

# UPDATE

JULY - SEPTEMBER 2009

## Major Rehabs Advance with CG, MOA, ARRA

Ozark, Stockton, Webbers Falls, Whitney. What do they have in common? Well, besides the most obvious answer of being hydroelectric projects in Southwestern's marketing area, the powerhouses of these four multipurpose reservoir projects are currently in various states of disassembly and repair as worn, outdated, and broken components of hydroelectric turbines, generators, and related equipment are being replaced and rehabilitated. This work will ensure that the projects can continue to produce renewable, clean, and dependable hydropower for the Nation.

Funding for this type of work has historically been provided through Construction General (CG) appropriations to the U.S. Army Corps of Engineers (Corps). However, as appropriated dollars have dwindled in past years, Federal hydropower stakeholders have been forced to look beyond appropriations.

Since 2001, some of this funding gap has been met through a Memorandum of Agreement (MOA) among Southwestern, City Water and Light of the City of



**UNDER A CORPS CONTRACT FUNDED BY ARRA, DIVERS SUCCESSFULLY RETRIEVE A BROKEN BLADE THROUGH THE DRAFT TUBE OPENING AT STOCKTON DAM IN AUGUST 2009, THE FIRST MILESTONE EVENT IN THAT PROJECT'S REHABILITATION.**

Jonesboro, Arkansas (Jonesboro), and the Corps, which allows Southwestern's customers to provide funding for much-needed replacements and other work. In April this year, a new funding source was added as the Corps received funds for hydropower-related projects through the American Recovery and Reinvestment Act of 2009 (ARRA).

Funds spent on rehabilitation and other work related to the hydropower purpose at the projects within Southwestern's marketing area must be repaid by Southwestern as part of the agency's core mission to "market and reliably deliver Federal hydroelectric power" while "maximizing the use of Federal assets to repay the Federal investment" in these multipurpose projects.

The following sections summarize the individual funding history and status of the four rehabilitations currently ongoing in Southwestern's marketing area.

### Ozark

The Ozark powerhouse is a feature of the Ozark-Jeta Taylor Lock and Dam project located on the Arkansas River McClellan-Kerr Navigation System near Ozark, Arkansas. The

**CONTINUED ON PAGE 4**



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# Interns on Power Trip

The Ozark region of Missouri is home to Southwestern's Operations Center, several of Southwestern's customers, and the Table Rock dam and powerhouse, making it the perfect area for Southwestern's summer interns to get plenty of firsthand knowledge about power generation, marketing, and transmission on a single trip.

Ashley Corker, Lyndsey Derkatch, Brad Gahring, and Nicki Perryman, who began internships at Southwestern's Tulsa headquarters earlier this year, toured several sites from August 18-20, 2009, taking the opportunity to learn from some of the seasoned professionals who play a role in charging the grid in this part of the country. The foursome made the trek with Aiden Smith, a Public Utilities Specialist in Southwestern's Division of Customer Service who himself began his Southwestern career as an intern.

Their first stop was Springfield, Missouri, where the group visited the Power Marketing and Operations offices of Associated Electric Cooperative, Inc. (AECI), one of Southwestern's large customers. Chris Bolick, AECI's Manager of System Operations, gave a tour of the transmission dispatch facility, where Kirk Clark, AECI's Senior Wholesale Power Marketing Specialist, discussed generation, and Chris McGeeney, AECI's Senior Gas Coordinator, talked about the natural gas side of the utility business. The diversity in AECI's power sources, says Smith, helped to provide a "big picture" view of the industry.

"It was very interesting for the interns to see firsthand how fossil-fuel-based energy is marketed, as compared to hydropower," says Smith. "I found it pretty interesting myself."



**SOUTHWESTERN INTERNS NICKI PERRYMAN, ASHLEY CORKER, AND LYNDSEY DERKATCH ARE INVESTED IN LEARNING ABOUT POWER PRODUCTION AS THEY PREPARE TO TOUR CITY UTILITIES OF SPRINGFIELD'S COAL PLANT.**

