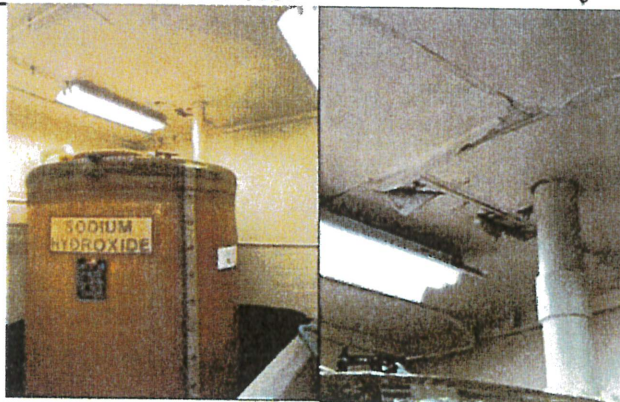


98	WATER FUND	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
99	Lee Well Improvements	55,000									
100	Town Water System Improvements	500,000	130,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000
103	Town/UNH Shared Water System Improvements		70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000
104	Utility Truck Replacement (One Ton)	67,500									
105	Madbury Road Water Line Replacement		2,205,000								
106	Wiswall Dam Spillway			650,000							
107	Foss Farm and Beech Hill Water Storage Tank Mixing Systems			225,000							

CAPITAL IMPROVEMENT PROGRAM

PROJECT YEAR		2022	PROJECT COST		\$55,000	
DESCRIPTION		Lee Well Improvements	DEPARTMENT			Public Works - Water
IMPETUS FOR PROJECT (IE. MANDATED, COUNCIL GOAL, DEPT INITIATIVE, ETC.)						
Department Initiative						
DESCRIPTION (TO INCLUDE JUSTIFICATION)						
<p>The Lee Well pump house is a concrete masonry unit block building built in 1984 with a wood truss roof. The purpose of the building is to house the pump that draws water from the Lee Well and equipment that provides sodium hydroxide and sodium hypochlorite treatment. The Town of Durham has identified deficiencies with the existing Lee Well Pump House roof, specifically the failing condition of the asphalt shingles. The deficiencies in the roof have led to deterioration of the interior ceiling allowing precipitation to leak into the chemical storage room. The compromised condition of the existing roof may pose risks to the pump house that can adversely affect the equipment needed to provide water to the distribution system. The budget price of approximately \$15,000 includes roofing, a new roof hatch, an electrical allowance, engineering, and contingency. The remaining \$40,000 of this capital request will provide funding for well inspection and redevelopment. In summary, as a municipal production well ages it become less efficient effecting water yield or specific capacity (gallons/minute/foot). This could result from incrustation from mineral deposits, physical plugging of the aquifer from sediment, well screen or casing corrosion or pump damage. Typically, well inspection and redevelopment is scheduled on a 6-8 year frequency or when well production notably decreases. The scope of well rehabilitation will including pump and motor removal, inspection, and repair, well hole and casing CCTV inspection and well redevelopment. This work was last completed in 2006 and is recommended to ensure ongoing dependable operation of the Lee well.</p>						
ESTIMATED COSTS:		PRELIMINARY STUDY, DESIGN AND ENGINEERING	\$	55,000		
		FINAL DESIGN AND ENGINEERING	\$	-		
		CONSTRUCTION ENGINEERING OVERSIGHT	\$	-		
		CONSTRUCTION COSTS				
		CONTINGENCY	\$	-		
		TOTAL PROJECT COST	\$	55,000		
FINANCING		OPERATING BUDGET	\$	55,000		
		UNH - CASH	\$	-		
		BOND - TOWN PORTION	\$	-		
		FEDERAL/STATE GRANT	\$	-		
		CAPITAL RESERVE ACCOUNT	\$	-		
		TOTAL FINANCING COSTS	\$	55,000		
IF BONDED:		NUMBER OF YEARS		N/A		
		TOTAL PRINCIPAL	\$	-		
		TOTAL INTEREST	\$	-		
		TOTAL ESTIMATED COST	\$	-		



