

Table 2 Water Control Structures Major Maintenance Forecast 2025-2029

	WECI Project	2025	2026	2027	2028	2029
Total Expenditures of All Dams and Dikes for Year		\$5,039,400	\$3,756,900	\$6,203,900	\$7,323,900	\$3,863,900

Dikes	WECI Project	2025	2026	2027	2028	2029
Brantford Dike						
Minor maintenance works		\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Dike safety study - Future Engineering Studies of specific issues	DR-Future WECI		\$50,000	\$50,000	\$50,000	\$50,000
Dike safety study - River Road Floodwall and Gilkison Reach Mitigation EA and Final Design	DR.25.025 - WECI	\$350,000				
Dike safety study - Emergency preparedness inundation mapping		\$20,000				
Dike safety implementation - River Road Floodwall and Gilkison Reach mitigation	DR-Future WECI-Federal		\$500,000	\$1,500,000	\$750,000	\$250,000
GRCA Birkett Triangle Landfill - stabilization riprap, cleanup - design,	Property Program		\$50,000	\$500,000		
Dike safety Implementation - ongoing vegetation removal and management		\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
Subtotal for structure		\$395,000	\$625,000	\$2,075,000	\$825,000	\$325,000
Bridgeport Dike						
Minor maintenance works		\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
Dike safety Implementation - Installation of Gate Valve on storm outlet				\$20,000		
Dike safety study - Seepage, Stability and Capacity Improvements Design EA	DS.24.028 - WECI and DMAF	\$250,000				
Dike safety study - Seepage, Stability and Capacity Improvements Detailed Design	DR.25.001 - WECI and DMAF		\$200,000			
Dike safety study - Implementation of Seepage Control and Capacity Improvements	DS -Future- WECI and DMAF			\$1,000,000	\$2,000,000	\$1,500,000
Subtotal for structure		\$252,000	\$202,000	\$1,022,000	\$2,002,000	\$1,502,000
Caledonia Dike						
Minor maintenance works		\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
Dike bank erosion repairs east and west sides of the river	DR-Future WECI				\$150,000	
Subtotal for structure		\$2,000	\$2,000	\$2,000	\$152,000	\$2,000

Dikes	WECI Project	2025	2026	2027	2028	2029
Cambridge Dike						
Minor maintenance works		\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
Dike safety Implementation - Repair and reseal floodwall construction joints West Bank u/s Parkhill Road	DR.25.048 - WECI	\$250,000				
Dike Implementation - Decommission pump room and refurbish bridge closures	DR -Future WECI				\$30,000	\$250,000
Dike safety - Design and tender repair to east bank floodwall	DR -Future WECI		\$70,000			
Dike safety - Implementation - repair to east bank floodwall	DR -Future WECI				\$200,000	\$800,000
Subtotal for structure		\$252,000	\$72,000	\$2,000	\$232,000	\$1,052,000
Drayton Dike						
Minor maintenance works -		\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
Dike safety - Install rubber backflow check valves	DS -Future WECI		\$35,000			
Environmental Assessment - Extension of Existing Dike	Municipal and Grant					
Extension of the Existing Dike	Municipal and Grant					
Subtotal for structure		\$2,000	\$37,000	\$2,000	\$2,000	\$2,000
New Hamburg Dike						
Dike Minor Maintenance		\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
Environmental Assessment - Preferred flood mitigation options	Municipal and Grant	\$30,000	\$30,000			
Extension of the Existing Dike - Implementation of Flood Mitigation Options	Municipal and Grant					
Dike Safety- tree removal		\$25,000	\$25,000	\$25,000	\$25,000	\$25,000
Subtotal for structure		\$57,000	\$57,000	\$27,000	\$27,000	\$27,000
Total - Dikes		\$960,000	\$995,000	\$3,130,000	\$3,240,000	\$2,910,000

