



DES MOINES WATER WORKS
Board of Water Works Trustees

Agenda Item No. III-C
Meeting Date: June 27, 2017
Chairperson's Signature Yes No

AGENDA ITEM FORM

SUBJECT: Receive and File Five-Year Capital Improvement Plan

SUMMARY:

Finance and Engineering have worked cooperatively to establish a process for developing and maintaining a five-year capital improvement plan (CIP.) During the 2015 budgeting process, we began by developing a three-year CIP. During the 2016 budgeting process, we expanded the CIP to a five-year CIP for 2016-2020. Updating the CIP for 2017-2021 was delayed beyond the normal budget cycle in order to incorporate data from the Long-Range Plan.

The 2017-2021 five-year CIP was reviewed with the Finance and Audit Committee at their June meeting.

FISCAL IMPACT:

None at this time. Information from this five-year capital improvement plan will be used to develop capital budgets that will be presented to the Board for action in future years.

RECOMMENDED ACTION:

Receive and file the Five-Year Capital Improvement Plan.

BOARD REQUIRED ACTION:

Motion to receive and file the Five-Year Capital Improvement Plan.

_____/_____ Peggy Freese (date) Chief Financial Officer	_____/_____ (date)	_____/_____ William G. Stowe (date) CEO and General Manager
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Attachments: Memo and attachments

MEMORANDUM

DATE: June 20, 2017

TO: William Stowe, CEO and General Manager

FROM: Peggy Freese, Chief Financial Officer
Danny J. Klopfer, Engineering Services Manager

SUBJECT: 2017-2021 Five-Year Capital Improvement Plan

Capital improvement planning was first introduced to our budgeting process in 2015 with the development of a 3-year Capital Improvement Plan (CIP) for 2015, 2016, and 2017. In the 2016 budget cycle, it was expanded to a 5-year CIP for 2016-2020.

Several sources of information were utilized in the creation of the 2016-2020 CIP including:

- 2020 Long Range Plan (completed in 2009)
- Engineering Services Manager's list
- Collaborative list from Water Production, Water Distribution, and Engineering Leadership
- List of needs from Engineering staff
- DMWW Park Foundation planning
- Disinfection By-Products Report
- Nitrate Management Report
- CIRDWC Technical Committee (future water needs)
- Individual meetings with several wholesale customers

The 5-year CIP for 2016-2020 totaled \$241,023,100 of which \$57,444,028 was to be paid by other entities, leaving planned funding by DMWW at \$183,579,072. \$85,546,083 of the \$183,579,072 was attributed to disinfection by-products and nitrate mitigation.

Since the development of the 2016-2020 CIP several things have occurred that have impacted our planning process. These items include treatment plant process improvements that assist in lowering disinfection by-products therefore allowing us to modify our management plan, wetland piloting, and creation of the 2040 Long Range Plan.

The completed 2040 Long Range Plan will include:

- Population and water demands for every 5 years until 2040
- Standards of service for entire system
- Hydraulic model of our system(s)
- Capital improvements for water source, treatment, pumpage, storage, and transmission for each 5-year period
- Water main replacement model with main break targets through 2040 for our existing distribution system(s)

As we updated the 2016-2020 CIP into the 2017-2021 CIP, several additional items were completed beyond the previous process:

- Engineering Services Manager's list was updated
- Collaborative list from Water Production, Water Distribution, and Engineering Leadership was re-evaluated
- Needs list from Engineering staff was refined
- DMWW Park Foundation work was updated to current schedule
- Draft of 2040 Long Range Plan was incorporated into the updated CIP
- Timing and content of projects were updated to coincide with the 2040 Long Range Plan
- All costs were updated to the year the project is forecasted to be constructed

The condensed 2017-2021 CIP is attached. Projects that may be completed and paid for by other entities such as DMWW Park Foundation and the cities of Polk City and Norwalk are not included. Numbers used for 2017 are from the capital budget approved by the Board at the November 2016 Board Meeting. The five-year plan totals \$178,185,480 of which \$18,943,971 is included in the 2017 budget, leaving \$159,241,509 for 2018-2021.

