

# Whitehall Water Treatment Plant

The knowledge guide behind the whole project





# Overview

This presentation will help you learn and understand the;

1. Who
2. What
3. Where
4. When
5. Why
6. How

Of the Whitehall Water Treatment Plant  
Project

Appendix Items:

- A. DEQ Administrative Court Order
- B. 2022 Updated PER
- C. Bid Tabulation - Hard Rock Item  
breakdown



# 1. The Who

- Ultimately the Town of Whitehall was not the one who choose to create a water treatment plant for the town.
- January 31, 2017 the Town of Whitehall was given a court order to fix the uranium “issue” that was reported by Department of Environmental Quality (DEQ) of the State of Montana.
- *As stated by our Court Order, “Violations of the public water supply laws by the Town of Whitehall at the Town of Whitehall public water supply, PWSID MT 0000359, Whitehall, Jefferson County, Montana (FID 2488).*
- DEQ allowed us, the Town of Whitehall, the ability to apply for grants and fundraise in order to offset the costs of the required project.



## 2. The What

- A lot of people asked “what caused the increase in uranium”. Our water supply did not all of a sudden get an increase in the quantity of uranium in the water. There has always been uranium in our water.
- On December 16th, 2014 DEQ notified the Town of Whitehall that we would be placed on quarterly monitoring for uranium, due to our system running an annual average greater than the Maximum Contaminant Level (MCL) allowed for a public water system.
- During the monitoring periods of the 3rd and 4th quarters of 2015 and the 1st and 2nd quarters of 2016 the water system had exceeded the MCL levels.
- DEQ sent letters during these monitoring periods advising Whitehall MT that it was required to not only continue monitoring the system for uranium, but we are also required to implement a corrective action to reduce the uranium levels. (#12. Court Order)



## 3. The Where

- The Town of Whitehall pulls the public water from 2 groundwater wells located within the town.
- Both Well #1 and Well #2 have repeatedly been over the maximum level of uranium allowed for a public water system.
- The water storage tank located just north of town was in need of repair in order to sustain the implementation of a treatment plant and longevity of the town's water supply.

Estimates breakdown:

**2018: \$2,905,887.00**

(Retrofitting PW Shop to hold the treatment system, which was ultimately turned down by DEQ)

**2019: \$4,464,879**

(Adjustments to bring current project to address plan changes, and inflation)

**2022: \$6,269,880.00**

(Adjustments to bring current project to address material/equipment due to inflation/pandemic/etc.)

**2024: \$8,662,771.38 (BID AMOUNT)**

(Costs outlined in Hard Rock's bid for construction of the water treatment project)



# Preliminary Engineering Report (PER)

- The PER documents the study, conclusions, and recommendations for the Town's water system facilities. The PER identifies the planning area, evaluates the existing condition and operation of the existing facility, identifies existing problems within the system, establishes and prioritizes recommended courses of action and funding strategies for water improvements. The study evaluates the needs of the Town and the requirements to meet State and Federal regulations for a 20-year planning period.
- The PER was first completed in April, 2018, with updates in December 2018, December 2019, and August 2022.



# PER Alternative Options

## 2018 PER

- Alternative 1 -No Action
- Alternative 2 – New Surface Water Source
- Alternative 3 – New Ground Water Source
- Alternative 4A – IX Treatment Plant at Rec Complex Using Existing Wells
- Alternative 4B- IX Treatment Plant at Rec Complex Using 1 Existing Well and 1 New Well
- Alternative 4C – IX Treatment Plant in Old Firehall Using Existing Wells

## 2018 PER Update

- **Alternative 4D – IX Treatment Plant at New Town Hall Using Existing Wells**
- Alternative 4E- IX Treatment Plat at New Town Hall Using 1 Existing Well and 1 New Well

## 2019 PER Update

- **Alternative 5 – Recoat Tank, Replace AC Main, and Provide Distribution System Loop Through Alley**
- Alternative 6 – Recoat Tank, Replace AC Main, and Provide Distribution System Loop Through School Property



# Selection of Alternative Plan

- The recommended preferred alternative from the 2018 PER and 2018 PER Update was Alternative 4D – IX Treatment Plant at New Town Hall Using Existing Wells. The recommended preferred additional alternative from the 2019 Update was Alternative 5- Recoat Tank, Replace AC Main, and Provide Distribution System Loop Through Alley.
- The additional alternatives developed in this PER Update reflect issues that have been identified during the design phase for previously selected alternatives.
  - Ground water source-  
Worked with Hydrologist - Fess Foster, on a sampling plan. We hit every aquifer in the valley, with 34 water samples taken. None of them came back with low enough uranium.
- Through the design phase of implementation of Alternative 4D, it became apparent that the Town Hall building does not have the room to house an IX Treatment Plant. Additionally, the condition of the existing tank has deteriorated significantly rendering Alternative 5 infeasible.



