BOARD FOR FINANCING WATER PROJECTS

WORKSHOP

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CAPITAL IMPROVEMENT GRANTS PROGRAM

- Nevada Revised Statutes (NRS) 349.980 to 349.987 describes the Capital Improvement Grants Program and the powers and duties of the Board for Financing Water Projects (Board).

- The Nevada Division of Environmental Protection (NDEP), Office of Financial Assistance (OFA) administers the Capital Improvement Grants Program on behalf of the Board as per NRS 349.982 and Nevada Administrative Code (NAC) 349.430 to 349.574, inclusive.

- NRS 349.982 outlines the Board's authority to establish regulations for participation in the Capital Improvement Grants Program.

POLICIES FOR DISCUSSION

Policies meant to ensure system sustainability

- Fiscal Sustainability Plan
- Capital Asset Replacement Reserves
- Reasonable Water Rates

Policy meant to address Preliminary Engineering Report (PER) structure and project funding

- Construction, Engineering and Contingency

REASON FOR REVIEW

- Provide more consistency between partner funders to reduce burden on utilities
  - Clean Water State Revolving Funds (CWSRF)
  - Drinking Water State Revolving Funds (DWSRF)
  - United States Department of Agriculture-Rural Development (USDA-RD)
  - Governor's Office on Economic Development (GOED)—Community Development Block Grants (CDBG)
- Discuss concerns with certain benchmarks and thresholds
- Address intent of sustainability within a utility

The Board considers a system "viable" or a project "financially feasible" if it is financially supporting the system's future.

NEW POLICY

FISCAL SUSTAINABILITY PLAN (FSP)

- Currently required for all CWSRF as a result of changes to the Clean Water Act.
- Being considered for subsidy projects within the Drinking Water State Revolving fund Intended Use Plan.
- Document not required by USDA-RD or GOED, but the data is used.
- Assistance to utilities to prepare a FSP can be provided at no cost.
- Can be logical sections of a system rather than the entire system.

FISCAL SUSTAINABILITY PLAN (FSP)

- Asset Management
  - Inventory all assets (short-lived 5-15 year assets and long-term 20-100 year assets)
  - Identify “critical” assets (How are users affected by the asset failure?)
  - Document condition and lifespan (Will the asset need to be replaced soon?)
- Asset Maintenance and repair
  - Monthly, quarterly, annually maintenance procedures
- Asset Planning
  - Funding for capital asset replacement (funding reserves)
  - Timeline for capital asset replacement
  - Re-evaluation every 5 years

FISCAL SUSTAINABILITY PLAN (FSP)

Discussion and comments

CAPITAL ASSET RESERVE REQUIREMENT

- Two previously issued policies on Capital Asset Reserve Requirements
  - March 4, 1998

"The amount to be contributed to the fund can be calculated by dividing the grant amount by the total project amount, and multiplying the resulting percentage by the annual depreciation of the entire project."

Funding Agreement Asset(s)	Storage Tank, transmission pipe, and a pump
Annual Depreciation of funded assets	$12,987 (38.5 weighted average years)
Amount of grant in funding agreement	80%
Amount to fund in reserves	$12,987 x 80% = $10,390

Tank	$390,000	60 years
Pipe	$100,000	40 years
Pump	$10,000	15 years

CAPITAL ASSET RESERVE REQUIREMENT

- May 3, 2006

  "The amount to be contributed annually to the account is the present value of an ordinary annuity with a factor of one percent (1%) inflation. The interest rate for calculating the annuity is five percent (5%)."

Funding Agreement Asset(s)	Storage Tank, transmission pipe, and a pump
Annual Depreciation of funded assets	$12,987
Amount of grant in funding agreement	80%
Amount of grant awarded at 80%	$500,000
Present worth of $500,000	NPV = $869,008 Annual = $3,240 for 500 residents

Tank	$390,000	60 years
Pipe	$100,000	40 years
Pump	$10,000	15 years

CAPITAL ASSET RESERVE REQUIREMENT

- 50 grant agreements contain a Capital Asset Reserve Requirement
  - 33 following the 1998 policy
  - 15 following the 2006 policy
  - 2 following a special approved policy ($8,500 per year total for both).

- Approximately $13.1 million in Capital Reserves across all agreements at the end of SFY 2016. This is up $323,362 over SFY 2015.
- Reserve funds have been used to replace water lines and valves, a backhoe, new wells, and PER's to address asset improvements.

