


Internal Monitoring Report

Policy #: EL-2G Infrastructure
Frequency: Annual

Date: April 30, 2014

I certify that the following information is true.

Signed  General Manager

Policy Language:

The General Manager shall not cause or allow conditions, procedures, or decisions that prevent Madison Water Utility from meeting its obligation to serve current and future generations of customers within the City of Madison and its authorized service areas.

Accordingly, the General Manager shall not cause or allow conditions, procedures, or decisions that:

1. Fail to assure that required rates fund all expenditures for timely and prudent capital improvements to existing utility systems, and that those capital improvements are driven by reliability, operational or regulatory requirements, replacement of aging infrastructure, utility relocations for public works and road projects, or extension of the life of existing systems.
2. Fail to identify and plan for resource and infrastructure needs for the provision of water service to customers within the City of Madison and the Madison Water Utility's service areas consistent with a reasonable planning period for that service.
3. Fail to coordinate Madison Water Utility activities and policies with the City of Madison's Comprehensive Plan and other relevant guidelines for community development.
4. Fail to consider participation with other governmental or private entities on regional major water infrastructure or water supply planning projects.

General Manager's interpretation and its justification:

This Executive Limitations policy requires that the Utility budget for, fund, prioritize, plan for, and construct the necessary system improvements to replace and sustain the Utility infrastructure for current and future generations. This policy recognizes that any and all long term planning shall be consistent with and comply with any and all City and regional plans. The Utility has the responsibility to establish, manage, and plan for the necessary water rates to fund all expenditures to meet identified capital and operational requirements. The Utility shall administer and conduct long term facility and system wide comprehensive planning to identify system needs and funding priorities. The Utility shall also maintain routine regular condition assessments of all facilities to allow for the planned upgrade and replacement of facilities to assure the long term capacity of the system to meet established levels of service. The Board has identified four specific areas: financial planning, asset management, long term planning and City and Regional planning as key components of this policy.

Data directly addressing the General Manager's interpretation:

1. *Assure that required rates fund the full cost of utility system capital improvements, and that those capital improvements are prioritized by reliability, operational or regulatory requirements, replacement of aging infrastructure, utility relocations for public works and road projects, or extension of the life of existing systems.*

Madison Water Utility develops an annual capital budget based on the Utility's Water Master Plan, Infrastructure Management Plan, and planned maintenance of the system. Based on the needs of the system, regulatory constraints, identified deficiencies, and planned replacements; projects are prioritized, budgeted, and scheduled.

Recommendations for upgrades and renewals were made in the Water Master Plan and the Infrastructure Management Plan and are being implemented as a part of the Utility's Capital Improvement Program (CIP). Planning level CIP Budget projections are developed for a 5 to 10 year planning horizon. Total annual capital budget capacity is based on the current rate base, the Utility's borrowing capacity, and any anticipated rate increases. To manage rates and ensure that the rate structure will cover anticipated capital expenditures, the Utility has developed and uses a financial planning model to evaluate and project funding needed. Through the use of this model, bond sales are planned and rate increases are developed.