A condensed comparison of the 2016-2020 CIP to the 2017-2021 CIP is attached. Items added or that were moved forward, several of which came from the 2040 Long Range Plan, include:

- Design of Saylorville Water Treatment Plant expansion
- 2 new aquifer storage and recovery wells
- Increased funding for water main replacement
- Additional feeder mains
- Fleur Drive Filter Gallery pipe painting and bolt replacement
- Des Moines River wellfield

Items removed or delayed include:

- Maffitt presedimentation
- Wetland in Water Works Park
- Additional feeder mains
- Water storage tank aeration for disinfection by-products
- Tank painting

The CIP is intentionally comprehensive, with over \$178 million in investments identified. It establishes a path of anticipated needs based on a defined set of assumptions. There is no expectation that all the improvements will be completed in the years noted. Some improvements may be deferred or eliminated altogether, but the five-year CIP demonstrates today's prioritization of infrastructure plans, under constant review. The CIP will change as assumptions are modified based on actual experience, such as regulatory requirements, demand growth, and water quality vulnerabilities. Priorities of projects may be subject to many variables.

Many components of the plan are “modular,” and may be completed in smaller increments over time to allow for more flexibility in financing and to ensure investments meet changing priorities. Des Moines Water Works is committed to managing and optimizing available financial resources. Financing may involve a combination of bonding, grants, water rates, purchased capacity, SRF loans.

Staff is beginning work on the 2018 operating and capital budgets which the Board will approve in the fall. The CIP will provide the basis for the 2018 capital budget, with further refinement of the numbers occurring as we go through the budget development process.

Attachments:

- 2017-2021 CIP Condensed
- 2016-2017 Condensed CIP Comparison

**5 Year CIP
2017-2021**

	2017	2018	2019	2020	2021	5 Year
Customer Service - Meters, MTUs	1,060,999	1,146,618	1,203,962	1,250,156	1,250,156	5,911,891
Information Technology						
Normal Replacement	408,785	908,300	655,000	655,000	513,250	3,140,335
CRM	1,889,363	2,401,996	-	-	-	4,291,359
PeopleSoft	-	-	2,075,000	1,575,000	-	3,650,000
OCEO	144,941	-	-	-	-	144,941
Water Distribution	868,744	841,907	867,524	902,370	960,451	4,440,995
Water Production						
Vehicle & Equipment Replacement	200,000	450,000	450,000	450,000	450,000	2,000,000
Normal WP Replacement	592,906	750,000	750,000	750,000	750,000	3,592,906
TOTAL UTILITY w/o Engineering	5,165,738	6,498,820	6,001,486	5,582,526	3,923,857	27,172,426
Engineering						
Plant & Raw Water Increased Capacity	1,219,700	5,671,433	6,732,846	10,776,516	9,877,822	34,278,316
Distribution Increase Capacity	-	7,049,783	2,666,767	-	3,539,905	13,256,455
Water Quality	5,933,711	16,135,667	8,028,173	1,837,069	-	31,934,620
WSI	4,237,180	7,648,002	8,242,714	8,580,960	8,523,460	37,232,315
Uncategorized	2,387,643	12,704,402	6,494,501	7,105,169	5,619,631	34,311,347
TOTAL ENGINEERING	13,778,233	49,209,287	32,165,001	28,299,714	27,560,818	151,013,054
TOTAL UTILITY	18,943,971	55,708,107	38,166,487	33,882,240	31,484,675	178,185,480

	2016	2017	2018	2019	2020	2021	5 YEAR
2016 - 5 YEAR CIP	10,766,566	48,064,451	57,019,143	49,564,480	18,164,431		183,579,072
2017 - 5 YEAR CIP		18,943,971	55,708,107	38,166,487	33,882,240	31,484,675	178,185,480
Added to 5 Year CIP							
SWTP - Additional RO Skid							1,876,410
SWTP - Expansion Raw Water							1,838,800
SWTP - Expansion to 20 MGD							2,096,000
New ASR Well Waukee Feeder Main							6,598,673
New ASR Well Joint East Side							6,677,505
Increase in WSI Funding							7,083,000
Tenny to LP Moon Feeder Connection							2,247,429
Fleur to Hazen Feeder 30"							3,539,905
Filter Gallery Pipe Paint & Bolts							2,371,322
MWTP - PAC & Coagulant Expansion for New Source Water IF Needed							1,116,327
DM River Well Field							9,772,934
Reduced from 5 Year CIP							
Raw Water Maffitt							(3,800,000)
Raccoon River Intake & PS Wetland							(23,153,524)
Joint NW Storage, Pump Station & Feeder Main - pushes out							(3,100,000)
Storage Aeration							(3,773,000)
Tank Painting							(1,500,000)
Joint SW Storage							(3,100,000)