**December 2014** - DEQ notified the Town of Whitehall that we must be placed on quarterly monitoring for uranium levels

**Aug. 2015, Sept. 2015, Dec. 2015, March 2016, and May 2016** - DEQ notified in writing that the Town's water system exceeded uranium levels

**January 2017** - DEQ issued a State Administrative Court Order to remedy the water situation

**March 2017** - An initial engineering firm was hired to perform a PER for the water system remedy. (This firm did not continue the project)

**January 2018** - Triple Tree Engineering was selected to perform the PER for the water system remedy

**June 2018** - the first PER findings were reported to the town

**December 2018** - Alternative plan of using the New Town Hall was explored

**December 2019** - Plans for the Retrofitting of New Town Hall space was sent to DEQ for project approval

**2020** - DEQ submittals and design improvements took place. Found that the retrofitting location had an insufficient footprint for the equipment (Design turned down by DEQ)

**2021** - DEQ submittals and Redesign/PER analysis of new water treatment plant at Rec location

**August 2022** - the final PER update determined the need for building a new water treatment plant and 60% soft DEQ submittal

**December 2022** - 90% DEQ submittal

**April 2023** - 100% full DEQ submittal

**September 2023**- DEQ Approval

**October 2023**- 1st advertisement for bid

**December 2023** - Open bids window for Water Treatment Plant

**January 2024** - Secured additional \$2m grant and \$2m loan for project inflation

**February 2024** - Closed Bid window

**March 2024** - Awarded Hard Rock Road & Utilities for the bid of the Whitehall Water Treatment Plant

**June 2024** - Estimated break ground month for the Whitehall Water Treatment Plant

## 4. The When



## 5. The Why

To recap, the selection of the water treatment plant was selected based on previous analysis combined with changes based on real-world findings from the early design stages. The Covid pandemic put the project on hold for a little while as the world tried to figure everything out.

During the various analysis of the Preliminary Engineering Report (PER) the proposed solution must meet all of the following criteria:

- Public Health and Safety – Will the additional alternative protect and enhance the health and safety of the Town’s residents?
- Public Acceptance - Will the additional alternative meet the needs of the residents, and will the residents be receptive to the additional alternative?
- Local Economic Affect – What effect does the additional alternative have in terms of keeping money in the local economy through local capital purchase, construction spending, and/or employment of local citizens?
- Environmental Impacts – What effect does the additional alternative have in terms of adverse impact to the environment?
- Impacts to Existing Facilities – Will the additional alternative impact existing Town of Whitehall facilities or the property and facilities of the residents?
- Reliability – Will the additional alternative be reliable both now and in the long term with respect to future potential requirements?
- Operational Ease - Will the additional alternative be easy to operate and maintain in relation to the existing facility?



## 6. The How

### Grants:

- American Rescue Plan Act - State Revolving Fund (SRF) A Loan (forgiveness) - \$750,000
- Water Infrastructure Improvements - EPA Wiin Grant - \$219,456
- American Rescue Plan Act (ARPA) Grant - \$2,000,000
- MT Coal Endowment Program (MCEP) - \$625,000
- Community Development Block Grant (CDBG) - \$450,000
- Renewable Resource Grants and Loans (RRGL) - \$125,000
- US Water Resources Development Act (USACE WRDA) 1 - \$270,000
- US Department of Agriculture Rural Development (USDA RD) 1 Grant - \$650,000
- US Department of Agriculture Rural Development (USDA RD) 2 Grant - \$1,036,000
- US Department of Agriculture Rural Development (USDA RD) 2 ECWAG Grant - \$1,000,000

Total Grants: \$7,125,456.00

### Loans:

- American Rescue Plan Act - State Revolving Fund (SRF) B Loan - \$450,000
- US Department of Agriculture Rural Development (USDA RD) 1 Loan - \$674,000
- US Department of Agriculture Rural Development (USDA RD) Loan - \$900,000
- US Department of Agriculture Rural Development (USDA RD) 2 Loan - \$2,000,000

Total Loans: \$4,024,000

**Local Contribution:** \$30,544

### Water Tank Grant:

- USACE WRDA 2 Grant - \$1,440,000



## 6. The How

### **Grants:**

A government grant is a financial award given by a federal, state, or local government authority for a beneficial project.