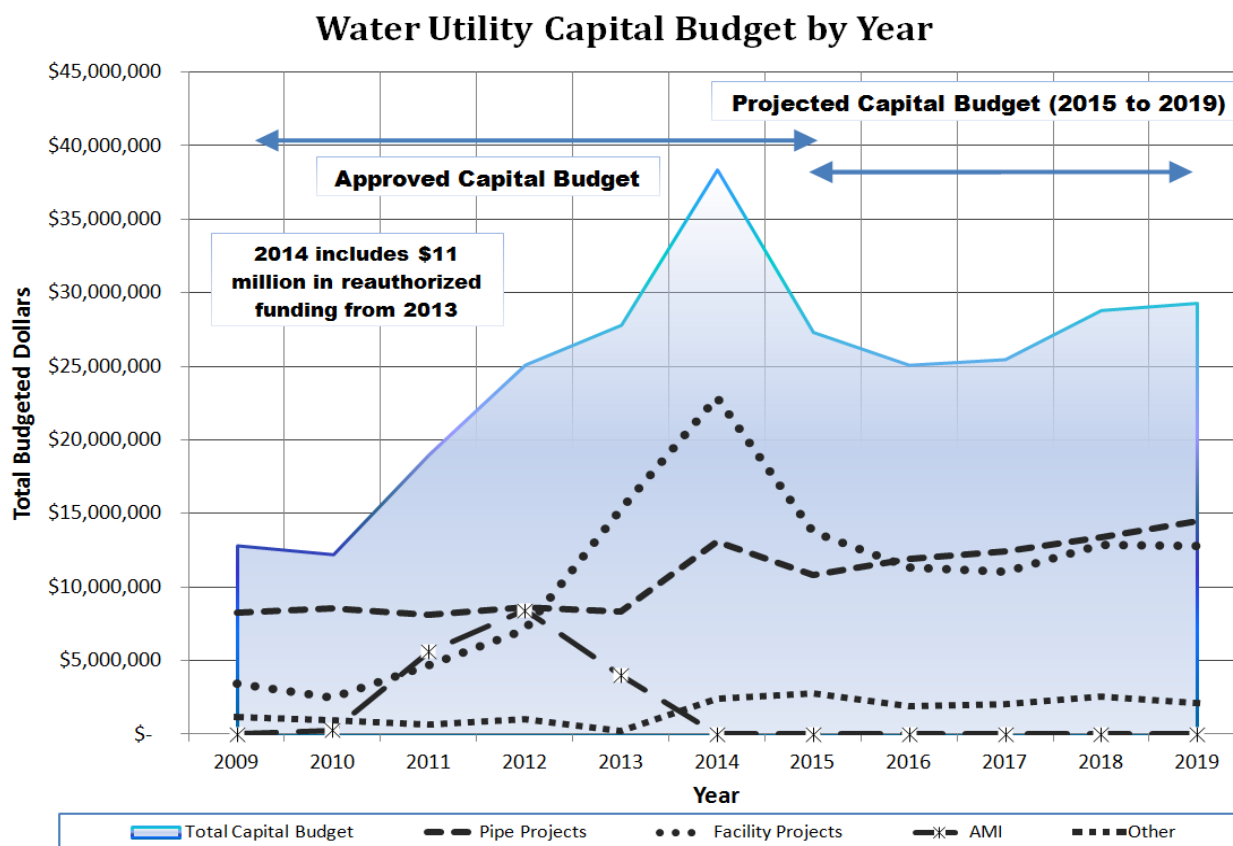
In May and June each year, the next year's capital budget is refined based on need, funding, current conditions, public feedback, and staff availability. The proposed capital budget is submitted first to the Water Utility Board for review and then to the Mayor and the Common Council for approval.

A copy of the approved 2014 Capital Budget is attached for information and use. The 2014 capital budget indicates authorized projects for 2014 and provides projections to the year 2019. A graph of the approved capital budget from 2009 to 2014 and a graph of the projections to the year 2019 is included below. The graph shows the total capital budget by year and also the breakdown by 1) pipe projects; 2) facility projects; 3) AMI; and 4) other.

The graph indicates a sharp increase in the capital budget to the year 2014. There is a significant increase in the projected budget in 2014 due to a backlog of projects resulting from the implementation of the AMI project. Another significant reason for the sharp increase is capital projects tend to be for more than one year and funds are reallocated from previous years to pay for project completions. Projects started in 2013 and continuing into 2014 were reallocated therefore driving up the annual budget for 2014. The reallocation for 2014 from 2013 is over \$11 million. The "new" budget for 2014 is approximately \$27 million.

The Utility is dedicated to increasing spending on pipeline and facility replacement and upgrades to maintain the infrastructure. Following a very sharp increase in the annual capital budget after the adoption of the Infrastructure Management Plan, the annual capital budget has leveled out around 2014 and is projected to remain in the \$25 to \$30 million range. A steady increase in pipeline renewal budget throughout the projected planning period indicates an increase from just over \$8 million to over \$13 million per year in the 10 year period. Facility

spending is also showing a significant upward trend, moving from \$4 million to over \$15 million per year.



