Veen	2022	2024	2025	2026	2027	2020	2020	2020	2024	2022	2022	
Year	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	
	4	4	4	4	4	4	4	4		4	4	
Equipment	\$750	\$750	\$750	\$750	\$750	\$750	\$750	\$750	\$750	\$750	\$750	\$8,250
	4	4	4	4	4	4	4	4		40.00	4	
Bridges	\$1,490	\$1,550	\$1,612	\$1,676	\$1,743	\$1,813	\$1,885	\$1,961	\$2,039	\$2,121	\$2,206	\$20,095
ST resurf	\$550	\$500	\$510	\$520	\$531	\$541	\$552	\$563	\$574	\$586	\$598	\$6,025
	· ·											
HM Resurf	\$403	\$419	\$436	\$453	\$471	\$490	\$510	\$530	\$552	\$574	\$597	\$5,435
Reconst	\$600	\$624	\$649	\$675	\$702	\$730	\$759	\$790	\$821	\$854	\$888	\$8,092
Sidewalk	\$35	\$36	\$37	\$38	\$39	\$39	\$40	\$41	\$42	\$43	\$44	\$434
Housing	\$162	\$168	\$175	\$182	\$190	\$197	\$205	\$213	\$222	\$231	\$240	\$2,185
Enviromental/Dams	\$50	\$60	\$62	\$65	\$67	\$70	\$73	\$76	\$79	\$82	\$85	\$770
Street lights	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$220
Annual total	\$4,060	\$4,128	\$4,251	\$4,379	\$4,513	\$4,651	\$4,795	\$4,944	\$5,099	\$5,259	\$5,426	\$51,505
		1 . ,			. ,	. ,		. ,	. ,	. ,	_ · ·	. ,
Water	\$400	\$416	\$433	\$450	\$468	\$487	\$506	\$526	\$547	\$569	\$592	\$5,395
Sewer	\$400	\$416	\$433	\$450	\$468	\$487	\$506	\$526	\$547	\$569	\$592	\$5 <i>,</i> 395
Annual Total	\$800	\$832	\$865	\$900	\$936	\$973	\$1,012	\$1,053	\$1,095	\$1,139	\$1,184	\$10,789

DAMS	Pre Eng.	Repair	Replace	
Durchaus Hanas Dans	2022			
Durham Upper Dam	2023			Pre eng. to determine feasibility of repair vs replacement
Durham Middle Dam				ownership under MNR
<b>Durham Lower Dam</b>	2026			
Neustadt Dam	2024			Pre Eng. To determine if dam can be removed/repaired or replaced
Ayton Dam	2026			Pre . Eng to determine the extent of deficiencies
Meux Creek Gabion Wall		2023		
Neustadt Creek	2025			Pre. Eng. To determine if creek can be replaced with an underground storm system

# **Bridges and Culverts**

## 10 Year Capital Replacement Plan

West Grey currently carries a bridge/culvert inventoy of 104 structures

Council has yet to confirm proposed closures

Based on the reports, the Director has made a projected number of closures in order to propse a 10yr captial plan

**Total Capital Replacement based on Bridge Studies for 95 structures** 

\$97,000,000

Average Life Cycle is 90 years

\$1,060,000

Total Cost per year for replacement Total cost per year for maintenance

**\$320,000** 1/3 of replacement value

\$110,400 engineering & tendering at 8%

**Total 2023 Budget** 

\$1,490,400

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Repacement	\$1,060	\$1,092	\$1,125	\$1,158	\$1,193	\$1,229	\$1,266	\$1,304	\$1,343	\$1,383	\$12,152
Maintenance	\$320	\$330	\$339	\$350	\$360	\$371	\$382	\$394	\$405	\$418	\$3,668
Annual Budget	\$1,490	\$1,421	\$1.464	\$1.508	\$1,553	\$1,600	\$1,648	\$1,697	\$1.748	\$1.801	\$15,931

Bridge/Culvert #	Current Age											
N-189	79	\$300	-									
G-44	95	\$1,100	1									
		\$1,400	1									
		1,722	1									
B-003	85		\$940									
					_							
N-184	74			260	-							
					1							
B-51	92				\$1,990							
B-008	88					\$504						
B-011	83					\$513						
						\$1,017						
G-133	58						\$151					
N-058	65						\$600					
G-132	33						\$294					
							\$1,045	]				
N-185	?							\$275	1			
B-001	88							\$646				
								\$921	]			
G-040	93								\$1,053			
											1	
B-196	?									\$180		
N-061	103									\$704 <b>\$884</b>	1	
										7004	1	
G-041	53										\$560	
N-055	93										\$1,660	
				_							\$2,220	
Reserve		-\$340	\$152	\$865	-\$832	\$176	\$184	\$345	\$251	\$459	-\$837	\$422

Н	0	u	S	ir	าย	,
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Based on 100 year life cycle