A grant does NOT need to be paid back.

### **Loans:**

Government loans are either funded directly by the government or made by private lenders and backed by the government. These loans have different benefits, interest rates, and repayment options.

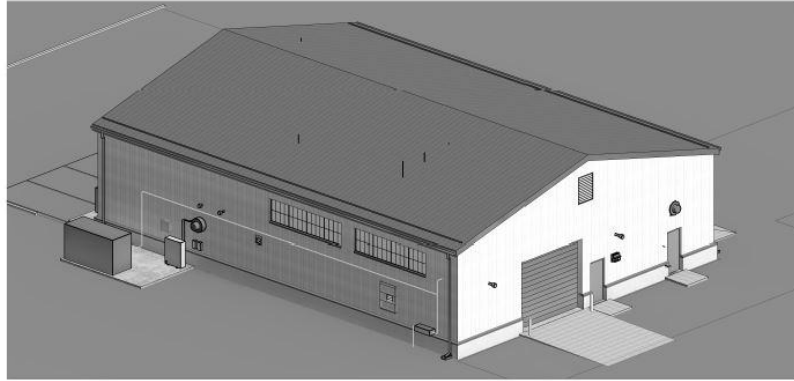
These loans may require us to prove that we have a specific number in reserves in order to have the loan given to us.

Loans **MUST** be paid back within the terms.

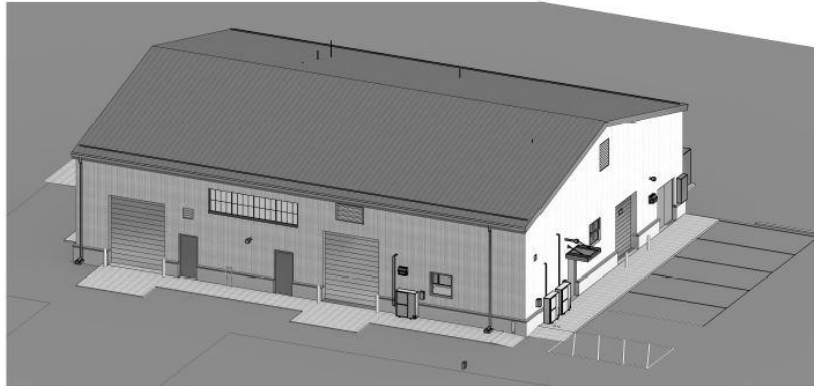


# Government Operating Budgets

- Gives local government officials the authority to incur obligations and pay expenses. It allocates resources among departments, reflecting the legislative body's priorities and policies, and controls how much each department may spend.
  - **Fund Level** – A fund level budget allows for the greatest amount of flexibility and therefore requires monitoring throughout the budget cycle to ensure that actual expenditures fall within the various program or department projections that were established during the budget process. EXAMPLE: Whitehall Tax Increment Fund (TIF)
  - **Department/Program Level** – This refers to a budget appropriation level that limits expenditures to department or program activities. These programs and departments may be appropriated at this level as a tool for managing the budget. EXAMPLE: Public Works, Clerk's Office, etc.
  - **Budget Reserve Funds** – used to save money to finance all or part of future infrastructure, equipment, and other fiscal needs.
    - Cash Flow Requirements: Sufficient cash on hand to satisfy cash flow needs.
    - Rainy Day Funds: Provides resources when revenues decline due to economic downturn.
    - Repairs and Improvements: Purchases for operating equipment and vehicles as they become obsolete.
    - Capital Reserves: Provides resources to meet the objectives of the capital improvement plan.
    - Contingencies: Funding for times of emergencies and disasters.



