

# On Site

*People building for People.*

## Barnard Team Rebuilds Oroville Dam Transmission Line



*A crew dismantles one of the old transmission towers atop Oroville Dam during the shoofly operations. Inset: A helicopter assists during shoofly tie-in.*

Following extraordinary weather that strained dams across Northern California in February, Barnard joined the group of teams assisting the *California Department of Water Resources (DWR)* in responding to the spillway failure at Oroville Dam, the tallest earthen dam in the United States. Barnard's Electric Transmission Group is contracting with DWR to reroute two double-circuit 230kV lines that traverse the dam so they will not be jeopardized if DWR is required to use the Oroville Dam Emergency Spillway again. The new alignment reroutes the lines to avoid the floodplain that is affected when the Emergency Spillway is placed in service. In fact, our Transmission Team was onsite within one day of the emergency declaration in February and had our equipment staged two days later to initially remove threatened structures and temporarily replace the line with a shoofly arrangement. At present we are working in a Design-Assist capacity with Design Engineer *Stantec*, and beginning to construct the permanent reroute of this line which will transmit power from the dam's powerhouse at the base of the 770-foot-tall earthen dam. The fast-track project requires foundation design and construction for 22 towers, procurement and erection of those towers, access road and crane pad construction, and one outage. The team already met one critical outage when tying in and activating the shoofly lines. Subcontractors providing valuable assistance include *Outback DVBE, Inc.*, *Summit Helicopters, Inc.* and *Siller Helicopters, Inc.*

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## notables

Barnard appreciates our recent receipt of an Excellence in EHS Performance Award from the *City of New York*, awarded to Barnard-D.A. Collins JV for outstanding performance in EHS Management System Audits and implementation of Best Management Practices for program efficiency and EHS culture during the construction of the **Gilboa Dam Reconstruction Project**.

## C-44 Reservoir Team Completes Test Sections

Construction at Barnard's **C-44 Reservoir Project, Contract No. 2** advances with the completion of critical toe trench test sections. The test section results provide Barnard and Owner *U.S. Army Corps of Engineers (USACE)* the vital information necessary to continue construction of this 3,500-acre reservoir encircled by a 9.2-mile, 30-foot-high earthen embankment. Crews recently completed two toe drain



Foundation excavation at the C-44 Reservoir.

test section installations and have started work on the soil-cement test section. This soil-cement test section will provide USACE with a scaled-down version of the reservoir to test soil-cement mixes and placement techniques, as well as all other portions of the embankment including placement of the finish sod cover. Subcontractor *McDonald Construction Corp.* has started stripping the 6-inch overburden and has completed stripping over 500 acres of the 1,600-acre site. This has allowed the foundation proofing and embankment building process to begin. The C-44 Reservoir, designed by *HDR*, will ultimately capture commercial and agricultural runoff from the local basin and send it to the Stormwater Treatment Area (STA), an adjacent project also being constructed at this time. That STA site will cleanse the runoff water through a settling process before releasing it to the C-44 canal and into the St. Lucie Estuary on Florida's east coast.

## L3PS Team Practices Mine Rescue for Safety Week

Now in its fourth year, the practice of conducting Safety Week during the first week of May is built into our project scheduling. This year, our **Lake Mead Intake No. 3 Low Lake Level Pumping Station (L3PS) Project** Team's Safety Week exercises in southern Nevada included mine rescue and fall protection. The Team performed two drills: the first during which one of L3PS's two MSHA-certified mine rescue teams "rescued"



The L3PS Team celebrates Safety Week.

personnel from a mock fire in the Access Shaft; and the second with Owner *Southern Nevada Water Authority's* adjacent water treatment plant where the Team evacuated the work site during a simulated chlorine gas leak. The Team also conducted a fall protection drop demonstration with local supplier *Silverstate Wire and Rope*. Barnard was one of the founding sponsors of Safety Week, a nationwide, industrywide focus on safety training for one week each year.

