

Internal Monitoring Report

Policy #: EL-2G Infrastructure
Frequency: Annual

Date: May 26, 2015

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.*

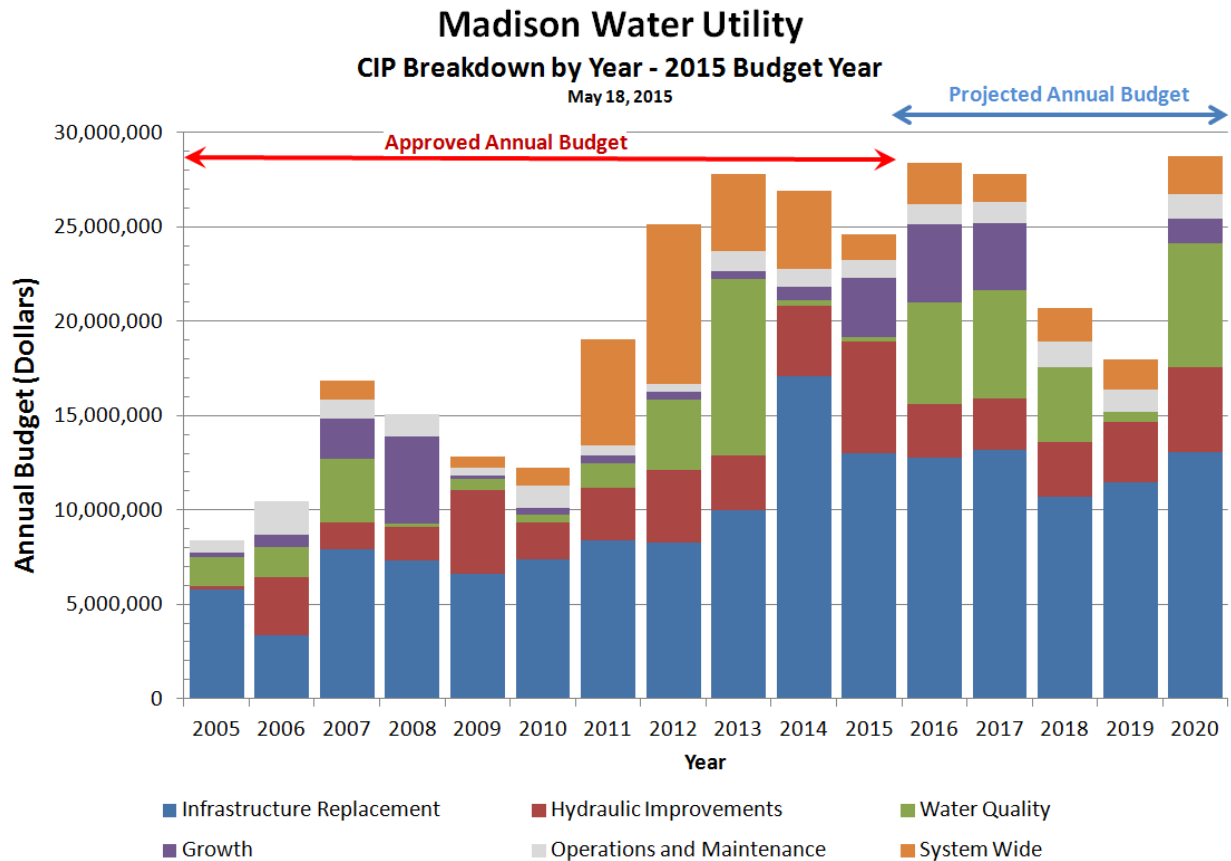
Each year Madison Water Utility develops an annual capital improvement (CIP) budget based on the Utility's Water Master Plan, level of service policies, the Utility's Infrastructure Management Plan, other known capital improvement needs, and itemized maintenance of the system. Based on all of these factors, regulatory requirements, identified deficiencies, and planned replacements; projects are prioritized, budgeted, and scheduled over a five year period. This five year capital improvement program list (CIP) is reviewed and updated annually to ensure that it meets the critical needs of the Utility and that service to customers meets minimum service levels for the Utility.

Projects included in the CIP are those needed to bring the system up to minimum service levels established by the Utility. These projects include hydraulic upgrades and long term facility replacements identified and prioritized in the Water Master Plan, the Infrastructure Management Plan, and the East Side Water Supply Plan. Prioritized projects are implemented as a part of the Utility's Capital Improvement Program (CIP). The Utility currently uses a 5 to 10 year projection for the planning level CIP Budget projections. The Utility's total annual capital budget capacity is based on the current and projected rate base and the Utility's borrowing capacity. Water rates and any projected rate increases are in compliance with the Water Board policy on the affordability of water. To manage water rates and ensure that the rate structure will cover anticipated capital expenditures and provide infrastructure renewal, the Utility has developed and uses a financial planning model to evaluate and project rate needs based on projected capital spending. As a part of the 2015 rate case submitted to the PSC, revenue projections and future rate increases were developed within the Utility water rate policy guidelines. Based on these rate projections and the Utility's borrowing capacity, the Capital Budget going forward is limited to no more than \$30 million per year (2015 Dollars). This will be reflected in the development of the 2016 Capital Budget and the five year projection included with the capital budget submitted to the Water Utility Board.