Capital budget projects currently underway for 2014 include over 6 miles of water main replacement, major system improvements on Verona Road and East Johnson, over \$1 million in pipe lining work, addition of a generator at Well 26, reconstruction of Booster Station 106, reconstruction and addition of filters at Well 7, start of the design for a new source of supply for Pressure Zone 4 with Well 31 and significant reservoir repair work at Well 24.

I report compliance.

2. *Identify and plan for resource and infrastructure needs for the provision of water service to customers within the City of Madison and the Madison Water Utility's service areas consistent with a reasonable planning period for that service.*

A system wide Water Master Plan has been used by Madison Water Utility for long term system planning since 1964. The plan is routinely updated every 5 to 8 years and outlines the needed improvements to facilities and piping systems. The latest version of the Master Plan was developed from 2004 to 2006 and approved by the Water Utility Board in December 2006.

The Water Master Plan is a key planning tool for the preparation of the annual capital budget. During 2010 to 2012 the area east of the Yahara River including the north side and the southeast corner of the City, was evaluated for long term water demand needs. This project was titled the "East Side Water Supply Project". Evaluation of the balance of the system was scheduled to start in 2013. With the downturn of the economy 2008 to 2012 and the overall lack of growth, the start of this update has been delayed until the second half of 2014. The East Side Water Supply Plan and the 2014 study will constitute the Utility's updated Water Master Plan.

Madison Water Utility completed an Infrastructure Management Plan in 2005 with the objective of assessing all assets and planning for long term maintenance and replacement. Every facility in the system was surveyed and its condition assessed and rated. Piping system condition was determined by computer modeling, performance history, age, size, and main break records. The information gathered during the preparation of the Infrastructure Management Plan is used to identify needs, prioritize maintenance and replacement, and assist in the development of the annual capital budget. Updating the Infrastructure Management Plan is also expected to start in the second half of 2014 and much of the information developed with this Plan will be merged into the Utility's planned Asset Management Plan.

Since completion of the 2005 Infrastructure Management Plan, the pipe replacement budget has increased by over 100% and projects have been completed to upgrade existing facilities. As noted in the Capital Budget graph included above, the replacement piping budget continues to grow every year. Work on wells, pump stations, and reservoirs is starting to ramp up and will continue to do so over the next 5 to 8 years. Routine inspections and facility assessments are continuing and work is planned and prioritized as recommended by the inspections.

Utility staff also monitor, assess and prioritize projects throughout the year. Identified repair and replacement projects are included in the Utility capital budget based on need and criticality of the asset.

The Utility is starting the process of developing an asset management system for the Utility. Asset management will provide a framework to monitor Utility assets and provide a basis for making reinvestment decisions and setting priorities. It is expected that an asset management system will take several years to fully implement and refine. The Utility will use condition assessments and failure analysis from the asset management process to formulate capital budgets, and maintain and renew the system for generations to come.

I report compliance.

3. *Coordinate Madison Water Utility activities and policies with the City of Madison's Comprehensive Plan and other relevant guidelines for community development.*

Madison Water Utility works closely with the City Planning Department in the long term planning process for the Utility. Since 1964 the Utility has used a Water Master Plan to guide the development and expansion of the system. Population estimates, development patterns and

neighborhood plans are drawn from the City of Madison Planning Department's Comprehensive Plan. Utility engineering staff relies on the Planning Department to revise and update the City Comprehensive Plan with any updates to community development guidelines, changes in Zoning codes and revisions to economic development projections within the planning area.

I report compliance.

4. *Participate with other governmental or private entities on regional major water infrastructure or water supply planning projects.*

No major regional water infrastructure or water supply planning projects are currently under way. Madison Water Utility participates in regional water groups as they develop and is an advocate of regional planning. The Utility has facilitated preliminary discussions within Dane County regarding regional groundwater management. Utility employees participate on water policy and research committees facilitated by Wisconsin Water Association.

I report compliance.