NEVADA IRRIGATION DISTRICT

Water & Hydroelectric Operations Committee

March 13, 2018

MINUTES

Committee Members Present: Will Morebeck, Director, Division 4
Nick Wilcox, Director, Division 5

Committee Staff Members Present: Greg Jones, Assistant General Manager
Chip Close, Water Operations Manager
Keane Sommers, Hydroelectric Manager
Sue Sindt, Water Resources Superintendent
Pam Robinson, Management Assistant

Others Staff Members Present: Matthew Crowe, Senior Right of Way Agent
Tony Rodoni, Right of Way Agent II
Doug Hobbs, Associate Engineer
Dar Chen, Senior Engineer, Dam Safety
Susan Lauer, Communications Specialist

Public Comment
None

Minutes of the January 9, 2018 and February 13, 2018 Regular Meeting
Approved as resubmitted and submitted.

Water Supply Update
Mr. Chip Close, Water Operations Manager, provided an update of the District water supply.

The District’s reservoir storage as of March 7, 2018 is at 237,509 AF, 136% of average, and 88% of capacity.

Estimated carryover storage will be 144,000 AF. The normal storage carryover is 120,000 AF.

Bowman Lake precipitation is at 42.01” and 83% of average.

The Average water content from the March 1, 2018 snow survey was 7.7” which is 27% of average for this time of year. The Historical average is 28.8”.

Surplus Water Declaration
Mr. Chip Close, Water Operations Manager, and Ms. Sue Sindt, Water Resources Superintendent, spoke to the Committee.
Ms. Sindt explained the forecasted water availability for March/April is >235,700 AF. This storage number reflects normal operations per the Drought Contingency Plan.

She also performed a very conservative calculation including factoring in surplus water and excluding the purchase of PG&E water for carryover storage. This resulted in estimated carryover storage of 144,000 AF (99% of avg).

Director Nick Wilcox expressed his concern of advancing a surplus water declaration recommendation at this time until the data is received from the April 1st snow survey.

Director Wilcox would like to present this item at the first Board of Directors meeting in April. He said accurate data will be available from the April 1st snow survey and the most up to date water storage numbers.

After discussion, Director Wilcox and Director Morebeck would like to advance Surplus Water Declaration discussion to the first Board of Directors meeting in April.

The Committee opened for public comment.

Mr. Rich Johansen, member of the public, spoke to the Committee expressing concern of the 144,000 AF carryover. He is of the opinion the amount should be higher. He also expressed his view that an increased rate for outside District water sales is needed.

Mr. Close replied the District would like to have a higher carryover number; however, it is a fine line, if the carryover number is too high, the District will always be in a drought stage. The District always attempts to be as conservative as possible while providing the service our customer base needs.

Additionally, outside District customers’ rate is 25 percent higher.

In closing, the Surplus Water Declaration will be discussed at the April 11, 2018 Board of Directors meeting.

**Combie South Access Road**

Mr. Keane Sommers, Hydroelectric Manager, addressed the Committee regarding access to the Combie South Powerhouse.

Prior to a PowerPoint presentation, Mr. Sommers provided a brief background. He also distributed emails he received after the agenda was submitted from two concerned property owners.

He said Combie South Powerhouse is located on District property and the current access road is served through Meadow Vista Road.
The discussion today is the result of going back to 9/11 and the necessity for security and access. Recently, the Oroville Dam incident has brought this topic to the forefront. The District also received a letter from the Federal Energy Regulatory Commission (FERC) requesting the need for improved access.

The District enlisted an independent consultant to research access routes. The results of the research are being discussed today.

Mr. Sommers presented a PowerPoint presentation illustrating the current conditions of the existing access road with the option for improvement and three additional alternatives.

He said the goal for today was to present and to update the Committee and receive guidance.

He added the District is in a situation where improving access is mandated from FERC.

The Committee discussed all four alternatives.

In conclusion, the Committee would like to invite the property owners involved in the alternatives to attend the next WHO meeting for further discussion in a public forum.

The Committee opened for public comment.

Ms. Syd Brown, resident of Nevada City, asked about an easement on Figure 3 of the study report. She also commented on the nature of existing roadway as it presently exists. She feels perhaps to assist in the erosion problems, cooperation and communication with the land owners along the existing route to incorporate appropriate drainage would be beneficial. She is of the opinion working together the existing route would also have the least impact.

Ms. Brown also commented she did not see an option to extend the road along District property. She said there was a reference of an existing road; however, she would like to see a map or plat showing a road connection once reaching District property.

**Scotts Flat Spillway Investigation Results**

Mr. Keane Sommers, Hydroelectric Manager, spoke to the Committee about the Scotts Flat Spillway Investigation results.

He provided a brief overview before giving a PowerPoint Presentation.

The spillway investigation was driven by the Oroville spillway incident last year prompting California Division of Safety of Dams (DSOD) and FERC to require the investigation.
The lower portion has received prior repairs most significantly in 2017 following the high flows.