CAPITAL REPLACEMENT RESERVE REQUIREMENTS

	Capital Improvement Grants Program	USDA-RD	GOED-CDBG	CWSRF or DWSRF
Reserve Requirement	Yes	Yes	No	No*
Funding based on	Capital asset funded in grant	Short-lived assets of system		
Depreciation basis	Useful life of assed funded in grant	Short-lived asset useful life		
Calculation method	Net present worth using 1% inflation and 5% interest earnings.	Straight-line		
Restricted	Yes	No		

*The CWSRF and DWSRF are considering a reserve condition for principal forgiveness loans.

CAPITAL ASSET REPLACEMENT CHANGES

PREVIOUS POLICY

- Based upon the asset funded in the grant agreement
- Based upon a net present worth using 1% inflation and 5% interest earnings
- Amortized over the asset funded in the grant agreement

PROPOSED POLICY

- Based upon systems short-lived assets
- Amortized over the short-lived asset life

CAPITAL ASSET REPLACEMENT

Discussion and comments

REASONABLE WATER RATE

- Four previously issued policies on reasonable water rates
  - March 4, 1998
    - Result of a 1991 survey of over 90 water systems around Nevada
    - Water usage as high as 22,000 gallons for as little as $30-$40
    - "…customers in a community receiving a grant must pay no less than $30 per month for water before the State contributes grant funds. In communities which are financially stronger, the Board may determine that higher rates are reasonable."
    - "Another way to calculate a reasonable rate is to base it on 1 ½% of median household income."
    - Must fund operations, maintenance, debt service and capital replacement reserves.

REASONABLE WATER RATE

- November 9 , 2006, September 20, 2007 and September 14, 2010
  - "Customers in a community where the median household income (MHI) is at or above the State MHI based on the current US census must pay no less than 2% of the MHI for an average calendar year monthly water usage rate of 15,000 gallons (i.e., 2% x $50,000 = $1,000 per year or $83.33 per month)."
  - "Customers in a community where the MHI is below the State MHI based on the current US census must pay no less than 1 ½ % of the MHI for an average calendar year monthly water usage rate of 15,000 gallons (i.e., 1 ½ % x $24,000 = $360 per year or $30 per month)."
  - Must fund operations, maintenance, debt service and capital replacement reserves.

REASONABLE WATER RATE

- What has changed since September 2010:
  - The US Census Bureau no longer collects MHI on their annual surveys
    - Moved to the 5-Year American Community Survey (ACS) report.
      - The ACS is a relatively new survey conducted by the U.S. Census Bureau. It uses a series of monthly samples to produce annually updated estimates for the same small areas (e.g., census tracts and block groups) formerly surveyed via the decennial census long-form sample. Initially, five years of samples were required to produce these small-area data. The Census Bureau released its first 5-year estimates in December 2010. (ACS website https://www.census.gov/programs-surveys/acs/methodology/design-and-methodology.html).
    - MHI is not necessarily an 'affordability' measure
    - Is the use of MHI an appropriate benchmark on what an individual water system and/or community will require in rates to maintain their specific system?
    - What volume of water – monthly or annually – is considered reasonable for a community?

REASONABLE WATER RATE
AMERICAN COMMUNITY SURVEY (ACS) DATA

Alamo Sewer and Water	2013 ACS	2014 ACS	2015 ACS	2016 ACS
MHI	$48,750	$34,917	$44,007	$47,500
MHI Margin of Error	±19,966	±36,704	±16,813	±16,417
Reasonable Rate (per connection per month)	$60.94	$43.65	$55.01	$59.38

Town of Tonopah	2013 ACS	2014 ACS	2015 ACS	2016 ACS
MHI	$41,688	$41,898	$38,969	$38,600
MHI Margin of Error	±18,145	±27,125	±7,351	±6,926
Reasonable Rate	$52.11	$52.37	$48.71	$48.25

- No proof that a 1.5% or 2% water rate will sustain the individual system.
- MHIs in GREEN are considered 'disadvantaged' or below 80% of the State's MHI.