Multipurpose Dams	WECI Project	2025	2026	2027	2028	2029
Multi-Purpose Dams Overall Dam Safety Program						
Dam Safety Maturity Matrix- CEATI Membership		\$30,000	\$30,000	\$31,000	\$31,000	\$31,000
Dam Safety Maturity Index Implementation - external consulting - actively operated dams as priority - facilitators. Meeting with OPG		\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
Security - multi-purpose dams security cameras		\$20,000	\$20,000	\$20,000	\$20,000	
Dam Safety Information Management - external consultants and drawings management		\$15,000	\$75,000	\$75,000	\$75,000	\$75,000
Subtotal for Overall Dam Safety Program		\$85,000	\$145,000	\$146,000	\$146,000	\$126,000
Conestogo Dam						
Minor maintenance works		\$3,000	\$3,000	\$3,000	\$3,000	\$3,000
Unidentified preventative maintenance		\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
Vegetation Control/Management		\$3,000	\$3,000	\$3,000	\$3,000	\$3,000
Dam Safety Review	DS Future-WECI			\$200,000		
Control Room Roof Repair	DS Future-WECI	\$75,000				
Concrete rehabilitation 2025 - u/s 2	DR.25.045 - WECI	\$1,700,000				
Auto Gate Controls - Operation Indicator	DR Future-WECI		\$65,000			
Onsite Emergency Backup Generator Replacement			\$150,000			
Replacement of emergency egress ladder	DR -Future-WECI			\$60,000		
Concrete rehabilitation 2026 - spillway 1	DR -Future-WECI		\$1,200,000			
Concrete rehabilitation 2027 - spillway 2	DR -Future-WECI			\$1,100,000		
Replace gate hoist cables 4 gates	DR-Future-WECI		\$20,000			
Mechanical refurbishments - sump pumps, draft tube valve	DR-Future-WECI				\$150,000	\$20,000
Subtotal for structure		\$1,791,000	\$1,451,000	\$1,376,000	\$166,000	\$36,000
Guelph Lake Dam						
Minor maintenance works		\$6,300	\$6,300	\$6,300	\$6,300	\$6,300
Unidentified preventative maintenance		\$5,000	\$5,000	\$5,000	\$5,000	\$5,000

Multipurpose Dams	WECI Project	2025	2026	2027	2028	2029
Mechanical refurbishment - draft tube valve	DR-Future-WECI			\$30,000		
Vegetation management - saddle dams	DR-Future-WECI			\$40,000		
Replace guard rails	DR-Future-WECI		\$40,000			
Dam Safety Periodic Review	DS -Future-WECI				\$150,000	
Mechanical refurbishment - sump pump replacements	DR-Future-WECI				\$100,000	
Replace gate cables 6 gates	DR-Future-WECI					\$25,000
Subtotal for structure		\$11,300	\$51,300	\$81,300	\$261,300	\$36,300
Laurel Creek Dam						
Minor maintenance works		\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
Turf Maintenance		\$400	\$400	\$400	\$400	\$400
Dam Safety Review	DS-Future-WECI	\$100,000				
Large rip-rap replacement around control structure	DR-Future-WECI		\$60,000			
Vegetation management downstream relief wells	DR-Future-WECI			\$10,000		
Implement DSR Recommendations	DR-Future-WECI				\$80,000	0
Mechanical replacement - discharge valve	DR-Future-WECI					\$30,000
Mechanical refurbishment - spillway gates	DR-Future-WECI					\$120,000
Improve access to discharge valve	DR-Future-WECI					\$50,000
Rehabilitation of toe drain, cleaning of fines from rip-rap	DR-Future-WECI				\$10,000	\$10,000
Subtotal for structure		\$102,400	\$62,400	\$12,400	\$92,400	\$212,400
Luther Dam						
Minor maintenance works		\$800	\$800	\$800	\$800	\$800
Embankment repair - toe drain		\$50,000				
Add debris boom/debris management system in forebay; cleanout forebay	DR-Future-WECI			\$100,000		
Survey				\$5,000		