Shed Replacement	year	sq. ft.	\$/sq.ft.	2022 replacemt \$	projected replacement	years remaining	minimum \$ per yr to resv
Bentinck Shed	1976	2048	\$150	\$307,200	2076	54	\$6,000
Bentinck garage	1958	6518	\$190	\$1,238,420	2058	36	\$34,000
Bentinck Sand Shed	1990	4914	\$150	\$737,100	2090	68	\$11,000
Normanby Shed	1980	1550	\$150	\$232,500	2080	58	\$4,000
Normanby garage	1958	6536	\$190	\$1,241,840	2058	36	\$34,000
Normanby Sand Shed	1980	6624	\$150	\$993,600	2080	58	\$17,000
Glenelg Sand shed and Storage	1991	9600	\$150	\$1,440,000	2091	69	\$21,000
Glenelg garage	1960	4000	\$120	\$480,000	2060	38	\$13,000
Durham	1993	5000	\$150	\$750,000	2093	71	\$11,000
Old Co. Shed	1900?	Do not rep	olace				
New Shed	2018	3800	\$60	\$228,000	2124	102	\$2,000
addition to new shed	2024	2700	\$190	\$513,000			
		3800	\$100	\$380,000			
				\$893,000	2124	102	\$9,000
						Annual \$	\$162,000

Housing	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Shed Replacement											
Bentinck Shed	\$6,000	6,240	6,490	6,749	7,019	7,300	7,592	7,896	8,211	8,540	8,881
Bentinck garage	\$34,000	35,360	36,774	38,245	39,775	41,366	43,021	44,742	46,531	48,393	50,328
Bentinck Sand Shed	\$11,000	11,440	11,898	12,374	12,868	13,383	13,919	14,475	15,054	15,656	16,283
		0	0	0	0	0	0	0	0	0	0
Normanby Shed	\$4,000	4,160	4,326	4,499	4,679	4,867	5,061	5,264	5,474	5,693	5,921
Normanby garage	\$34,000	35,360	36,774	38,245	39,775	41,366	43,021	44,742	46,531	48,393	50,328
Normanby Sand Shed	\$17,000	17,680	18,387	19,123	19,888	20,683	21,510	22,371	23,266	24,196	25,164
		0	0	0	0	0	0	0	0	0	0
Glenelg Sand shed and Storage	\$21,000	21,840	22,714	23,622	24,567	25,550	26,572	27,635	28,740	29,890	31,085
Glenelg garage	\$13,000	13,520	14,061	14,623	15,208	15,816	16,449	17,107	17,791	18,503	19,243
		0	0	0	0	0	0	0	0	0	0
Durham	\$11,000	11,440	11,898	12,374	12,868	13,383	13,919	14,475	15,054	15,656	16,283
Old Co. Shed		0	0	0	0	0	0	0	0	0	0
New Shed	\$2,000	2,080	2,163	2,250	2,340	2,433	2,531	2,632	2,737	2,847	2,960
addition to new shed		0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0
	\$9,000	9,360	9,734	10,124	10,529	10,950	11,388	11,843	12,317	12,810	13,322
	\$162,000	\$168,000	\$175,000	\$182,000	\$190,000	\$197,000	\$205,000	\$213,000	\$222,000	\$231,000	239,800

## **Surface Treatment**

197.6 km in inventory

average life cycle between resurface is 8 years  $\,$ 

means that total kms of surface treat per year is 24.7 km

Based on 2022 costs 24.7 km x \$21,000 per km \$518,700

spot improvements \$30,700

annual budget \$549,400

### **Hot Mix Rural**

41.3 km in inventory

average life cycle between resurfacing is 20 years

means that total kms of rural hot mix per year is 2.06km

Based on 2022 costs 2.06 km x \$90,000 per km drainage, shouldering, spot repairs \$36,000 per km

\$126,000 per km

annual budget \$259,560

### **Hot mix Urban**

26.4 kms in inventory

average life cycle between resurface is 25 years

mean that total kms of urban hot mix per year is 1.06km

Based on 2022 costs 1.06 km x \$100,000 per km milling, drainage, curb, spot repairs \$35,000 per km

\$135,000 per km

annual budget \$143,100

### 10 year capital forcaast 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 Hard Top Resurfacing \$952 \$990 \$1,030 \$1,071 \$1,253 \$1,303 \$1,355 \$1,007 \$1,114 \$1,158 \$1,205

# **Sidewalk Replacement**

24030 metres of sidewalk

Based on a 75 year life cycle 320 metres of sidewalk should be replaced annually

2022 costs for sidewalk removal and placement is \$110 per metre

Total annual budget should be \$35,200

# **Street Lights**

2019 cost 2016 LED installation Costs for Lights in Durham, Neustadt and Elmwood \$320,000 \$340,000 2013 LED installation costs for Ayton \$60,000 \$68,000

\$408,000 \$500,000

Life cycle for replacement after 25 years

Total Annual Budget should be \$20,000

# Water

Durham Water Tower Replacement	\$3,500,000
Durham Well No. 2 Genset plus fencing	\$100,000
Durham Well No. 1 Genset plus fencing	\$100,000
Neustadt Water Tower Rehab	\$1,000,000
New Well	\$300,000
	\$5,000,000

## **Waste Water**

Durham Waste Water Electrical Upgrades	\$50,000
Twin Bruce Street lift Station	\$1,500,000
Genset replacement at Neusatdt lift station	\$100,000
Neustadt Sewage lagoon cleanout	\$1,000,000
Fix Neustadt Infiltration problem	\$100,000
	\$2,750,000