

SECTION 9 - CAPITAL FACILITIES PLAN

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9.1 INTRODUCTION

This Section of the Plan provides an overall Capital Facilities Plan (CFP) for Midway Sewer District which outlines the recommendations detailed in previous sections of the Plan. The CFP is presented in Table 9-1 and provides a summary of recommended projects, identifies estimated costs of each project and provides recommended scheduling and financing recommendations for each.

9.2 PROJECT RECOMMENDATIONS

The projects recommended in Table 9-1 are the result and summary of the analysis and recommendations detailed in Sections 6 (Collection System Analysis and Recommendations) and Section 9 (Treatment Plant Analysis and Recommendations). Each project, or project area, is shown on the Sewer System Plan Map provided at the back of this document.

Although the recommended projects are as concise as possible, in some cases the magnitude of projects required can not be identified without additional analysis and monitoring. This is especially true in the case of rehabilitation projects, where video inspection of pipelines is required to determine the extent and priority of the projects. In these cases, a worst case scenario was assumed to provide the District with more conservative budgeting information.

9.3 COST ESTIMATES

Project cost estimates are based on the current, local, August 2000 Engineering News Record (ENR) construction cost index of 7150. Estimated recommended improvement costs include: construction costs, tax, overhead costs for project engineering, legal and administrative services (25%) and a contingency factor (varied between 25% and 40% depending on project size and estimated scope).

The cost estimates outlined herein are based on industry standards, engineering experience and documented costs of similar recent construction work. Other factors affecting cost estimates include the complexity of the project and the known and unknown constraints which may be associated with the construction. The projects outlined have been identified in conceptual terms and it is important to note that

further analysis and actual design of the improvements could significantly impact the cost of the project from the given estimate. Prior to the initiation of the projects outlined in the CFP, specific design criteria should be reviewed and the cost estimates should be updated to reflect current conditions.

9.4 PROJECT SCHEDULING

Recommended project scheduling has been developed for the projects included in the Capital Facilities Plan. The projects have been prioritized according to the needs determined by a combination of engineering analysis performed in this planning process, the District's existing Capital Facilities Plan, the transportation planning schedules for the cities within which the District operates and the Washington State Department of Transportation and information provided by District staff. Although a detailed six year improvement schedule has been developed, schedules projects identified beyond 2006 are more generally defined.

It is recommended that this CFP be reviewed annually to confirm the actual construction program for the year as well as transportation improvement projects scheduled by cities within which the District operates and the State Department of Transportation. Project priorities should be modified as required to accommodate more current information, key community issues and available funding. As mentioned previously in this Section, the magnitude of several of the rehabilitation projects identified in the CFP will be determined from additional monitoring and analysis. Similarly, projects such as those associated with the Pacific Ridge development are dependent on significant changes in land use and redevelopment. Although this Plan is required to be updated every six years, it is important that the District staff review project priorities as additional studies and analyses are performed and that the CFP is adjusted accordingly.

Table 9-1
Midway Sewer District
Capital Facilities Plan

Project	Project Description	Estimated Cost ¹	Project Schedule ²	Recommended Financing ³
11. Telemetry Improvements	Installation of SCADA telemetry system to monitor all pump stations.	\$394,000	2002	Rates
12. 7 th Avenue Pump Station Study	Pump Station analysis in conjunction with "Regional" Pump Station (See Project 8).	\$40,200	2003-2004	Rates
13. Bow Lake Trunk	Replace trunk east of Bow Lake to prevent potential surcharging. Rehabilitation dependent on monitoring results and schedule assumes monitoring before possible replacement. Cost assumes replacement and upsizing of approximately 950 LF with 10-inch pipe.	\$318,000	2004-2020	PWTF, Rates
14. Annual Infiltration and Inflow Control Program	Continue implementation of annual infiltration and inflow identification and rehabilitation program.	\$150,000 to \$375,000	On-going	Rates
15. South 247 th Street and Marine View Drive Replacement	Replace line with approximately 550 LF of 8-inch main.	\$40,200	2003	PWTF, Rates
16. Pacific Ridge Area B Improvements (South 220 th Street Trunk)	Approximately 3,550 linear feet of 24-inch main and approximately 1,100 linear feet of 18-inch main	\$1,780,300	ARBID	GFC, DE
17. 13 th Place South from South 256 th St. to South 261 st St.	Replace lines with approximately 1,650 LF of 8-inch main.	\$475,000	2003	PWTF, Rates
18. South 248 th St. from 22 nd Ave. S to 23 rd Ave. S	Replace lines with approximately 400 LF of 8-inch main.	\$117,000	2003	PWTF, Rates

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19. Regional Pump Station @ Kent-Des Moines Road and 16 th Avenue South	Construct Regional Pump Station to replace Interceptor Station, improve capacity and address projected future system flows. Convert existing 18-inch gravity/siphon to force main. Sizing to be based on flow monitoring, I & I reduction, and projected population increases. Study Pump Station	\$65,000 \$1,905,000	2006-2008	PWTF, Rates
20. Pacific Ridge Area C Improvements	Approximately 2,700 linear feet of 15-inch main, approximately 4,350 linear feet of 10-inch force main and a new Pump Station or contribution to Regional Pump Station (Project 19).	\$3,175,000	ARB	GFC, DE
21. Pacific Ridge Area A Improvements (17 th to 20 th Avenue South Replacement)	Replace and upsize approximately 1,600 linear feet of main.	\$530,475	ARB	GFC, DE
22. Service to unsewered Northwestern portion of District	Provide service to unsewered area in northwestern portion of District by installing approximately 41,000 linear feet of main.	\$11,475,000	ARB	ULID, DE, GFC
23. Star Lake Road	Replace/upsized 1,500 LF of existing 8-inch main with 12-inch pipe to increase capacity. The project will be dependent on continued flow from Lakehaven Utility District and cost estimate does not include potential cost sharing.	\$553,000	2005	PWTF, Rates, Cost share with Lakehaven
24. Miscellaneous Sewer Service	Provide service to miscellaneous unsewered areas within District.	To be determined at time service is requested	ARB	ULID, DE, GFC

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Treatment Plant Improvements		2000	Rates
1T. A-S Recycle	Add 6-inch recycle line from tank effluent back to trickling filter feed.	\$59200	Rates
2T. Source Control Program	Set up and operate a more aggressive source sampling and control program.	\$25,000 set-up \$26,500 annually	Rates
3T. Headworks, Sludge Filter and Roofing	Add another sludge filter press, roofing over the UV systems and secondary clarifiers and remove bar screens and add rotary fine screens in headworks.	\$2,770,000	Rates
4T. Clarifiers	Two additional primary clarifiers, two additional secondary clarifiers, piping, pumps, meters, etc.	\$3,600,000	PWTF, Rates
5T. Trickling Filter	Add additional trickling filter and increased solids contact volume, piping, pumps, meters, etc.	\$1,300,000	PWTF, Rates
6T. Submarine Outfall	Approximately 2,100 linear feet of 48-inch diameter outfall with a multi-port diffuser.	\$1,700,000 Includes funds spent through 7/2000	PWTF, Rates Ongoing
7T. Outfall Highway Crossing	Bore 48-inch diameter outfall through fill at Des Moines Memorial Drive.	\$400,000 Includes funds spent through 7/2000	PWTF, Rates Ongoing

Notes:

- 1 Cost estimates are in 2000 dollars and include construction, engineering, surveying, inspection, taxes, administration, etc.
- 2 ARBD - As Required by Development
- 3 PWTF - Public Works Trust Funding, GFC - General Facility Charge, LFC - Local Facility Charge, DE - Developer Extension