MAYWOOD PARK PROPOSED SEWER PROJECT

40-Yr Present Worth Cost Comparison - Updated April 2023

Addendum No. 1, Table 1 (pg 4)

	2020 Estimated Cost Per Homeowner			2022 Estimated Cost Per Homeowner			2023 Estimated Cost Per Homeowner		
Present Worth Cost Item	**New Septic System**	**New ATT System**	**New Gravity Sewer**	**New Septic System**	**New ATT System**	**New Gravity Sewer**	**New Septic System**	**New ATT System**	**New Gravity Sewer**
Public Sewer System			$21,000			$25,600			$27,000
Sewer Lateral			$10,000			$10,900			$11,600
Onsite System Cost	$25,000	$43,000		$28,000	$47,000		$28,000	$56,000	
Operations and Maintenance (O&M)	$23,000	$43,000		$24,600	$47,300		$30,000	$67,000	
Portland System Development Charge			$7,000			$7,500			$8,300
Portland Sewer Rates			$13,000			$13,880			$14,400
Total Present Worth	**$48,000**	**$86,000**	**$51,000**	**$52,600**	**$94,300**	**$57,880**	**$58,000**	**$123,000**	**$61,300**
Initial Cost	$25,000	$43,000	$38,000	$28,000	$47,000	$44,000	$28,000	$56,000	$46,900
Initial Cost with GO bonds	$25,000	$43,000	$17,000	$28,000	$47,000	$18,400	$28,000	$56,000	$19,900

1. Sewer Laterals (includes all permitting and work related to completing all work needed prior to being operational and all work needed to restore homeowner's property).
2. Onsite System Cost (includes all permitting work related to completing all work needed prior to being operational and all work needed to restore the homeowner's property).
3. Septic and ATT costs per Rick McBee Excavating for recent projects within Maywood Park (septic stayed the same, ATT increased).
4. Sewer laterals updated per higher of Engineering News Record (ENR) 4.6% and onsite cost average 7%.
5. Septic pumping costs increased from $500 to $1000.
6. ATT maintenance increased to $450/yr + $185/yr to Multnomah County.
7. Gravity sewer and sewer lateral construction cost increased by ENR.
8. City of Portland fees and rates updated to 2023.

Maywood Park Proposed Gravity Sewer – Construction and Initial Costs
Opinion of Probable Cost Summary – Updated April 2023

	June 2017		November 2021		April 2023	
	Public Elements	Average Cost Per Homeowner	Public Elements	Average Cost Per Homeowner	Public Elements	Average Cost Per Homeowner
Public Sewer System	$6,062,000	$23,050	$7,769,000	$25,600	$8,201,000	$27,000
Private Sewer Connection	NA	$9,500	NA	$10,900	NA	$11,600
Portland System Development Charge	NA	$5,700	NA	$7,500	NA	$8,300
Total	**$6,062,000**	**$38,250**	**$7,769,000**	**$44,000**	**$8,201,000**	**$46,900**

Maywood Park Proposed Gravity Sewer
Ongoing Homeowner Costs – Updated April 2023

Property Taxes (assume G.O. bond approval, but funding through state or federal agency)

	June 2017		November 2021		April 2023	
	Per Year	Per Month	Per Year	Per Month	Per Year	Per Month
Example A: 4% interest, 25-yr term	$1,475.48	$122.96	$1,638.71	$136.56	$1,726.85	$143.90
Example B: 4% interest, 40-yr term	$1,164.57	$97.05	$1,293	$107.78	$1,362.97	$113.58
Portland Sewer Billing (based on 4.9CCF average use in Maywood Park)		$55.00		$58.41		$60.52
Other Costs	The above costs do not include costs for private sewer connections or SDCs. There may be additional Maywood Park sewer billing depending on the final intergovernmental agreement (IGA) with the City of Portland.					

Estimated Range of Project Costs and Annual and Monthly Payments
Based on 25-year GO bond term

Project Cost	Average Homeowner Cost	4 Percent		5 Percent		6 Percent	
		Annual	Monthly	Annual	Monthly	Annual	Monthly
$7,500,000	$24,671.05	$1,579.24	$131.60	$1,750.47	$145.87	$1,929.94	$160.83
$8,000,000	$26,315.79	$1,684.53	$140.38	$1,867.17	$155.60	$2,058.60	$171.55
$8,500,000	$27,960.53	$1,789.81	$149.15	$1,983.87	$165.32	$2,187.26	$182.27
$9,000,000	$29,605.26	$1,895.09	$157.92	$2,100.57	$175.05	$2,315.92	$192.99
$9,500,000	$31,250.00	$2,000.37	$166.70	$2,217.26	$184.77	$2,444.58	$203.72
$10,000,000	$32,894.74	$2,105.66	$175.47	$2,333.96	$194.50	$2,573.25	$214.44

MAYWOOD PARK PROPOSED SEWER PROJECT

Opinion of Probable Costs (OPC) Basement Service – Gravity Mains – Updated April 2023			
Table 4.3 from 2019 Wastewater Facilities Plan			
	2017	**2021**	**2023**
Subtotal	$4,011,000	$4,687,000	$4,905,000
Contingencies	$802,000	$940,000	$985,000
Engineering and Construction Observation	$802,000	$940,000	$985,000
Surveying	$80,000	$150,000	$160,000
City of Portland Branch Charge (11 total)	$65,000	$80,000	$93,000
Easements	$10,000	$15,000	$20,000
Permitting	$90,000	$200,000	$210,000
Legal and Administration	$201,000	$200,000	$210,000
OPC TOTAL	**$6,061,000**	**$7,212,000**	**$7,566,000**
Portland Line and Branch Charge (35 total)	$515,384	$557,000	$635,000
Total (Public Improvements)	**$6,576,384**	**$7,769,000**	**$8,201,000**

