

On Site

People building for People.

Strengthening Dams across the Tennessee Valley



Subcontractor Robert Smith, Inc. places the first lift on top of prepared subgrade at Fort Loudoun Dam. Inset: Barnard crews place sand and gravel filters beneath the RCC subgrade using a material-placing conveyor.

For more than four years, Barnard has worked with the *Tennessee Valley Authority (TVA)* to strengthen and stabilize dams across Tennessee and Alabama. Since undertaking a series of Probable Maximum Flood (PMF) upgrade projects beginning in 2014, we have completed 18 projects for TVA and cycled more than 50 Barnard Project Managers, Superintendents, and Project Engineers through them. Many of these projects, including emergency repair work, involved accelerated schedules and innovative construction techniques to keep communities safe and preserve critical resources. All projects demanded an intense focus on safety – we have now worked over a half million man-hours on TVA sites while maintaining an incident rate well below the national industry average. After constructing floodwall modifications in 2015 at Fort Loudoun Dam outside Lenoir City, Tennessee, Barnard is now assisting TVA with a permanent modification to the dam’s south embankment. For the **Fort Loudoun Roller-Compacted Concrete (RCC) Wall Project**, Barnard is placing RCC and constructing a cast-in-place concrete floodwall and a clay embankment closure berm. RCC placement began in early March, with subcontractor *Robert Smith, Inc.* performing the paving portion of the RCC. The Project also involves construction of a riprap, sand, and gravel access road; installation of chain link fencing; placement of asphalt pavement; and installation of new instrumentation and guardrail. Set to wrap up in April, this PMF modification Project serves as another example of the strong collaboration between Barnard and TVA to address dam-safety concerns throughout the region.

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C-44 Reservoir Begins Embankment Work

notables

- On Feb. 27, Barnard's **Chilhowee Dam North Embankment Remediation Project** received the *2018 Associated General Contractors of America (AGC) Construction Risk Partners Build America Award in the Utility Infrastructure – Renovation category.*
- Also on Feb. 27, Barnard received the *2018 AGC Construction Safety Excellence Award – Utility Infrastructure category.*
- On March 9, Barnard received the National Utility Contractors Association's (NUCA's) *William H. Feather Safety award in the 500,001 – 1 million man-hour category.*
- On Jan. 18, **CryptoWatt LLC** contracted with Barnard to complete the **MSE Substation Upgrade Project** in Butte, Montana. CryptoWatt is retrofitting existing buildings to house their first bitcoin mining data center in Montana. Barnard is upgrading a 20 MW brownfield substation to 67 MW to support the projected server load.



Crews complete the toe trench installation around the radius of the embankment.

Barnard has expanded our self-perform scope for the **C-44 Reservoir Project, Contract No. 2**, now performing more than 7 million CY of earthen embankment work that remains to create the 16-billion-gallon C-44 Reservoir. This challenging project for the *U.S. Army Corps of Engineers* in partnership with the *South Florida Water Management District* has ramped up for the impending dry season after battling wet weather throughout fall and winter. Crews are now placing nearly 100,000 CY of embankment per week. The toe trench excavation, backfill, and compaction crews move at a steady pace, with approximately 35,000 LF of trench left to install along the downstream toe of the embankment footprint. Crews completing the toe trench two-stage filter began installing internal embankment drains in February. Critical to the embankment's safety, the two-stage filter allows groundwater to flow freely through a combination of granite drain sand and a perforated HDPE drain pipe surrounded by granite 57 stone wrapped in geotextile fabric. Crews are working diligently to finish this feature during the dry season, as it will allow embankment to be placed at full width and bring the earthwork process off the ground so embankment work can advance through the wet season.

Barnard Bessac JV Advances Gravity Pipeline Design

After completing twin subway tunnels for San Francisco's Central Subway Tunnel Project in 2015, members of Barnard's Underground group have returned to familiar territory. Barnard, joint venture partner, *Bessac*, and design engineer, *ARUP*, are working with the *Silicon Valley Clean Water (SVCW) Commission* on a nearly \$8 million progressive design-build preconstruction contract to advance the design of a gravity pipeline in Redwood City, California. Beginning with a Partnering workshop, Barnard Bessac JV (BBJV) quickly co-located with SVCW last fall to advance the Project design from the 10 percent stage to 60 percent. The design scope includes support of excavation (SOE) for the tunnel boring machine (TBM) launch shaft; SOE for two TBM retrieval shafts; 3 miles of gravity sewer pipeline tunnel; and all inlets, drop structures, and connections to the tunnel, including full hydraulics design. The pipeline, to be constructed by earth pressure balance (EPB) TBM methods, will improve the wastewater conveyance system that eventually discharges into the San Francisco Bay. Once design for this stage is complete, BBJV will prepare to negotiate pricing for Stage 2, which includes completing the design and constructing the Project.