Multipurpose Dams	WECI Project	2025	2026	2027	2028	2029
Dam Safety Review	DS -Future-WECI				\$100,000	
Implement DSR Recommendations	DR-Future-WECI					\$30,000
Subtotal for structure		\$50,800	\$800	\$105,800	\$100,800	\$30,800
Shade's Mills Dam						
Minor maintenance works		\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
Replace instrumentation piezometers and repair relief wells	DS-Future-WECI	\$100,000				
Decommission mercury manometers	DR-Future-WECI		\$10,000			
Dam Safety Review	DS.25.027	\$200,000				
Implement recommendations from dam safety reviews (incl. rip rap on upstream embankment)	DR-Future-WECI		\$100,000	\$100,000		
Mechanical refurbishment - spillway gates actuators	DR-Future-WECI					\$50,000
Structural - refurbish concrete guard rails	DR-Future-WECI					\$100,000
Subtotal for structure		\$302,000	\$112,000	\$102,000	\$2,000	\$152,000
Shand Dam						
Minor maintenance works (railings etc.)		\$6,000	\$6,000	\$6,000	\$6,000	\$6,000
unidentified maintenance		\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
Vegetation control		\$3,000	\$3,000	\$3,000	\$3,000	\$3,000
Dam Safety Review	DS.25.026 - WECI	\$200,000				
Gate superstructure load monitoring 3 remaining gates				\$40,000		
Gate motor brake refurbishment		\$40,000				
Isolation Stoplog Gains Refurbishment	DR.24.040 - WECI	\$500,000				
Superstructure safety warning lights	DR-Future-WECI			\$30,000		
Piezometer rehabilitation and monitoring	DR-Future-WECI		\$50,000			
Concrete Repairs - wingwalls and piers	DR-Future-WECI				\$400,000	
Discharge valves refurbishment	DR-Future-WECI				\$150,000	

Multipurpose Dams	WECI Project	2025	2026	2027	2028	2029
Sump pump replacement	DR-Future-WECI				\$100,000	
Subtotal for structure		\$759,000	\$69,000	\$89,000	\$669,000	\$19,000
Woolwich Dam						
Unidentified maintenance		\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Turf Maintenance		\$900	\$900	\$900	\$900	\$900
Upgrade/maintenance of the automatic gate controls Gate 1 Woolwich Dam	DR.25.047-WECI	\$100,000				
Hydro feed from road - underground burial	DR.25.055 - WECI	\$300,000	\$50,000			
Dam Safety Update Periodic Review	DS-Future-WECI			\$150,000		
Settlement Assesment (update)	DS-Future-WECI			\$20,000	\$20,000	
Cleanout of dam drainage	DR-Future-WECI			\$50,000		
Sluice gate refurbishment	DR-Future-WECI			\$80,000		
Rehabilitate Crest of Dam, rip rap and replace guard rails - implementation	DR-Future-WECI				\$800,000	
Subtotal for structure		\$405,900	\$55,900	\$305,900	\$825,900	\$5,900
TOTAL - Multi-purpose dams		\$3,507,400	\$1,947,400	\$2,218,400	\$2,263,400	\$618,400

Small Dams	WECI Project	2025	2026	2027	2028	2029
Baden						
Minor maintenance works		\$800	\$800	\$800	\$800	\$800
Vegetation management						
Isolate gates Replace wooden gates		\$20,000	\$20,000			
Embankment Repair Toe Drain Installation	DR.24.071 - WECI	\$275,000				
Bissell Dam						
Minor maintenance works		\$800	\$800	\$800	\$800	\$800
Design solution and specification to isolate and rehabilitate wooden gates				\$50,000		
Concrete patching on main gate structure				\$20,000		

Small Dams	WECI Project	2025	2026	2027	2028	2029
Rehabilitate wooden gates					\$10,000	\$10,000
Breslau Dam						
Minor maintenance works		\$800	\$800	\$800	\$800	\$800
Caledonia Dam						
Minor maintenance works			\$3,500	\$3,500	\$3,500	\$3,500
Embankment repairs including design			\$75,000			
Public safety repairs - railings, grates and gate			\$20,000			
Implement new stoplog gains and stoplogs					\$75,000	
Chicopee Dam						
Minor maintenance works		\$600	\$600	\$600	\$600	\$600
Underwater conduit inspection					\$20,000	
Damascus Dam						
Minor maintenance works		\$700	\$700	\$700	\$700	\$700
Inspect valve and complete maintenance on low flow valve	DR-Future-WECI					
Drimmie Dam						
Minor maintenance works		\$600	\$600	\$600	\$600	\$600
Replace safety boom			\$100,000			
Dunville Account 5508						
Main Dam						
North Wingwall concrete inspection				\$5,000		
Future concrete repair north wingwall					\$500,000	
Weir # 2						
Replace stop logs						
Weir # 3						
Repair and retrofit of fish way - design					\$40,000	
Minor maintenance works		\$1,200	\$1,200	\$1,200	\$1,200	\$1,200
Weir # 4						
Minor maintenance works		\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
Design solution to isolate and replace stop logs		\$30,000				
Replace stop logs			\$45,000			
Augment rip-rap			\$15,000			
Design and install stairs by wing wall						
Everton Dam						
Minor maintenance works		\$600	\$600	\$600	\$600	\$600