2 3D-NORTH-WEST VIEW  
SCALE: NTS



1 3D - SOUTH-EAST VIEW  
SCALE: NTS



PROJECT # 19-29  
DRAWN BY RY / EH  
CHECKED BY LD/QB  
ISSUE DATE 08/25/23

**WATER TREATMENT FACILITY IMPROVEMENTS**  
WHITEHALL, MT

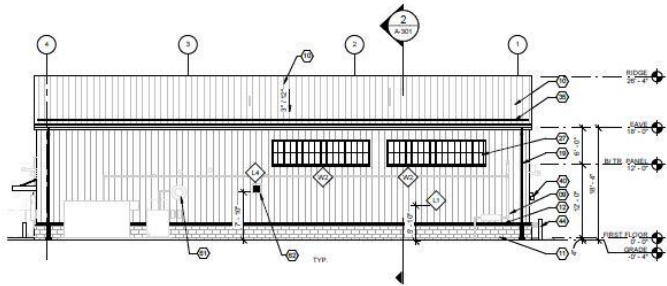
**AXONOMETRIC VIEWS**



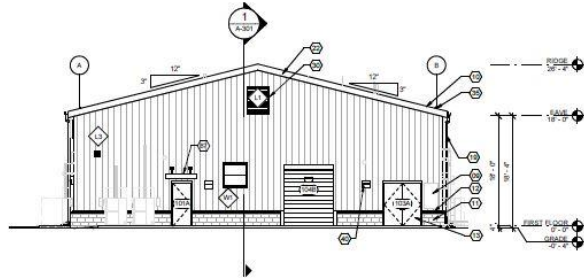
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#	DATE	DESCRIPTION
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1		
2		
3		

SHEET NO.:

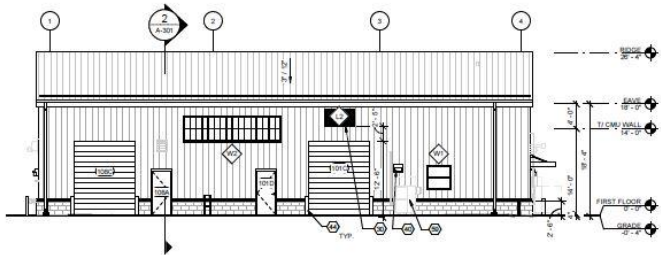
**A-901**



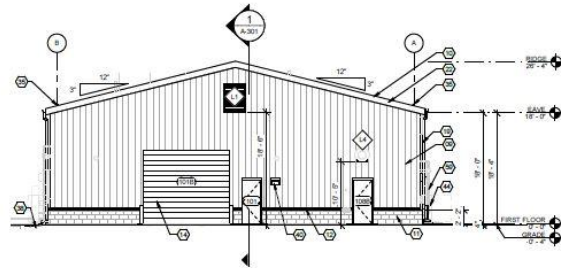
4 NORTH ELEVATION  
A-201 SCALE: 1/8" = 1'-0"



2 EAST ELEVATION  
A-201 SCALE: 1/8" = 1'-0"



3 SOUTH ELEVATION  
A-201 SCALE: 1/8" = 1'-0"



1 WEST ELEVATION  
A-201 SCALE: 1/8" = 1'-0"

- KEYNOTES**
- 08 4" THICK INSULATED METAL WALL PANEL
  - 10 8" THICK INSULATED METAL ROOF PANEL WITH STANDING SEAM PROFILE
  - 11 4" CMU VENEER
  - 12 PRECAST CONCRETE CAP
  - 13 INSULATED RPIF DOOR AND FRAME
  - 14 INSULATED ROLLING STEEL DOOR
  - 15 PRE-FINISHED METAL DOWNPOUTS TO CONCRETE SPLASH BLOCK
  - 22 RAKE FLASHING
  - 27 INSULATED TRANSLUCENT PANEL WITH THERMAL BRAKE
  - 35 ARCHITECTURAL INTAKE LOUVER WITH BIRD SCREEN. REFER TO MECHANICAL DRAWINGS FOR SIZING
  - 36 CONTRACTOR SHOW BARCADE BAR ON CLAMPS ON STANDING SEAM - VERIFY QUANTITY OF RAWS W/ MFR. TO COMPLY WITH LOCAL BUILDING CODE REQUIREMENTS
  - 38 FINISH GRADE. PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDING. REFER TO CIVIL DWGS.
  - 40 EXTERIOR WALL MOUNTED LIGHT FIXTURE. MOUNTED 65.7" A.F.F. TO CENTER OF FIXTURE. SEE ELECTRICAL DRAWINGS
  - 44 4" DIA BOLLARD
  - 56 HEAT PUMP OUTDOOR UNIT. REFER TO MECH DWGS
  - 61 CENTRIFUGAL FAN. REFER TO MECH DWGS
  - 62 INTAKE LOUVER. REFER TO MECHANICAL DWGS
  - 67 CANOPY FRAMING AND ROOFING (DELEGATED DESIGN)