Furthermore, last year extensive repairs were made to the damaged slabs of concrete and joints. Preliminary subsurface evaluations were also completed.

A spillway investigation report was prepared for discussion today and includes an assessment and recommendations.

The assessment of the spillway resulted in the following conclusions:
- The old spillway chute was not designated or built to modern standards (sub drains, joint details, reinforcements, etc.)
- The spillway foundation generally consists of sound bedrock in the new spillway crest area and more weathered materials toward downstream chute
- Under probable maximum flood, spillway chute slabs may get damaged but the new spill crest is well built and likely resist damage
- The old spillway chute is considered safe for continued services; however, it needs upgrades to meet current standards and regularity requirements

Some recommendations are:
- Enhanced inspections
- Maintenance of drain holes, repair debris boom anchor on upstream of the dam
- Hydraulic study of the spillway chute
- Complete an assessment of the stability of the raised crest structure
  - Currently underway
- Inspections and surveys of the lower plunge pool
- Investigation and exploration to characterize subsurface materials
  - Currently outlining an investigation plan
  - Sending DSOD and FERC the proposed plan for review and approval

The Committee members supported the work being done and to continue forward as planned and required.

The Committee opened for public comment.

Ms. Syd Brown, resident of Nevada City, had a comment for the seismic stability spillway recommendation of .25g. She said throughout much of California .3g is the standard. She would like the District to look into a higher level.

Mr. Dar Chen, Senior Engineer - Dam Safety, responded. He said this spillway is located a great distance from any fault lines. He will verify this number meets the standard and criteria.

Ms. Brown also asked if Rollins has similar spillway issues.
Mr. Chen replied Rollins was built in the 1960’s and construction during that time is considered modern. Rollins is also located in sound bedrock. Due to the performance of Rollins, DSOD and FERC did not require exploration.

**Hydroelectric Department Activities Update**

Mr. Keane Sommers, Hydroelectric Manager, provided an update of the Hydroelectric Department activities:

- **Outages**
  - Chicago Park – Draft tube install
  - Chicago Park – Stuck float following dewatering
  - Dutch Flat – Problem opening flume gate
- Rebuilt the DC power supply at the Chicago Park Flume intake
- Worked toward integrating Deer Creek PH data with NID SCADA pending transfer of the asset
- Painted gage house at Rollins Lake
- Built tool basket for lowering tools with crane at the powerhouses, built a rigging box for organizing shackles, eyebolts and straps
- Completed annual NERC attestations
- Completed DHS Dam Sector Information Sharing Drill
- Attended Federal hearing in support of CPUC ReMAT program
- Helped Recreation Department remove boat slips at Orchard Springs
- Completed installation of new log booms at Dutch Flat Flume intake
- Installed/commissioned power system stabilizer and generator CTs for NERC compliance
- Completed 6 month battery testing
- Installed public safety signage at Dutch Flat, Chicago Park, and Rollins
- Installed new draft tube at Chicago Park
- Storm damage at Rollins Powerhouse caused loss of connectivity to SCADA RTU. When this happens station must be manned 24/7. Outage lasted approximately 3 days

**Operations Department Activities Update**

Mr. Chip Close, Water Operations Manager, provided an update of the Operations Department activities:

- **Distribution:**
  - Worked through SYC Outage
  - Flushing crew complete
  - Spillway inspections complete
• Installing boards plates and boxes
• Lots of outages doing final canal cleanup
• Performing PRV rebuilds in Alta Sierra
• Canal patrolling

• Water Treatment
  • Treated 133 Million Gallons
  • CCR complete
  • Cleaned tanks
    • LWW 4
    • Wayfarer
    • LWW 2
    • Timber Ridge
    • Cascade Shores
  • Sampling
    • Crypto
    • UCMR4
  • Starting up fill line @ NA
  • Water quality @ spills
    • Hwy 20 (Fuel)
    • Wolf Creek (Sewer)
    • Lake Theodore (Sewer)
    • Rollins Trib. (Fuel)

• Water Resources
  • Water Management
    • Continuing to work with neighboring agencies in prep for dry year
  • Compiling water rights reports
    • Involves both Ops & Hydro
  • Installing and testing backflow devices
  • Reviewing update of data reporting software upgrades
  • PG&E agreements
  • Prepping for April snow survey

• Electrical
  • Meter @ Siphon Lane
  • Upgrading SCADA PLC’s to Unity (keeps current)
  • Replacing LWW filter valves
  • Installed water storage tank mixers and blowers
  • NA ROFC
  • NA High lift Pump 3
  • Performing pump efficiency testing
Mr. Close reviewed totals for January 2018:

- 19 Scheduled Raw Water Outages
- 0 Emergency Raw Water Outages
- 19 Scheduled Treated Water Outages
- 3 Emergency Treated Water Outages
- 68 Acre Ft increased Raw Water Sales
- 1 New Treated Water Accounts
- 2,587 Customer Calls (Customer Service – 1,814, Dispatch - 773)