During 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 Water Utility 2015 Capital Budget prepared and approved in 2014 is attached for information and use. The 2015 capital budget indicates authorized projects for 2015 and provides projections through the year 2020. A graph illustrating the approved annual capital budgets from 2005 to 2015 and the projected annual budgets approved in 2015 through the year 2020 is included below. The graph shows the total capital budget by year and also the breakdown by infrastructure replacement, hydraulic improvements, water quality

improvements, growth, operations and maintenance, and system wide projects. This graph illustrates that the Utility has aggressively increased capital budget spending over the past decade to replace and upgrade its aging infrastructure.



Historically CIP spending has been budgeted for the year in which the construction project is bid. This process allowed the contract to be issued and fully funded within the approved budget. The majority of facility projects executed by the Utility span several years starting with conceptual development and then moving to final design and construction. This skews the perception of spending in the budget and requires a significant routine reauthorization component in the budget from year to year. For 2016 forward, a budget based on projections of actual spending will be developed with the objective of budgeting spending in the year actual costs are incurred. Compared to prior CIP's, this process spreads out costs and provides a better picture of spending and borrowing needs.

Following the completion of the Infrastructure Management Plan in 2005, the Utility dedicated itself to actively funding pipeline and facility replacement and upgrades to sustain and renew system infrastructure. Reflecting that effort, funding of the CIP in recent years has risen to the \$25 to \$30 million range with an associated increase in borrowing. Continuing at this funding level without aggressive rate increases above current policy guidelines is not possible. Going forward, the CIP will be funded at a level of no more than \$20 million per year (2015 dollars). This funding level reflects a significant commitment to infrastructure renewal. This effort far

exceeds that done by other utilities across the State of Wisconsin and the majority of utilities across the country.

The Utility is in the process of hiring an Asset Manager. This new position will coordinate the process of developing and implementing an Asset Management Program for the Utility. The Asset Management Program will assess and catalogue the condition of all of the Utility's assets and develop a long range process to maximize the value of all assets. Through a process of assessment, risk analysis, preventive maintenance and planning, the Utility's investment will be maximized and a long term plan for system renewal will be implemented.

Capital budget projects currently underway for 2015 include over 7 miles of water main replacement, over \$1 million in pipe lining work, completion of the reconstruction of Well 7, reconstruction of the Lake View Reservoir, reconstruction of the Paterson Street Operations Center, the addition of the first new well since 2006, Well 31, upgrades to Booster Pumping Station 115 and the conversion of Well 12 to a two zone well. With the exception of Well 31, a much needed project for reliability and redundancy in the southeast corner of the system, all of the projects are renewal and upgrades of existing facilities. Very little current spending within the CIP is investing in facilities required to support growth or expansion of the system.

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 10 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 and water quality 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. It is expected that the update of the Water Master Plan will occur in 2015 and 2016 and will shape the development of the system for the next 20 years.

Madison Water Utility completed its first Infrastructure Management Plan in 2005. This Plan evaluated and documented the condition of the Utility's assets with the objective of planning and budgeting for long term maintenance and replacement. 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.

Madison Water Utility is starting the process of developing an asset management program for the Utility. The first step in this process is to hire an Asset Manager to develop and implement the program. The asset management program will provide a framework to monitor the condition of Utility assets and provide a basis for making reinvestment decisions and setting priorities. It is expected that an asset management program will take several years to fully implement and refine.

Since completion of the 2005 Infrastructure Management Plan, the pipe replacement budget has increased by over 350% as the Utility works to replace an aging water distribution system. The Utility has approximately 400 miles of pipe to replace over the next several decades. Only critical facility upgrade projects have been completed over the past 10 years due to budget limitations. With the downturn of the economy in 2008/2009 the Utility was able to turn its attention to upgrading existing facilities. It is expected that work on wells, pump stations, and reservoirs will ramp up over the next several years. Routine inspections and facility assessments are continuing and work is planned and prioritized as determined by the inspections.

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.*

As part of the Master Planning process, Madison Water Utility works closely with the City Planning Department to ensure coordination and compliance with City long term planning efforts. Since 1964 the Utility has used a Water Master Plan to guide the development, improvement, and expansion of the drinking water system. Population estimates, development patterns and neighborhood plans are drawn from the City of Madison Planning Department's Comprehensive Plan and other planning documents. Utility engineering staff relies on the Planning Department to revise and update the City Comprehensive Plan per community development patterns and 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.*

During the past year, no major regional water infrastructure or water supply projects were developed or planned. To address regional planning issues, Madison Water Utility participates in regional water groups as they develop and is an advocate of regional water supply planning. Over the years, the Utility has facilitated some high level discussions within Dane County regarding regional groundwater management. Utility management, water quality and engineering staff participate on water policy and research Wisconsin Water Association committees.

I report compliance.