## Del Shannon joins our Business Development Team

Barnard recently welcomed Del Shannon, P.E. to our Dams and Hydro Business Development Team. Del brings to Barnard 25 years of experience working in the civil, geotechnical, and environmental engineering fields, with a focus on dam safety and dam design, most recently having worked for ASI. Del has been involved in significant roles on a wide variety of embankment and concrete dam projects, such as Project Manager on the development of a preconstruction test quarry for the Gross Dam Raise, Engineer of Record on the Pine Brook Dam and Reservoir Design, and Project Manager on the Cotter Dam Enlargement Project, among many others. Del regularly contributes his expertise to local, national and international committees, most recently serving on the roller-compacted concrete committees for the International Commission on Large Dams (ICOLD). He also serves on the Geotechnical Engineering and Design/Build subcommittees for the U.S. Society on Dams and the Association of State Dam Safety Officials. He has given dam-related presentations internationally, including in 2008 in China where he participated in dam safety inspections of dams damaged during the Wenchuan earthquake. In 2010, he spoke before the British Dam Society 2010 annual conference on U.S. dam safety rules and regulations. He earned an M.S. in Civil Engineering from the University of Colorado in 1993 and is a licensed Professional Engineer. On behalf of Barnard, Del is pursuing new dam construction and rehabilitation opportunities through RFQ and RFP responses, value engineering, and industry organization participation. He can be reached at 406.586.1995 or del.shannon@barnard-inc.com.



*Del Shannon*

## Meet Our New Employees



**Kyle Ferraro**  
Project Engineer  
B.T., Construction Management  
SUNY Delhi  
After interning for Barnard, Kyle recently joined our C-44 Reservoir Team full-time.



**Sam Larson**  
Project Engineer  
B.S., Civil Engineering  
Montana Tech  
Sam joins our Estimating Team at the Home Office.



**Kurt Warner**  
Project Engineer  
B.T., Construction Management  
SUNY Delhi  
Initially an intern on our PG&E Team in Northern California, Kurt recently joined the Team full-time.



**Cori Gore**  
Administrative Assistant  
Cori brings nearly 20 years of professional administration experience to Barnard's Home Office management team.



**Dillon Pigman**  
Project Engineer  
B.S., Construction Engineering Technology  
Montana State University  
Dillon joins our Estimating Team at the Home Office.



**Justin Zandt**  
Project Engineer  
B.S., Mining Engineering  
Colorado School of Mines  
Justin joins our Estimating Team at the Home Office.



**Sean Kelly**  
Project Engineer  
B.S., General Engineering, Civil Option  
Montana Tech  
Sean joins our Estimating Team at the Home Office.



**Timothy Smith**  
Project Superintendent  
A concrete specialist, Tim brings 10 years of RCC experience to our Muskrat Falls Team in Labrador, Canada.

# BARNARD

701 Gold Avenue  
Bozeman, MT 59715  
406-586-1995  
406-586-3530 (fax)  
barnard-inc.com

OnSite  
Barnard's official newsletter.

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## Nye Substation Takes Shape



To provide additional capacity for growth in a rural county and at an active palladium mine, Barnard is constructing a greenfield 100/50kV substation near Nye, Montana, for *NorthWestern Energy, Inc.* The remote site in the Beartooth Mountains of southcentral Montana has posed several weather and geotechnical challenges. Construction began in spring 2017. Work includes foundations, grounding, conduit, cable trench, structural steel, equipment installation, bus work, control/power cable, station service, security and finish grading.

## Barnard's "Next Generation"

Baby boy born to **Brittany** and **Patrick McNamee**. **Liam Michael McNamee** was born on March 12, 2017, weighing 7 lbs. 3 oz.

Baby boy born to **Katie** and **Bill Sutter**. **Blake Gary Sutter** was born on May 2, 2017, weighing 8 lbs. 1 oz.

Baby girl born to **Jaylin** and **Nate Knutson**. **Cali Alice Knutson** was born on May 12, 2017, weighing 7 lbs. 10 oz.

## Wedding Bells

**Sherrie Roberts** and **Dustin Bunch** were married on March 18, 2017, in Murrieta, California.

**Erin Morrison** and **Ryan McCarty** were married on May 22, 2017, in Kauai, Hawaii.