

WATER UTILITY BOARD MEETING: 9/20/2022

UNIT WELL 19 TREATMENT SYSTEM ADDITION PROJECT REQUEST TO TAKE RECOMMENDED OPTION TO FINAL DESIGN



Kelly Miess, PE
MWU Project Engineer

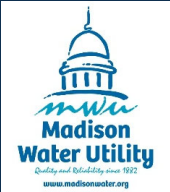
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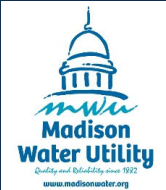
Engineers | Architects | Planners | Scientists

PROJECT OBJECTIVES

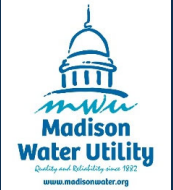


1. **Reduce** iron, manganese, and radium levels at Well 19 through wellhead filtration
2. **Improve** water quality to optimize use of this critically important supply point
3. **Upgrade** the pumps and electronic controls for more energy-efficient operations

OPTION 1: FILTRATION IN EX. BUILDING



OPTION 2: FILTRATION IN NEW BUILDING



ENVIRONMENTAL & SOCIAL IMPACTS

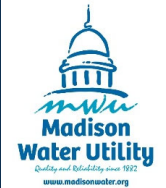


Table – 1
Environmental and Social Impacts

	Option – 1	Option – 2
Post-construction impacts to long-term maintenance	Significant	Negligible
Construction impacts to well operation and water supply	Significant	Negligible
Impacts on the viewsheds from Eagle Heights and the Lakeshore Nature Preserve	Negligible	Moderate
Increased impervious area	Moderate	Moderate
Site disturbance during construction	Moderate	Moderate

COST IMPACTS



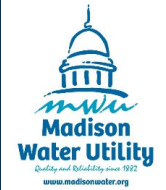
Table – 2
Estimated Cost Comparison

	Option – 1	Option – 2
Construction Cost	\$6.8M	\$6.8M
Annual O&M Costs	\$36K	\$44K
Net Present Value of 50-Year O&M Costs	\$1.8M	\$2.2M
Net Present Value of 50-Year Equipment Replacement & Repairs	\$3.8M	\$3.8M
50-Year Lifecycle Cost	\$12.4M	\$12.8M

STAFF RECOMMENDATION

- **Option 2** is more desirable from a social and environmental impact perspective
- **Option 1** is more desirable from a purely financial perspective
- **Staff recommends Option 2** since the minimal additional cost more than compensates for the greater social and environmental benefits

REQUESTED ACTION



Authorize staff to take Option
2 to Final Design



QUESTIONS?