**TRIPLE TREE ENGINEERING**  
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**TETRA TECH**  
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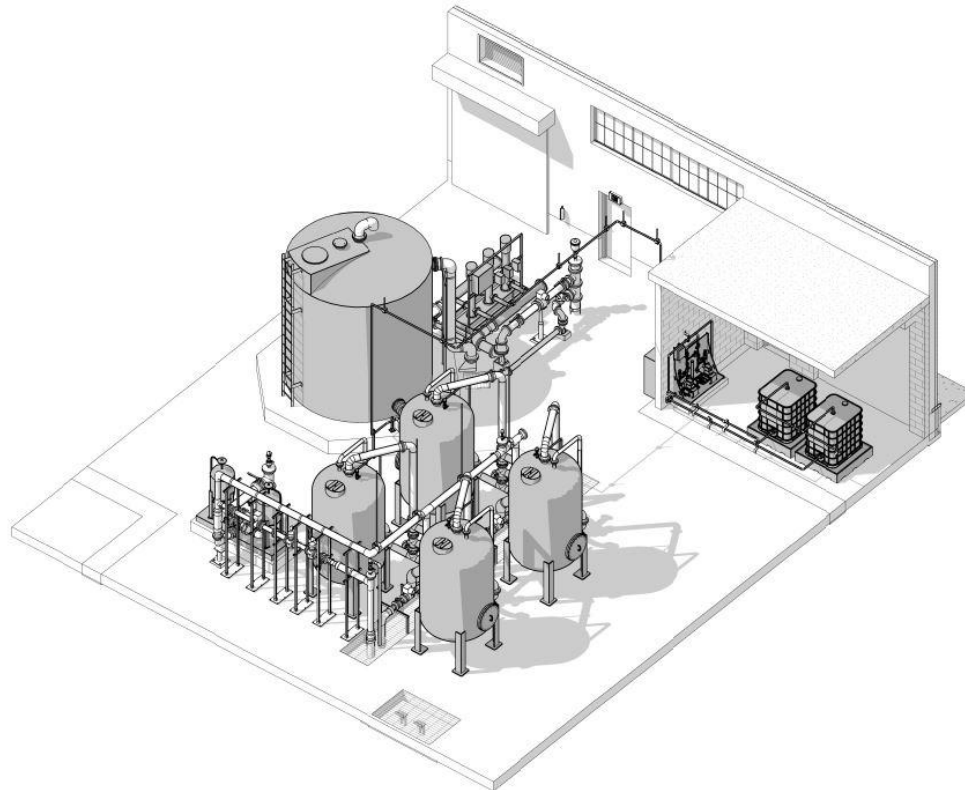
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DRAWN BY	RY/EH
CHECKED BY	LDGB
ISSUE DATE	08/25/23

**WATER TREATMENT FACILITY IMPROVEMENTS**  
WHITEHALL, MT  
**ARCHITECTURAL EXTERIOR ELEVATIONS**



REVISIONS		
#	DATE	DESCRIPTION
0	08/25/23	ISSUE FOR BID
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3		

SHEET NO.  
**A-201**



FILTER AND VESSEL  
3D PERSPECTIVE  
SCALE: NTS



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PHONE: (303) 632-3000 FAX: (303) 632-0962

PROJECT #	19-23
DRAWN BY	NTK
CHECKED BY	DGO
ISSUE DATE	08/25/23

**WATER TREATMENT FACILITY IMPROVEMENTS**  
WHITEHALL, MT

**WTP ISOMETRIC**



REVISIONS		
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