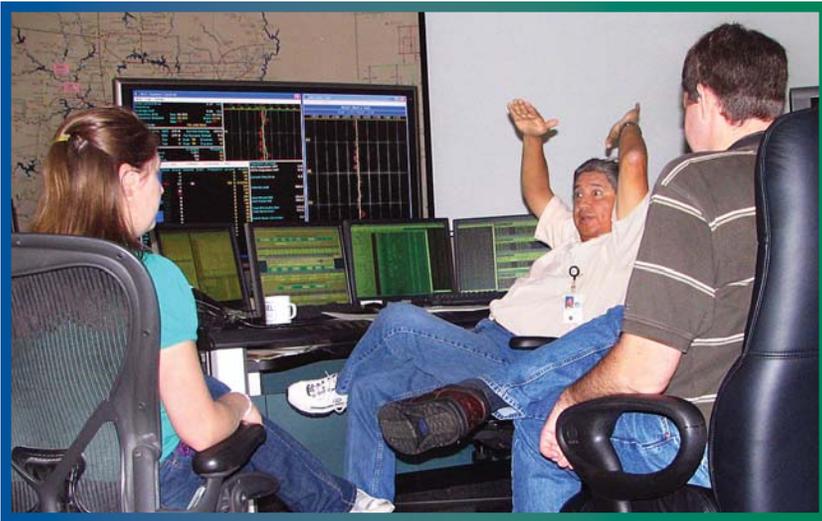


**DOUG JOHNSON AND JOHN RIBAR (FAR RIGHT) TALK TO FRANCIS ROMANS, BRAD GAHRING, DANIEL MAY, LYNDSEY DERKATCH, NICKI PERRYMAN, AND ASHLEY CORKER ON A WALKTHROUGH OF SOUTHWESTERN'S SPRINGFIELD SUBSTATION. ROMANS AND MAY, WITH SOUTHWESTERN SUPPORT SERVICES CONTRACTOR BEARSKIN SERVICES, ACCOMPANIED THE INTERNS ON THIS TOUR STOP.**

The group began its second day with a hard hat tour of Southwestern's Springfield substation, led by Doug Johnson, Electrical Engineer, who serves as the Springfield Section Chief for Southwestern's Division of Engineering and Planning. Johnson and John Ribar, Power System Operations Specialist, showed the interns around the transformers and buswork, explaining the functions of the equipment in relation to electric transmission.

For several of the interns, this was their first time in a substation. "I had never been to a substation before," says Derkatch. "We got to see how everything works, and ask about what all the equipment does."

Next door, they visited Southwestern's Power Operations Center, where the group spent time with Power System Dispatchers Sheldon McNeil and Carl Brown, who explained the basics of power dispatching, demonstrated how the Supervisory Control and Data



Acquisition (SCADA) system works, and answered numerous questions about voltages and transmission.

“It was pretty cool to see all the dams displayed and the amounts of water going through each of them,” recalls Perryman. “Sheldon and Carl explained how Southwestern ensures that enough water goes through to meet the needs of the system at every moment. That was really interesting.”

Derkatch appreciated getting to see how her work plays a role in the agency’s mission. “Since I’ve been doing the daily schedules now and then, it was interesting for me to see how the dispatchers use the schedules we put out.”

**DISPATCHER Sheldon McNIel EXPLAINS THE INS AND OUTS OF TURBINE WATER FLOW CONTROL TO Nicki PERRYMAN AND BRAD GAHRING AT SOUTHWESTERN’S POWER OPERATIONS CENTER.**

After lunch, the itinerary led to City Utilities of Springfield (CU) for a hard hat tour of its Southwest Power Station, a 195 megawatt (MW) pulverized coal-fired plant. David Gimlin, CU’s Supervisor of Power Station Operations, conducted the tour of both the main facility and a second unit being constructed at the site to expand capacity an additional 300 MW.

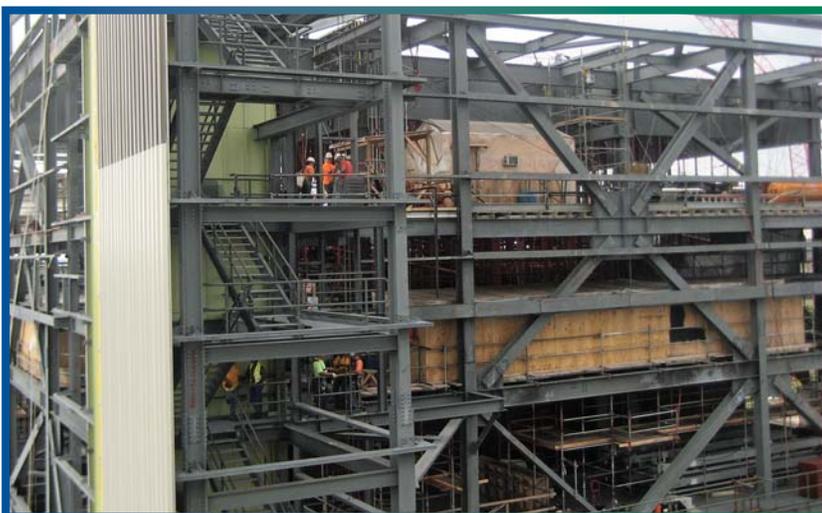
“This kind of large coal-fired plant doesn’t get built very often, so we felt privileged to be there,” says Smith. “It was amazing to get to see it. It’s hard to imagine the massive hugeness of these things.”