Del Shannon Elected to USSD Board of Directors

Barnard's Dams, Hydropower, and Water Resources Business Development Manager **Del Shannon** was recently elected to the United States Society on Dams (USSD) Board of Directors. Del joins the 13-member board for a three-year term. The USSD serves as the United States member of the International Commission on Large Dams (ICOLD); both USSD and ICOLD lead the profession of dam and levee engineering and provide a forum for the exchange of knowledge and resources. As a member of the USSD Board of Directors, Del will promote and encourage more collaboration, growth, and engagement of young professionals as well as work cross-functionally with a broad collection of professions, organizations, and individuals. Del can be reached at (406) 586-1995 or del.shannon@barnard-inc.com.



Del Shannon

Meet Our New Employees



Alysa Duenas
Operator Qualifications
Evaluator
M.S., Crisis and Emergency
Management
University of Nevada, Las Vegas
Alysa joined the PG&E Team in
Northern California.



Erik Mereno
Outage Coordinator
Erik brings over 20 years
of experience in the
transmission and distribution
industry to our West of
Devers Upgrade Project in
Southern California.



Wyatt Scheck
Project Engineer
B.S., Construction
Management
University of Wisconsin -
Platteville
A former intern, Wyatt
joined the C-44 Reservoir
Project Team full-time.



Patrick Finn
Senior Project Engineer
B.S., Mining Engineering
Montana Tech
Patrick recently joined our
Home Office Estimating
Team.



Scott Milby
Safety Educator
Scott served in the U.S.
Navy and brings over 10
years of experience in the
construction and safety
industries to our West of
Devers Upgrade Project.



Brian Sinyangwe, P.E.
Quality Control Coordinator
B.S., Mining Engineering
University of Arizona
Brian joined the Home Office
Estimating Team.



Derek Glynn
Project Engineer
B.S., Construction
Engineering Technology
Montana State University
A former intern, Derek joined
the Estimating Team at the
Home Office.



Michael Merselis
Assistant Project Manager
Michael holds a Montana
Real Estate License and
joined our Investments Team
at the Home Office.



Doug Vining
Project Superintendent
Doug brings over 20 years
of experience in roadway
construction and earthwork
to our C-44 Reservoir
Project in South Florida.



Vicente Gomez
Project Superintendent
Vicente brings nearly 25
years of experience in the
construction industry to our
C-44 Reservoir Project in
South Florida.



Chad Newell
Project Engineer
B.S., Mechanical Engineering
Montana State University
Chad recently joined our
PG&E Team in Northern
California.



Ben Weldin
Project Engineer
B.S., Geological Engineering
Missouri University of
Science and Technology
Ben joined our Home Office
Estimating Team.



Paul Loska
Project Engineer
B.S., Civil Engineering
University of Idaho
Paul joined our Home Office
Estimating Team.



Matt Oglesby
Safety Educator
B.S., Occupational Safety
and Health
Southeastern Oklahoma
State University
Matt joined our PG&E Team
in Northern California.



George Wooten
Safety Educator
George brings over 40
years of experience in the
construction and safety
industries to our
C-44 Reservoir Project in
South Florida.

BARNARD

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

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Barnard's official newsletter.

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Widows Creek Project Enters Final Construction Season



After nearly two years of meticulously capping and covering coal ash and coal combustion residuals at a retired fossil plant, Barnard has entered the final construction season at the **Widows Creek Main Ash Pond and Dredge Cell Final Closure Project**. Barnard has been assisting the *Tennessee Valley Authority* in properly closing the 400-acre ash pond and dredge cell site since spring 2016 while working through some of the wettest seasons on record for northeastern Alabama. When the sun is shining, the Project runs at full force with crews excavating and placing subgrade (ash), installing liner, and hauling and placing cover soil in the main ash pond. As of March, liner subcontractor *Environmental Specialties International, Inc.* has installed 12.6 million SF of linear low density polyethylene liner and geocomposite. Barnard crews have moved over 1.7 million CY of subgrade and have imported 965, 000 CY of borrowed clay material.

Promotions

Congratulations to **Jason Harsch** on his recent promotion to Superintendent. Jason is currently assigned to our Widows Creek Project in Stevenson, Alabama. He has been with Barnard on six projects over the past eight years.

Congratulations to **Rich Sargent** on his recent promotion to Superintendent. Rich has 25 years of experience in the hydropower industry and is currently estimating at Barnard's Home Office in Bozeman, Montana. He joined Barnard in 2015 as a Supervisor on the Smithland Hydroelectric Project.