CAPITAL IMPROVEMENT PROGRAM

PROJECT YEAR		2022	PROJECT COST		\$500,000
DESCRIPTION		Town Water System Improvements	DEPARTMENT		Public Works - Water
IMPETUS FOR PROJECT (IE. MANDATED, COUNCIL GOAL, DEPT INITIATIVE, ETC.)					
Department Initiative					
DESCRIPTION (TO INCLUDE JUSTIFICATION)					
The Town has 29 miles of water main, and understanding that water mains last for approximately 80 years, that means replacing 1,900 LF of water main each year at a cost of \$380,000 to replace the town's water mains and proactively (assuming \$200/lf construction cost). It is important to plan for these water main replacement programs proactively. The goal of this water system improvements program is to identify sections of oldest water mains and replace them in conjunction with the Town's road paving program. In FY 22, proposed water main replacements include Emerson Road (\$430,000 design and construction) and Dennison Road (\$70,000 design only) water mains. Funding for these projects has been included in the American Rescue Plan funding allocation for Year 2022 in the amount of \$500,000. In FY 23, Dennison Road water main construction is proposed in the amount of \$130,000. This has also been included in the American Rescue Plan funding allocation for Year 2023 in the amount of \$130,000. Project timing may shift forward or out based on funding availability and resources. Future years under this water system improvement program will include the funding request of \$75,000 annually to be put towards water main replacement projects that can be completed concurrently with the Town's road program.					
ESTIMATED COSTS:		PRELIMINARY STUDY, DESIGN AND ENGINEERING	\$	500,000	
		FINAL DESIGN AND ENGINEERING	\$	-	
		CONSTRUCTION ENGINEERING OVERSIGHT	\$	-	
		CONSTRUCTION COSTS			
		CONTINGENCY	\$	-	
		TOTAL PROJECT COST	\$	500,000	
FINANCING		OPERATING BUDGET	\$	-	
		UNH - CASH	\$	-	
		BOND - TOWN PORTION	\$	-	
		FEDERAL/STATE GRANT	\$	500,000	*Anticipated Funding through Federal American Rescue Act
		CAPITAL RESERVE ACCOUNT	\$	-	
		TOTAL FINANCING COSTS	\$	500,000	
IF BONDED:		NUMBER OF YEARS		N/A	
		TOTAL PRINCIPAL	\$	-	
		TOTAL INTEREST	\$	-	
		TOTAL ESTIMATED COST	\$	-	



CAPITAL IMPROVEMENT PROGRAM

PROJECT YEAR	2023	PROJECT COST	\$130,000
DESCRIPTION	<i>Town Water System Improvements</i>	DEPARTMENT	<i>Public Works - Water</i>
IMPETUS FOR PROJECT (IE. MANDATED, COUNCIL GOAL, DEPT INITIATIVE, ETC.)			
Department Initiative			
DESCRIPTION (TO INCLUDE JUSTIFICATION)			
<p>The Town has 29 miles of water main, and understanding that water mains last for approximately 80 years, that means replacing 1,900 LF of water main each year at a cost of \$380,000 to replace the town's water mains and proactively (assuming \$200/lf construction cost). It is important to plan for these water main replacement programs proactively. The goal of this water system improvements program is to identify sections of oldest water mains and replace them in conjunction with the Town's road paving program. In FY 22, proposed water main replacements include Emerson Road (\$430,000 design and construction) and Dennison Road (\$70,000 design only) water mains. Funding for these projects has been included in the American Rescue Plan funding allocation for Year 2022 in the amount of \$500,000. In FY 23, Dennison Road water main construction is proposed in the amount of \$130,000. This has also been included in the American Rescue Plan funding allocation for Year 2023 in the amount of \$130,000. Project timing may shift forward or out based on funding availability and resources. Future years under this water system improvement program will include the funding request of \$75,000 annually to be put towards water main replacement projects that can be completed concurrently with the Town's road program.</p>			
ESTIMATED COSTS:			
	PRELIMINARY STUDY, DESIGN AND ENGINEERING		
	FINAL DESIGN AND ENGINEERING	\$	-
	CONSTRUCTION ENGINEERING OVERSIGHT	\$	-
	CONSTRUCTION COSTS	\$	130,000
	CONTINGENCY	\$	-
	TOTAL PROJECT COST	\$	130,000
FINANCING			
	OPERATING BUDGET	\$	-
	UNH - CASH	\$	-
	BOND - TOWN PORTION	\$	-
	FEDERAL/STATE GRANT	\$	130,000
	CAPITAL RESERVE ACCOUNT	\$	-
	TOTAL FINANCING COSTS	\$	130,000
			*Anticipated Funding through Federal American Rescue Act
IF BONDED:			
	NUMBER OF YEARS		N/A
	TOTAL PRINCIPAL	\$	-
	TOTAL INTEREST	\$	-
	TOTAL ESTIMATED COST	\$	-



