7.89	Pedestrian Walkway Danielle Dr to Backriver Rd
I0071-000000	14	GARRISON RD	7.5	Shaw's Lane soccer fields
I0072-000000		BACK RIVER RD	4	Shaw's Lane upper field and parking area
I0075-000000		GARRISON RD	1.81	Unbuildable Lot off Garrison Rd - former stump dump
I0083-003000		SPRUCE LN	0.23	Unbuildable Lot off Spruce Ln (sewer main)
I0086-000000	156	BACK RIVER RD	0.4	Veteran's Building
I0091-000000		PISCATAQUA RD	0.3	Unbuildable Lot at Drew Rd and Piscataqua Rd - winter salt/sand pile (high voltage lines)
I0130-000000	29	RIVERDALE AV	2.91	Morningside Drive Park
J0003-000000		GARRISON RD	24	Open Space off Garrison Rd along Bellamy River (sewer main)

K0004-C00000		HENRY LAW AV	5.68	Woodland adjacent to Maglaras Park (high voltage lines)
K0015-000000		HUBBARD RD	4	Woodland adjacent to Pine Hill Cemetery - "New Section"
K0018-A00010		APPLEVALE DR	5.26	Applevale Dr Park
K0051-000000		APPLEVALE DR	0.29	Applevale Dr Sewer Pump Station
L0058-D00000		DOVER POINT RD	3.36	Woodland off Dover Point Rd along Piscatqua River - future river access
L0109-000000		DOVER POINT RD	0.149	Historic Fire Station - Dover Point Rd
M0047-B00000	87A	GERRISH RD	0.95	Gerrish Rd Sewer Pump Station
M0057-A00000	484	MIDDLE RD	35.86	Wastewater Treatment Plant
M0083-030000		OVERLOOK DR	0.27	Overlook Drive Park
M0084-001000		DOVER POINT RD	23	Conservation lot off Dover Point Rd (high voltage lines)
M0084-G00001		DOVER POINT RD	1.57	Unbuildable Lot off Dover Point Rd
M0090-D00013	22	ISAAC LUCAS CR	0.036	Isaac Lucas Cir Sewer Pump Station
H0038-A00000		KNOX MARSH RD	0.16	Unbuildable Lot
D0011-006000		QUALITY WY	2.61	Buildable Land in Enterprise Business Park
D0011-006SND		QUALITY WY	1.21	Unbuildable Sending Area Land for Enterprise Park
D0011-007000		QUALITY WY	3.49	Buildable Land in Enterprise Business Park
D0011-007SN1		QUALITY WY	0.98	Unbuildable Sending Area Land for Enterprise Park
D0011-007SN2		QUALITY WY	0.94	Unbuildable Sending Area Land for Enterprise Park
D0011-008000		QUALITY WY	8.61	Buildable Land in Enterprise Business Park
D0011-008SN1		QUALITY WY	0.55	Unbuildable Sending Area Land for Enterprise Park
D0011-008SN2		QUALITY WY	0.8	Unbuildable Sending Area Land for Enterprise Park
D0011-008SN3		QUALITY WY	1.83	Unbuildable Sending Area Land for Enterprise Park

D0007-000000		VENTURE DR	25	Buildable Land in Enterprise Business Park near turnpike
D0011-001000		VENTURE DR	36.19	Buildable Land in Enterprise Business Park
D0014-000000		VENTURE DR	5.02	Buildable Land in Enterprise Business Park
CITY-OWNED PROPERTIES IN OTHER COMMUNITIES				
I-19A		Bellamy Reservoir, Madbury	53.10	Woodland near Tolend Landfill
I-32		Bellamy Reservoir, Madbury	45.50	Woodland near Tolend Landfill
I-45		Bellamy Reservoir, Madbury	0.50	Woodland near Tolend Landfill
3-57		French Cross Road, Madbury	1.00	Aquifer/Wellhead protection
9-65		355 Mast Road, Madbury	2.82	Aquifer/Wellhead protection
3-52-	19	Old Stage Road, Madbury	12.00	Aquifer/Wellhead protection
0268-0001-000	422	182 Rochester Neck Rd, Rochester	1.00	Isinglass River Pump Station for Hoppers
1-14-1		Shady Lane, Rollinsford	8.50	Garrison Hill Park
1-14		Shady Lane, Rollinsford	28.00	Garrison Hill Park
3.9.0		Old Mill Lane, Rollinsford	10.00	Buildable Land end of Country Club Estates Drive
40-40		Willand Pond, Somersworth	3.60	Willand Pond Wells/ Pumphouse & Recreation Area
40-61		Willand Pond, Somersworth	11.80	Willand Pond Recreation Area