Helendale Community Services District

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Recycled Water Policy

INTRODUCTION

Over the years, recycled water has been discussed frequently. This appears to be the most beneficial use of the wastewater resource and the District does not disagree with that in concept. As stewards of the public's money --your money, the current Helendale CSD Board has evaluated the cost to upgrade the plant, the benefit for the upgrade and the water demands of the community. The Board has determined that it is cost prohibitive to upgrade the wastewater plant to produce recycled water at this time. The estimated impact to a residential customer would be an increase of $20 per month. It would cost approximately $10 million dollars to upgrade the plant and unless (1) we are required to do so by a regulatory mandate or (2) there is significant grant funding awarded for the project, the District will not upgrade the plant at this time due to the cost implications for our customers.

Staff's informal evaluation of the costs of the plant upgrade compared to other available options to increase water supply determines that to buy permanent water rights, in the long-run, is the least costly option at $7.10 per customer per month for the 20 year life of the loan to repay the purchase. The second option is to annually lease water from the Mojave Water Agency that would cost $6.41 per customer per month based upon Watermaster's 2020 rates. This rate would be adjusted each year based upon the cost of the imported supply. Lastly, the cost of upgrading the plant based upon a 2018 estimate would increase customer bills by approximately $20 per customer per month for the same amount of water based upon a 20-year loan.

TIMELINE

It is important to understand that the process will take time and will result in increased operating costs in addition to the construction costs for the upgrade. There are many steps that must be taken to upgrade the wastewater facility. The District answers to a regulatory agency that regulates the wastewater facility. Any changes to the facility must gain approval from that agency and its governing board. In addition to regulatory approval, other steps that must be completed to upgrade the wastewater facility to tertiary standards include: Engineering, environmental, financing, and construction. If the process to upgrade the plant started today, it would take an estimated three years to complete the construction on the facility to produce the tertiary quality water that could be used to irrigate grass.

BACKGROUND

Plant Capacity: The Helendale Community Services District owns and operations a secondary wastewater treatment plant with a design capacity of 1.2 million gallons per day. Current average daily flow of wastewater into the plant is 488,000 gallons per day. Some water is lost to processes and

evaporation and of that amount approximately 289,000 gallons per day would be available for tertiary uses. This is equal to approximately 325 acre-feet of water. Currently, per the regulatory permit, the water is used to irrigate a livestock feed crop. This process helps to purify the water so it meets the standards required by the regulatory agency to whom the District must answer. The existing permit under which the plant operates does not allow for transportation of the secondary effluent (treated wastewater) off of property used by the wastewater operation.

Uses: The wastewater facility can be upgraded to treat the water to a higher water quality level referred to as tertiary treatment. This treatment level would allow the recycled water to be used for park and golf course irrigation, dust mitigation, lake augmentation and other beneficial uses as permitted by the regulatory agencies. The District completed a Recycled Water Facilities Plan in 2012 that identified potential end users, treatment alternatives, conveyance pipeline and estimated cost for the upgrade. Costs, in 2018 dollars, was estimated to be between $8-$11 million for the plant facility not including the cost for pipeline installation to convey the recycled water to the end users. In addition, annual operating costs would increase because of increased energy and maintenance demands.

PROCESS

In order to move the process forward there are several steps that must be taken. An update of cost projections and assumptions used for the cost estimate would be necessary. Secondly, engineering would need to be completed along with an environmental process that complies with the California Environmental Quality Act (CEQA). These initial steps, (CEQA and engineering) would take at least a year to complete.

In addition to the CEQA and engineering that would be required to upgrade the plant, there is also a regulatory process that will be required to receive approval for the upgrade. The Plant operates under a permit issued by the Lahontan Regional Water Quality Control Board, an entity that establishes the requirements for wastewater facilities in our area. Regulations that Lahontan establishes may require specific plant equipment and processes in order to meet a required level of disinfection for the tertiary effluent. These processes are costly and have a high energy demand which in turn affects the annual operating costs of the Plant. The process to complete a revision in the Plant's existing permit would take up to a year. In an effort to help expedite this process the State Water Resources Control Board has adopted a General Order for tertiary water treatment that may apply to this project. After these steps are completed and upon award of a construction contract, it would take an additional 12 to 24 months for construction and startup of the tertiary upgrade. From start to finish the process is approximately 36 months.

FUNDING

Funding for a Plant upgrade can come for various sources including rates, end users, grants, loans, and development impact fees.