CAPITAL IMPROVEMENT PROGRAM

PROJECT YEAR	2024-2033	PROJECT COST	\$75,000
DESCRIPTION	Town Water System Improvements	DEPARTMENT	Public Works - Water
IMPETUS FOR PROJECT (IE. MANDATED, COUNCIL GOAL, DEPT INITIATIVE, ETC.)			
Department Initiative			
DESCRIPTION (TO INCLUDE JUSTIFICATION)			
<p>The Town has 29 miles of water main, and understanding that water mains last for approximately 80 years, that means replacing 1,900 LF of water main each year at a cost of \$380,000 to replace the town's water mains and proactively (assuming \$200/lf construction cost). It is important to plan for these water main replacement programs proactively. The goal of this water system improvements program is to identify sections of oldest water mains and replace them in conjunction with the Town's road paving program. In FY 22, proposed water main replacements include Emerson Road (\$430,000 design and construction) and Dennison Road (\$70,000 design only) water mains. Funding for these projects has been included in the American Rescue Plan funding allocation for Year 2022 in the amount of \$500,000. In FY 23, Dennison Road water main construction is proposed in the amount of \$130,000. This has also been included in the American Rescue Plan funding allocation for Year 2023 in the amount of \$130,000. Project timing may shift forward or out based on funding availability and resources. Future years under this water system improvement program will include the funding request of \$75,000 annually to be put towards water main replacement projects that can be completed concurrently with the Town's road program.</p>			
ESTIMATED COSTS:			
	PRELIMINARY STUDY, DESIGN AND ENGINEERING		
	FINAL DESIGN AND ENGINEERING	\$	-
	CONSTRUCTION ENGINEERING OVERSIGHT	\$	-
	CONSTRUCTION COSTS	\$	75,000
	CONTINGENCY	\$	-
	TOTAL PROJECT COST	\$	75,000
FINANCING			
	OPERATING BUDGET	\$	-
	UNH - CASH	\$	-
	BOND - TOWN PORTION	\$	-
	FEDERAL/STATE GRANT	\$	75,000
	CAPITAL RESERVE ACCOUNT	\$	-
	TOTAL FINANCING COSTS	\$	75,000
IF BONDED:			
	NUMBER OF YEARS		N/A
	TOTAL PRINCIPAL	\$	-
	TOTAL INTEREST	\$	-
	TOTAL ESTIMATED COST	\$	-



CAPITAL IMPROVEMENT PROGRAM

PROJECT YEAR	2023- 2032	PROJECT COST	\$70,000
DESCRIPTION	Town/UNH Shared Water System Improvements	DEPARTMENT	Public Works - Water
IMPETUS FOR PROJECT (IE. MANDATED, COUNCIL GOAL, DEPT INITIATIVE, ETC.)			
Department Initiative			
DESCRIPTION (TO INCLUDE JUSTIFICATION)			
This capital project is for design and construction of jointly shared Town/UNH water mains. Estimated costs are the Town's share of 1/3 of the total project cost estimated at \$210,000 per year. Funding for FY 22 has not been proposed due to fiscal constraints at the University.			
*Estimated costs are Town's Share of 1/3 of the total cost estimated at \$210,000 per year			
ESTIMATED COSTS:	PRELIMINARY STUDY, DESIGN AND ENGINEERING	\$	-
	FINAL DESIGN AND ENGINEERING	\$	-
	CONSTRUCTION ENGINEERING OVERSIGHT	\$	-
	CONSTRUCTION COSTS	\$	70,000
	CONTINGENCY	\$	-
	TOTAL PROJECT COST	\$	-
FINANCING	OPERATING BUDGET	\$	70,000
	UNH - CASH	\$	-
	BOND - TOWN PORTION	\$	-
	FEDERAL/STATE GRANT	\$	-
	CAPITAL RESERVE ACCOUNT	\$	-
	TOTAL FINANCING COSTS	\$	70,000
IF BONDED:	NUMBER OF YEARS		N/A
	TOTAL PRINCIPAL	\$	-
	TOTAL INTEREST	\$	-
	TOTAL ESTIMATED COST	\$	-