Small Dams	WECI Project	2025	2026	2027	2028	2029
Dam embankment rip-rap			\$15,000			
Floradale Dam						
Minor maintenance works		\$600	\$600	\$600	\$600	\$600
Dam concrete rehab - spillway face strategy	DS -Future-WECI		\$10,000			
Dam concrete rehab - repair	DR -Future-WECI			\$40,000		
New Dundee Dam						
Minor maintenance works		\$1,500	\$1,500	\$1,500	\$1,500	\$1,500
Worker Safety Deck operations improvement study	DR.24.070 - WECI	\$25,000				
Replacement of Gate Controls and monitoring				\$75,000		
Embankment RipRap protection replacement	DR -Future-WECI				\$150,000	
New Hamburg Dam						
Minor maintenance works		\$1,200	\$1,200	\$1,200	\$1,200	\$1,200
Replace gate seals, fishway debris cleanout			\$12,000			
Parkhill Dam						
Minor maintenance works		\$1,500	\$1,500	\$1,500	\$1,500	\$1,500
Outfall grate replacement			\$12,000			
Rockwood 1&2						
Minor maintenance works		\$800	\$800	\$800	\$800	\$800
Rehabilitation of downstream channel			\$20,000			
St. Jacobs						
Minor maintenance works		\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
Dam Design and Approval - LIRA - minor crest repair				\$40,000		
Dam Weir Repair - Construction					\$400,000	
Upper Ayr						
Minor maintenance works		\$600	\$600	\$600	\$600	\$600
Engineering Inspection to investigate gain separation from concrete, recommend repair			\$40,000			
Victoria Mills Dam						
Minor maintenance works		\$600	\$600	\$600	\$600	\$600
Design of repair to low flow outlet structure			\$30,000			
Repair to low flow outlet structure				\$200,000		
Wellesley Dam						
Minor maintenance works		\$600	\$600	\$600	\$600	\$600
Dam Rehab Design and Approvals - Embankment, Concrete		\$75,000	\$50,000			
Final Design and Approvals			\$75,000			

Small Dams	WECI Project	2025	2026	2027	2028	2029
Embankment repair, sheetpiling			\$150,000	\$100,000		
Gate Replacement/refurbishment			\$50,000			
Spillways, Concrete Design and Repair				\$200,000	\$300,000	
Wellington Street Dam and weirs and channel						
Minor maintenance works		\$2,900	\$2,900	\$2,900	\$2,900	\$2,900
Downstream embankment repair - design and construction		\$100,000				
Decommission/Rebuild Study - Rehabilitate super structure and gates (Follow Discussions with City in 2022)				\$60,000	\$200,000	\$200,000
Wilkes Dam						
Minor maintenance works		\$2,600	\$2,600	\$2,600	\$2,600	\$2,600
Design a repair concrete wing wall - park side		\$25,000				
Inwater inspection report			\$50,000			
Repair concrete wing wall - Park side study and repair				\$40,000	\$100,000	\$100,000
Total - Small Dams		\$572,000	\$814,500	\$855,500	\$1,820,500	\$335,500

Small Dams - Retired, Decommissioned or Transferred	WECI Project	2025	2026	2027	2028	2029
Chilligo Dam						
Dam de-commissioned		\$0	\$0	\$0	\$0	\$0
Columbia Street Dam						
Operation and maintenance transferred to City of Waterloo		\$0	\$0	\$0	\$0	\$0
Grand Valley Dam						
In discussions with municipal regarding transfer of dam to municipality		\$0	\$0	\$0	\$0	\$0
Rockwood Dam # 2						
Dam Retired		\$0	\$0	\$0	\$0	\$0
Taquanyah						
Dam de-commissioned		\$0	\$0	\$0	\$0	\$0
Total - Retired, Decommissioned or Transferred		\$0	\$0	\$0	\$0	\$0
Total of All Dams and Dikes for Year		\$5,039,400	\$3,756,900	\$6,203,900	\$7,323,900	\$3,863,900