

**AGENDA**  
**GREEN VALLEY MUTUAL WATER COMPANY**  
**BOARD OF DIRECTORS**  
Emergency Meeting (Teleconference)  
**5:30 p.m.**  
Tuesday, September 1<sup>st</sup>, 2020

Next Reso. # 20-03

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**1. Call to Order:**

President  
1<sup>st</sup> Vice President  
Secretary/Treasurer  
Directors

Ed Gray  
Kit Kjelstrom  
Scott Burger  
Christine Brandt  
Rick Blea  
Glen Pyne  
Ken Martin  
Charles Mattson  
Jerald Miller  
Steve Brandt  
Emily Nohr

Staff Members: Interim Business Manager  
Recording Secretary

**2. Roll Call of Board Members Participating**

**3. Public Comments** (3 minute limit)

**4. Old Business:**

a. Dam Repairs

**5. Adjournment:**

**From:** "Vogler, William@DWR"  
**Date:** Friday, August 14, 2020 at 12:56 PM  
**To:** Steve Brandt  
**Cc:** Kevin Floyd, Kit Kjelstrom, "Draeger, Rick@DWR"  
**Subject:** RE: Green Valley Mutual Water Company, Dam Repairs

Steve –

The DSOD Field Engineering Branch has reviewed the Green Valley Mutual Water Company's (GVMWC) proposal to repair the spalled concrete areas of the walkway, apply the epoxy sealer to the walking surface, and apply a slurry coat of the cementitious crystalline waterproofing material Xypex to the vertical face of the walkway, and repair the leaking crack located on the downstream side of the main arch by injection grouting with a hydrophilic urethane grout.

DSOD approves the repairs that were outlined in your email dated July 6, 2020 (copied below). Since the proposed repairs appear to be non-structural, DSOD considers these repairs maintenance and will not require a repair application. The GVMWC needs to afford DSOD the opportunity to inspect the progress of the repairs while the work is being performed. Please provide me at least 72 hours' notice (business days not including holidays) to schedule an inspection for each separate project (walkway and crack repair). I would like to be notified at the following stage of each respective project as follows:

1. Crest Walkway – Contact me after the spalled concrete has been removed to sound concrete and before you construct and close the formwork. Also contact me if you encounter damaged steel reinforcement, and take care to follow the manufacturer's installation instructions to expose a sufficient amount of the reinforcement per the product used. Also, you need to follow the manufacturer's requirements to achieve the proper Saturated Surface Dry (SSD) conditions if required.
2. Leak Repair – Contact me when you will be performing the grout injection.

During the course of the repairs, contact DSOD immediately if you encounter conditions that would negatively impact the safety of the dam.

Please feel free to contact me with any questions or concerns.

Take care,

Bill

**From:** Steve Brandt  
**Sent:** Monday, July 6, 2020 3:02 PM  
**To:** Vogler, William@DWR  
**Cc:** Kevin Floyd; Kit Kjelstrom  
**Subject:** Green Valley Mutual Water Company, Dam Repairs

Bill,

Thank you for your time and insight during your site visit last month. During your visit I stated we were waiting for the results of our testing with regard to the condition of the concrete and reinforcing steel. The testing is complete and attached is the Concrete Assessment Report.

The report confirms that the condition of concrete and reinforcing steel are in good shape other than some surface corrosion that has taken place at spalled areas and surface cracks in the concrete topping of the walkway. This is

good news as now we can move forward with a preventative maintenance program with regard to the walkway of the dam.

It is our intent to address this area in the following manner.

1. Remove the spalled concrete areas of the walkway to sound concrete (these are the areas above water level on the cantilevered portion of the walkway). Clean the surface corrosion on any exposed reinforcing steel. Set form work and patch with an appropriate structural repair mortar. This will be done in the same manner you observed during your site visit. A combination of Sikatop 111 Plus, Sikatop 122 Plus and Sikatop 123 Plus will be used relative to the location, depth and application method utilized for each repair.
2. A gravity fed epoxy sealer will be applied to the walking surface. The application of the sealer will fill the surface cracks and consolidate the surface to reduce damage from freeze thaw and corrosion of the reinforcing mat that is embedded in the topping.
3. A slurry coat of a Crystalline Waterproofing system will be applied to the vertical face of the cantilevered walkway. Zypex Concentrate is a brand name that would be one of the products considered for this application. This process will seal the cold joints around the patched areas, seal the old concrete that has not yet spalled away and provide a uniform look to the surface of the dam.

With regard to the small leaks in the face of the dam I offer the following information which we discussed onsite during your visit.

1. The surface patch in the area of the leak will be removed. This patch is barely holding to the surface. We anticipate that it will just need to be lightly tapped and it will fall from the surface. In the event it does not remove easily or requires demolition to the depth of reinforcing steel, we will not proceed until we contact you with an update and a directive from you as to if we should proceed or reevaluate the repair method.
2. After the patch is removed assuming it falls off as anticipated, the contractor will drill ¼" diameter holes diagonally so that they intersect the leaking crack. Packers (injection ports) will be placed at the surface of the drilled holes in which the contractor will attach a pressure injection machine to inject a hydrophilic urethane grout (chemical grout) to fill these areas and seal off the leak. The chemical grout selected will be one that is designed for injection of dams. This type of grout has a slower reaction time so that it can travel a great distance within the crack or void before reacting and gelling into a waterproofing filler.
3. Once the leaks are repaired with the chemical injection method the packers will be removed and any spalled areas in which an existing patch was removed will be replaced with a new application of a structural repair mortar.

We plan on utilizing a specialty repair contractor that is experienced in repairs of dam structures. It will likely be the same contractor that performed the repairs you observed and complimented. With the information I provided, how do we move forward with regard to an approval from you? We would like to start on this project and want to make sure you are comfortable with the repair methods that we are proposing. We plan on documenting the procedures with photos that can be emailed to you in the event that you may not be able to schedule time on site for your own observations. We plan on communicating with you regularly during this process to whatever extent you wish.

Another item on your report was to remove the large pine tree that sits to the east of the buried dam along the roadway. We had this tree removed a week ago. Would you like a photo of it or do you just want to check it off your list during next year's inspection?

Regards,  
Steve



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August 17, 2020

Green Valley Municipal Water Company  
c/o Steve Brandt

REF: Leak Repair Proposal

Steve,

After closer review, I believe the repair will be a combination of spall repair and chemical grouting. A stage will be erected from ground up to provide the best access.

Please find the following procedural quote and rough estimate of time and materials

Labor:

1. Erect and remove staging
2. Remove loose concrete, detail reinforcing steel
3. Prepare and patch back with polymer concrete
4. Drill, set packers, and inject chemical grout

This work to be performed on a Time and Materials basis as follows

Mobilization: \$500.00

Labor: \$110.00 per man hour

Based on Eight hour minimum per day/ per man

One hour drive time each day per man, Drive time to be billed at \$88.00 per hour

Plus 20% Markup on materials and consumables

Invoices to be generated from Daily Tracking Sheets

Not To Exceed Price: \$31,850.00

Exclusions: Plans, permits, testing, inspections, engineering, bond premiums, and city business license are excluded from this proposal.

Respectfully Submitted by,

Jon Ridley