CAPITAL IMPROVEMENT PROGRAM

PROJECT YEAR		2022		VEHICLE COST		\$67,500					
DESCRIPTION				1-Ton Utility Truck Replacement				DEPARTMENT		Public Works - Water	
DESCRIPTION (TO INCLUDE JUSTIFICATION):											
Replace the Water Division's 2012 Ford 1-ton utility truck. The current vehicle is a 2012 and on a 10 -12 year replacement schedule. Current unit is the only service vehicle in the Water Division and will have approximately 80,000 miles in 2022. This vehicle is equipped with numerous tools and equipment, such as a generator and a 2 ton crane. The 2 ton crane has been moved from previous trucks for the past 25 years and is also due to be updated. According to the New England Water Works Association equipment replacement survey 2022 is the optimum time to replace this piece of equipment. We anticipate a \$5,000 trade in. The truck cab and chassis cost is expected to be \$40,000, the crane \$6,000, utility body \$16,000 and a plow package will be added for approximately \$8,000 totalling \$70,000. (We will be trading in the HWY Dep. old 2007 Chevy 2500)											
Vehicle to be Replaced:		2012 Ford Utility Truck with utility body and crane.									
Trade-In:		2007 Chevy 2500									
ESTIMATED COST		PURCHASE PRICE		\$		56,000					
		ACCESSORIES*		\$		14,000					
		LESS TRADE-IN**		\$		(2,500)					
		NET PURCHASE PRICE		\$		67,500					
		*Accessories include lighting, radios, striping, misc. equipment.									
FINANCING		OPERATING BUDGET		\$		-					
		UNH - CASH		\$		-					
		BOND - TOWN PORTION		\$		67,500					
		FEDERAL/STATE GRANT		\$		-					
		CAPITAL RESERVE ACCOUNT		\$		-					
		TOTAL FINANCING COSTS		\$		67,500					
IF BONDED:		NUMBER OF YEARS				5					
		TOTAL PRINCIPAL		\$		67,500					
		TOTAL INTEREST (EST'D)		\$		4,000					
		TOTAL PROJECT COST		\$		71,500					



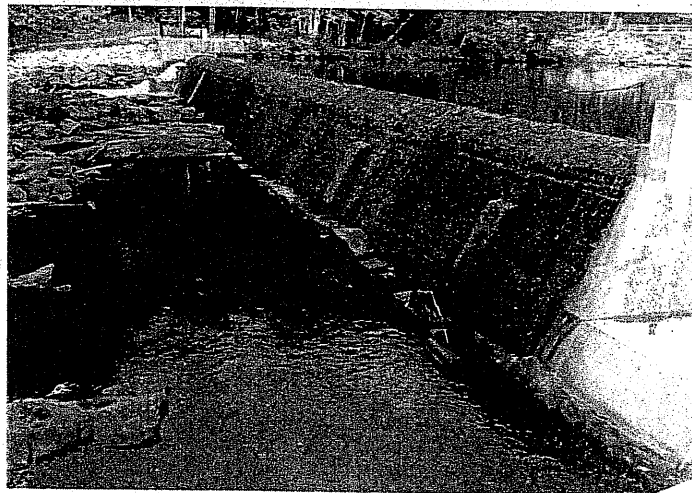
CAPITAL IMPROVEMENT PROGRAM

PROJECT YEAR	2023	PROJECT COST	\$2,205,000
DESCRIPTION	Madbury Road Water Line (Garrison - Route 4)	DEPARTMENT	Public Works - Water
IMPETUS FOR PROJECT (IE. MANDATED, COUNCIL GOAL, DEPT INITIATIVE, ETC.)			
Department Initiative			
DESCRIPTION (TO INCLUDE JUSTIFICATION)			
<p>This project is to replace the Madbury Road water main from Garrison Road to Route 4 (approx. 5700 ft). The pipe is a combination of 6" and 8" old pit cast iron pipe. The Town has experienced 7 water main ruptures in the past 10 years along this stretch of pipe. This project entails replacing the old, undersized pipe with new 12" ductile iron pipe which has a life expectancy of 80-100 years. (5700 LF @ \$323/LF Construction Cost Only) Funding in the amount of \$500,000 was approved in FY 2021 to commence design and permitting, which is currently underway with construction projected to being in 2023.</p>			
ESTIMATED COSTS:			
	PRELIMINARY STUDY, DESIGN AND ENGINEERING	\$	-
	FINAL DESIGN AND ENGINEERING	\$	-
	CONSTRUCTION ENGINEERING OVERSIGHT	\$	-
	CONSTRUCTION COSTS	\$	1,850,000
	CONTINGENCY 20%	\$	355,000
	TOTAL PROJECT COST	\$	2,205,000
FINANCING			
	OPERATING BUDGET	\$	-
	UNH - CASH	\$	-
	BOND - TOWN PORTION	\$	2,205,000
	FEDERAL/STATE GRANT	\$	-
	CAPITAL RESERVE ACCOUNT	\$	-
	TOTAL FINANCING COSTS	\$	2,205,000
IF BONDED:			
	NUMBER OF YEARS		20
	TOTAL PRINCIPAL	\$	2,205,000
	TOTAL INTEREST	\$	579,000
	TOTAL ESTIMATED COST	\$	2,784,000