REASONABLE WATER RATE WATER USAGE

	Average residential gallons	Essential Need (50 gallons per person per day)*	Excess water consumed over essential need
Alamo Sewer and Water	22,000	6,200	+15,800
Town of Tonopah	6,978	6,200	+778
Las Vegas Valley Water District	11,200	6,200	+5,000
Truckee Meadows Water Authority	10,660	6,200	+4,460

*A typical assumed indoor, non-discretionary use to maintain health in a contemporary US home (Teodoro, Manuel P., 2018. *Measuring Household Affordability for Water and Sewer Utilities*. AWWA

REASONABLE WATER RATE REQUIREMENTS

Capital Improvement Grants Program	Based upon a percentage of the communities MHI relative to the State's MHI. Other factors may be considered on a case-by-case basis.
USDA-RD	Based upon what similar systems are charging. Uses a MHI percent if requesting additional grant dollars from federal reserves.
GOED-CDBG	No requirement
CWSRF* and DWSRF*	Based upon a percentage of the communities MHI relative to the State's MHI. However, the communities existing operating, maintenance, debt service, and reserves are analyzed to determine if they are being funded.
Other State SRF's	Based upon a percentage of the communities MHI.

WHAT FINANCIAL INFORMATION IS REVIEWED

Financial Reports	• Financial statements including balance sheet, income statement and cash flows. • Audit opinions on financial statements, internal controls, and single audits. • Water User Rates • Capital Improvement Plans • Debt Management Plans
Ratio Analysis	• Solvency, liquidity, and performance • Current ratio, operating ratio, debt service coverage ratio, cash to total assets
Outstanding balances	• Unrestricted cash and cash in reserves • Outstanding debt
Trends	• Changes in balances and earnings • Changes in demographics (population, unemployment, MHI)
Capacity	• Debt capacity and affordability • New operating costs for proposed system • Management response to financial conditions / audit findings

REASONABLE WATER RATE
WHAT IS NOT CHANGING

Expectation that the system is funding current needs

- Operations
- Maintenance
- Debt service and reserves
- Capital replacement reserves

Expectation that the system will be capable of funding the new project and future needs

- Operations and maintenance of new system
- New debt service and reserve requirements
- New capital replacement reserve requirements

REASONABLE WATER RATE
WHAT IS PROPOSED

PREVIOUS POLICY

- Percentage based upon MHI of the community compared to the State MHI for 15,000 gallons used.
- Economic justification of the project

  (this is being moved to the Construction, Engineering, and Contingency Policy)

PROPOSED POLICY

- Reasonable would be determined on a system-by-system basis for actual and projected costs of operations, maintenance, debt service, capital reserves, and other reserve requirements.
- Governing Board would need to review rates every three (3) years.

REASONABLE WATER RATE

Discussion and comments

CONSTRUCTION, ENGINEERING, AND CONTINGENCY

- Board policy from May 3, 2006
  - Changes will adopt the PER – Rural Utilities Services Bulletin 1780-2 issued April 2013 – jointly approved by U.S. EPA, U.S.D.A., H.U.D. and I.H.S.
  - Address requirements other funding sources have (e.g., Davis-Bacon, American Iron and Steel, etc.)
  - Possibly eliminate duplication between the PER and the Board's Policy

CONSTRUCTION, ENGINEERING, AND CONTINGENCY

- Section 5 a) in the PER: Life Cycle Cost Analysis
  - A life cycle present worth cost analysis (an engineering economics technique to evaluate present and future costs for comparison of alternatives) should be completed to compare the technically feasible alternatives.

CONSTRUCTION, ENGINEERING, AND CONTINGENCY

- Section 6 e) in the PER: Total Project Cost Estimate (Engineer's Opinion of Probable Cost)
  - Provide an itemized estimate of the project cost based on the stated period of construction. Include construction, land and right-of-ways, legal, engineering, construction program management, funds administration, interest, equipment, construction contingency, refinancing, and other costs associated with the proposed project. The construction subtotal should be separated out from the non-construction costs. The non-construction subtotal should be included and added to the construction subtotal to establish the total project cost. An appropriate construction contingency should be added as part of the non-construction subtotal.
  - For projects containing both water and waste disposal systems, provide a separate cost estimate for each system as well as a grand total. If applicable, the cost estimate should be itemized to reflect cost sharing including apportionment between funding sources. The engineer may rely on the owner for estimates of cost for items other than construction, equipment, and engineering.

CONSTRUCTION, ENGINEERING, AND CONTINGENCY

- Does the PER contain sufficient guidance that the Board's Policy can remove:
  - a life-cycle cost analysis
  - the costs that may be associated with the pre-construction, construction, and construction engineering

CONSTRUCTION, ENGINEERING AND CONTINGENCY

Discussion and comments