Water Park Phase II
Long Term Modifications Update
75% Design Overview
Agenda

• 75% Design Walk Through
• Procurement activities
• Schedule
• Next steps
Design and Build Approach

- Hydraulic Modeling  ✔
- Develop 75% design  ✔
- Solicit vendors for pricing  ✔
- Issue PO’s for materials and parts
- Receive vendor design data
- Complete design for final approval
- Construct winter of 2023
Major Feature Overview

• Replace gates 4 and 5 with four 10-foot Obermeyer bladders for better river flow control
• Add 40’W x 4’H Obermeyer weir D/S of waveshaper to provide tailwater stability
• Run new air and lines and wiring for two new gates and new waveshaper stabilizing weir
• Modify equipment building and controls for new gates
• Simplify and waterproof vault components for flood resiliency and reduced maintenance
• Relocate stilling wells upstream of FUDC intake for better system accuracy
• Add a plunge pool behind new gates on spillway for increased safety
• Mitigate leakage D/S of fish ladder on left bank
Main Spillway

• Modifying existing gates 4 and 5 (G005, C102)
  • Split existing 20’ section to 2-10 sections
  • New bladders
  • Additional hardware, seals, straps, etc.
  • Will finalize with info from Obermeyer

• Running new airlines and routing on D/S side of apron (see S102, S104, M102)

• Encased in concrete (S105)

• New plunge pool 50’W x 25’ D/S x 5’ Deep (C101, C102)
Equipment Building

- Equipment Building
  - Add three new zones on manifold
  - Inputs for three new inclinometers
  - No compressor modifications needed
  - Open trench for new airlines
Vault

- Demo slab above (piping and conduit routing) (D101)
- Lift stairs up (piping and conduit routing) (D101)
- Run new airlines and new inclinometer wiring (M101)
- New stilling well conduit run (E104)
- Condensate drain box near bottom of stairs (M101)
- Waterproof terminal box connections in JB3 (E102)
- Proposing to replace condensate solenoid valves with manual valves and locate near top of manhole
- Remove desiccant unit
- Remove heater unit

- With these modifications there will be no need to enter vault on regular basis and complexity is reduced.
Stilling Wells

- Relocate to upstream side of FUDC intake (E104)
- Surface mounted standard McMillen design (M103, E103)
- Run conduit on bottom of existing railing, paint black to match
Left Bank

- Demo rip rap and install geomembrane
  place back riprap and regrout
- ~total demo for left bank and plunge
  pool is ~400 CY
## Proposed Schedule

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<thead>
<tr>
<th>Description</th>
<th>Schedule</th>
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<tbody>
<tr>
<td>Hydraulic Modeling</td>
<td>Through May 2023</td>
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<td>Detailed Design 75%</td>
<td>End of June 2023</td>
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<td>Obermeyer Pricing</td>
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<td>Boise Approval of 75% Approach</td>
<td>September 2023</td>
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<td>November 2023 - February 2024</td>
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Next Steps

1. City affirms design approach and provides comments. McMillen will provide:
   i. Current ~75% drawings
   ii. Hydraulic Tech Memo TM009
   iii. Update SOW TM008
   iv. Project Schedule

2. Order parts and services from Obermeyer

3. Finalize design

4. Construction
Thank you.