Individual Sewer Connection Homeowner Cost - Updated April 2023			
Pg 4.9 from 2019 Wastewater Facilities Plan			
	2017	**2021**	**2023**
Private service laterals construction	1,958,000	$2,288,000	$2,394,000
Average cost per lateral	$7,450	$8,700	$9,100
Front Yard Connection (187 each)	$4,000	$4,740	$4,890
Easy Backyard Connection (38 each)	$7,000	$8,180	$8,560
Hard Backyard Connection (38 each)	$11,000	$12,850	$13,450
Decommissioning	$2,000	$2,300	$2,440
Permitting, Home and yard restoration, miscellaneous	$2,000	$2,200	$2,500
Average private sewer connection	**$9,450**	**$10,900**	**$11,600**

MAYWOOD PARK PROPOSED SEWER PROJECT

City of Maywood Park Onsite System O&M Present Worth Worksheet (40-year) – Updated April 2023

SEPTIC SYSTEMS

1) Septic System Item Cost (in today's dollars)

	Year of Operation																
O,M,&R Item	**2.5-year**	**5-year**	**7.5-year**	**10-year**	**12.5-year**	**15-year**	**17.5-year**	**20-year**	**22.5-year**	**25-year**	**27.5-year**	**30-year**	**32.5-year**	**35-year**	**37.5-year**	**40-year**	
Proactive Maintenance	$160		$160		$160		$160		$160		$160		$160		$160		
Reactive Maintenance		$250				$250				$250				$250			
Septic Tank Pumping		$1,000		$1,000		$1,000		$1,000		$1,000		$1,000		$1,000		$1,000	
Major Repair				$1,050								$1,050					
Major Replacement								$10,500									
Complete Replacement																$21,000	
Totals	**$160**	**$1,250**	**$160**	**$2,050**	**$160**	**$1,250**	**$160**	**$11,500**	**$160**	**$1,250**	**$160**	**$2,050**	**$160**	**$1,250**	**$160**	**$22,000**	**$43,880**

2) Annual Cost per Service[1]

Uniform Sinking Series Factor[1]	0.38827449	0.18462711	0.11696168	0.08329094	0.06321723	0.18462711	0.04054835	0.03358175	0.02823159	0.02401196	0.02061356	0.0178301	0.01551872	0.01357732	0.01193099	0.01052349	Annual	Monthly
Item's Annual Cost (in today's dollars)	$62.12	$230.78	$18.71	$170.75	$10.11	$230.78	$6.49	$386.19	$4.52	$30.01	$3.30	$36.55	$2.48	$16.97	$1.91	$231.52	$1,443.21	$120.27

[1.] Calculation based on uniform sinking series factor: $i/((1+i)^n-1)$ where I = interest rate = 4% and n = years.

3) Septic System Present Worth

	Cost per Connection	ESPW Factor[2]	System Present Worth
Annual Costs (from (1) and (2) above)	$1,443.21	19.7928	$28,565
Annual Electrical Cost	$20.00	19.7928	$396
Total	**$1,463.21**		**$28,961**

[2.] Equal Series Present Worth factor: ((1+i)n-1)/(i(1+i)n) where I = interest rate =4% and n = 40 years

ATT (ADVANTAX) SYSTEM

1) ATT (Advantax) System Item Cost (in today's dollars)

	Year of Operation															
O,M,&R Item	**2.5-year**	**5-year**	**7.5-year**	**10-year**	**12.5-year**	**15-year**	**17.5-year**	**20-year**	**22.5-year**	**25-year**	**27.5-year**	**30-year**	**32.5-year**	**35-year**	**37.5-year**	**40-year**	
Proactive Maintenance		$1,600	$1,600	$1,600	$1,600	$1,600	$1,600	$1,600	$1,600	$1,600	$1,600	$1,600	$1,600	$1,600	$1,600	$1,600	
Reactive Maintenance		$250				$250				$250				$250			
Septic Tank Pumping		$1,000		$1,000		$1,000		$1,000		$1,000		$1,000		$1,000		$1,000	
Major Repair				$1,050								$1,050					
Major Replacement								$21,000									
Complete Replacement																$50,000	
Totals	**$0**	**$2,850**	**$1,600**	**$3,650**	**$1,600**	**$2,850**	**$1,600**	**$23,600**	**$1,600**	**$2,850**	**$1,600**	**$3,650**	**$1,600**	**$2,850**	**$1,600**	**$52,600**	**$106,100**

2) Annual Cost per Service[1]

Uniform Sinking Series Factor[1]	0.38827449	0.18462711	0.11696168	0.08329094	0.06321723	0.18462711	0.04054835	0.03358175	0.02823159	0.02401196	0.02061356	0.0178301	0.01551872	0.01357732	0.01193099	0.01052349	Annual	Monthly
Item's Annual Cost (in today's dollars)	$0.00	$526.19	$187.14	$304.01	$101.15	$526.19	$64.88	$792.53	$45.17	$68.43	$32.98	$65.08	$24.83	$38.70	$19.09	$553.54	$3,349.90	$279.16

[1.] Calculation based on uniform sinking series factor: $i/((1+i)^n-1)$ where I = interest rate = 4% and n = years.

3) ATT System Present Worth

	Cost per Connection	ESPW Factor[2]	System Present Worth
Annual Costs (from (1) and (2) above)	$3,349.90	19.7928	$66,304
Annual Electrical Cost	$40.00	19.7928	$792
Total	**$3,389.90**		**$67,095**

[2.] Equal Series Present Worth factor: ((1+i)n-1)/(i(1+i)n) where I = interest rate =4% and n = 40 years