CAPITAL IMPROVEMENT PROGRAM

PROJECT YEAR	2024	PROJECT COST	\$650,000
DESCRIPTION	Wiswall Dam Spillway	DEPARTMENT	Public Works - Water
IMPETUS FOR PROJECT (IE. MANDATED, COUNCIL GOAL, DEPT INITIATIVE, ETC.)			
NHDES Mandated			
DESCRIPTION (TO INCLUDE JUSTIFICATION)			
<p>The Wiswall Dam was constructed in 1912 and although the abutments have been rehabilitated, including complete replacement of the left abutment in 2011, the spillway has not had any attention in all these years. Part of the 2011 Wiswall Dam Repair and Fishladder Project was to include repair of the dam's spillway and installation of rock anchors in the dam's spillway to improve the dam's stability and reduce the risk of failure. During the 2011 construction it was determined rock anchor installation could not be performed as designed due to the presence of large boulders cast into the spillway's concrete. A geotechnical investigation conducted in July 2012, which included the extraction of two core samples into the spillway confirmed the presence of the boulders and provided concrete strength values needed for the design of the stability solution. The 2014 CIP included \$70,000 for preliminary design and the 2015 CIP included \$90,000 for final design and permitting.</p>			
ESTIMATED COSTS:			
	PRELIMINARY STUDY, DESIGN AND ENGINEERING	\$	-
	FINAL DESIGN AND ENGINEERING	\$	-
	CONSTRUCTION ENGINEERING OVERSIGHT	\$	-
	CONSTRUCTION COSTS	\$	650,000
	CONTINGENCY	\$	-
	TOTAL PROJECT COST	\$	650,000
FINANCING			
	OPERATING BUDGET	\$	-
	UNH - CASH	\$	-
	BOND - TOWN PORTION	\$	650,000
	FEDERAL/STATE GRANT	\$	-
	CAPITAL RESERVE ACCOUNT	\$	-
	TOTAL FINANCING COSTS	\$	650,000
IF BONDED:			
	NUMBER OF YEARS		20
	TOTAL PRINCIPAL	\$	650,000
	TOTAL INTEREST	\$	136,500
	TOTAL ESTIMATED COST	\$	786,500



CAPITAL IMPROVEMENT PROGRAM

PROJECT YEAR	2024	PROJECT COST	\$225,000
DESCRIPTION	Foss Farm and Beech Hill Water Storage Tank Mixing Systems	DEPARTMENT	Public Works - Water
IMPETUS FOR PROJECT (IE. MANDATED, COUNCIL GOAL, DEPT INITIATIVE, ETC.)			
Department Initiative			
DESCRIPTION (TO INCLUDE JUSTIFICATION)			
<p>Water age within the distribution system, inclusive of storage tanks and piping, plays a significant role around water quality and regulatory compliance. Storage tank mixing systems provide a complete, floor to surface mix which greatly reduces stratification while achieving consistent disinfectant contact and residuals throughout the water column. Previously the Town and UNH conducted water age studies to determine operating changes which could favorably impact water age. This study led to the decommissioning of the Edgewood tank. More recently the Town completed a water age study of the high-pressure zone (HPZ) fed by the Lee well and Beech Hill tank to evaluate water age and quality in the Lee water line extension and Beech Hill tank. Findings from both studies indicate that the Foss Farm and Beech Hill tanks experience extended water ages substantially beyond what would be considered optimum. The recommended capital investment of mixing systems will prevent stagnation, thermal stratification, and short-circuiting. It will also provide uniform water age and equal distribution of disinfectant while minimizing chemical disinfectant usage and disinfection by-products</p>			
ESTIMATED COSTS:	PRELIMINARY STUDY, DESIGN AND ENGINEERING	\$	-
	FINAL DESIGN AND ENGINEERING	\$	-
	CONSTRUCTION ENGINEERING OVERSIGHT	\$	-
	CONSTRUCTION COSTS	\$	225,000
	CONTINGENCY	\$	-
	TOTAL PROJECT COST	\$	225,000
FINANCING	OPERATING BUDGET	\$	-
	UNH - CASH	\$	-
	BOND - TOWN PORTION	\$	225,000
	FEDERAL/STATE GRANT	\$	-
	CAPITAL RESERVE ACCOUNT	\$	-
	TOTAL FINANCING COSTS	\$	225,000
IF BONDED:	NUMBER OF YEARS		10
	TOTAL PRINCIPAL	\$	225,000
	TOTAL INTEREST	\$	25,000
	TOTAL ESTIMATED COST	\$	250,000