Rates: If the District upgraded the plant through a loan to cover the costs, the rate payers would absorb these costs resulting in an estimated increase of approximately $20 per month to pay the debt service not factoring in increased operating costs. Currently without an order from the regulatory authority mandating the plant upgrade for water quality reasons, the District would not be able to prove that incurring such debt and increasing rates to that extent is a necessity

End User Reimbursement: Currently there is an agreement in place between the Silver Lakes Homeowners Association (SLA) and the County of San Bernardino, CSA 70B that states that SLA will pay for all operations and maintenance for the upgraded plant and in exchange receive 100% of the water. The CSD was formed after this agreement was solidified and must comply with the terms and conditions which are valid through June 2025. If the Association paid to upgrade the plant this would ostensibly result in higher Home Owner Association dues to cover this cost.

Grants: Grants typically have matching fund requirements and often require that certain milestones have already been achieved such as completion of engineering and CEQA. Grants will only cover a small portion of the costs and are highly competitive. The District has been successful in receiving one grant that required the District to pay 75% of the cost for the Feasibility Study and the grant paid 25%. Grants are not free money per se and come with certain criteria that must be met. With all grants, the money must first be spent and once the project has been completed and evaluated by the granting agency for completion reimbursement will be made. The CSD will continue to seek opportunities for grant funding to assist with the tertiary upgrade.

Loans: A loan could help fund all or a portion of the upgrade. Lending agencies require a guarantee of repayment therefore, a source would have to be identified (i.e. sewer rates or contractual guarantee from an end user, etc.). It is important to note that any debt incurred for upgrading the plant becomes part of the operations and maintenance budget. The cost of a plant upgrade will have to be paid back with interest. Typically, public finance loan terms are 20 years.

Development Impact Fees: Development fees contribute to infrastructure development, however, growth in our area has been limited to primarily in-fill lots and would not be enough to fund such an upgrade. Development fees are collected to ensure that new development pays a fair share for using the existing facilities and for any required upgrades that will be needed to serve the property or development.

ALTERNATIVE CONSIDERATIONS

Wastewater Quantity vs. Cost: If the plant were upgraded to tertiary for recycled uses it would provide approximately 325 acre-feet per year.

Using the estimated cost of $10 million to convert the wastewater plant to tertiary treatment the monthly cost/customer would be:

$10 million @3% interest over 20-year loan =	$13,310,342.00
Cost per year (Principle & 3% Interest) =	$ 665,508.00
Cost per month	$ 55,459.00
Cost per customer per month	**$ 20.00**

Water Rights: The District believes that there are other less costly alternatives to meet the water demands of the community. The CSD has been proactive in purchasing water rights as they become available and has sufficient supply to serve our customers. The purchase of permanent water rights that could be used year after year is the most cost-effective alternative currently. It is understood that there are occasional ramp downs in this use to ensure regional water balance, but it is more cost

effective than upgrading the wastewater facility. However, there is a limited supply of water rights available and an entity must be poised to buy the rights when available.

The cost to purchase permanent water rights that would equal 325 acre-feet of yield at the current ramped down rate of 55%:

720 acre-feet @ $5000/AF w/20-yr loan =	$3,600,000.00
Cost per year (Principle & 3% Interest) =	$ 239,586.12
Cost per month	$ 19,965.51
Cost per customer per month	**$ 7.10**

Annual Replacement water can also be purchased directly from Mojave Water Agency or leased each year from a water rights owner who does not use their full allocation of water.

Lease directly from Mojave Water Agency with ability to use 100% of each acre-foot of water: (This cost could go up each year based upon annually adopted rates.):

325 acre-feet at the 2020/2021 estimated Mojave Water Agency Rate of $666 per acre-foot (per the Watermaster Budget adopted April 22, 2020.)

Cost for 325 acre-feet @ $666 =	$216,450.00
Cost per month	$ 18,037.50
Cost per customer per month	**$ 6.41**

SUMMARY

In summary, the decision by the Helendale CSD Board of Directors to not pursue Recycled water at this time is based upon (1) the cost effectiveness of that option compared to other available options and (2) the lack of regulatory mandate requiring that the plant be upgraded at this time. As outlined in this Policy, the cost to District customers per month for the three options range from $6.41 per month for annually leased water; $7.10 per month for 20-years to purchase permanent water rights; and $20 per month per customer for 20-years to repay a loan for the upgrade.

Over the last 14 years, the District has aggressively purchased water rights as a long-term means to insulate the community against water supply volatilities and to gain greater autonomy from the uncertainty of imported water supply. The District has purchased 1,653 acre-feet of permanent water rights to ensure sufficient supplies to serve the drinking water needs of the community.

For questions, please contact the Helendale CSD at 760-951-0006 X224.