“We stood just outside where the new boiler will be placed,” says Gahring. “They’re just now installing the tubes that will carry the water. That was interesting to see.”



**LYNDSY DERKATCH LISTENS TO AECI’S CHRIS BOLICK, SYSTEM OPERATIONS MANAGER, DESCRIBE HOW AECI’S DISPATCHERS CONTROL POWER FROM MULTIPLE DIVERSE SOURCES.**

Corker says the CU tour was perhaps the most informative part of the trip for her, noting the video shown beforehand that explained what everything was that they would see, and the role the equipment plays in the generation process. “The best part of the tour was probably the boiler,” she says – specifically when Gimlin opened an observation port into the active unit. “The sight was intense.” All the interns agree that the moment was quite memorable.



**THE POWER PLANT EXPANSION AT CITY UTILITIES OF SPRINGFIELD, MISSOURI, PROVIDED AN OPPORTUNITY TO LEARN MORE ABOUT THE GENERATION AND MARKETING OF FOSSIL-FUEL BASED ENERGY AS COMPARED TO HYDROPOWER.**

**CONTINUED ON PAGE 7**

## MAJOR REHABS FROM PAGE 1

run-of-river project contains five 20 megawatt (MW) slant-axis generating units with a total rated generating capacity of 100 MW. The five units came online between November 1972 and May 1974 and are operated by the Corps' Little Rock District. The average annual energy at Ozark is estimated to be 429,000 MWh.

Due to operational stresses related to their slant-axis design, the generating units at Ozark have suffered from poor performance and chronic long-term forced outages over the years. The contract to conduct a major rehabilitation of the powerplant was awarded in May 2005 and includes turbine design, turbine model testing, turbine fabrication, disassembly and reassembly of all five turbines, and the provision of a spare bull gear for one speed increaser. To date, approximately \$44.5 million has been provided through CG funds, \$20.1 million has been provided through the MOA, and \$15.1 million has been provided through ARRA. Completed milestones for the Ozark Rehabilitation include disassembly of unit 4, repair of the unit 4 stay vane, and initiation of repairs to the unit 4 discharge ring.

### Stockton

The Stockton powerhouse is located on the Sac River, just east of Stockton, Missouri. The project contains one vertical-axis generating unit with a capacity of 45.2 MW. The unit came online in 1973 and is operated by the Corps' Kansas City District. The average annual energy at Stockton is estimated to be 55,000 MWh.

In early February this year, the Stockton powerplant was shut down due to failure of a turbine blade. Contracts to repair the blade, repair and ultimately replace the turbine, replace the transformer, and rewind the generator are in the process of being awarded using ARRA funds in the amount of \$33.5 million. Achievements for the Stockton rehabilitation so far include recovery of the broken blade and award and initiation of repairs to the intake and draft tube gates.

### Webbers Falls

The Webbers Falls powerhouse is located on the Arkansas River McClellan-Kerr Navigation System, approximately five miles northwest of Webbers Falls, Oklahoma. The run-of-river project contains three 20 MW slant-axis generating units with a total rated generating capacity of 60 MW. The three units came online between August and November 1973 and are operated by the Corps' Tulsa District. The average annual energy at Webbers Falls is estimated to be 213,000 MWh.

Like Ozark, operational stresses due to the slant-axis design of the generating units have caused poor performance and numerous

Ongoing Major Rehabilitations - 2009						
Project	Capacity (MW)	Average Annual Energy (MWh)	Funding To-Date (\$ millions)			
			CG	MOA	ARRA	TOTAL
<b>Ozark</b> Arkansas -- Arkansas River	100.0	429,000	44.5	20.1	15.1	<b>79.7</b>
<b>Stockton</b> Missouri -- Sac River	45.2	55,000	0.0	0.0	33.5	<b>33.5</b>
<b>Webbers Falls</b> Oklahoma -- Arkansas River	60.0	213,000	0.0	65.3	6.0	<b>71.3</b>
<b>Whitney</b> Texas -- Brazos River	30.0	73,000	10.0	6.3	0.0	<b>16.3</b>



**THE PROJECTS UNDERGOING MAJOR REHABILITATION (INDICATED IN RED) ARE LOCATED IN EACH STATE FROM WHICH SOUTHWESTERN MARKETS POWER.**

long-term forced outages since the powerhouse came online. To maximize turbine design and contract administration efficiencies, the contracts to perform the Webbers Falls rehabilitation were included as options to the Ozark contract and were awarded between December 2007 and April 2008. The rehabilitation consists of turbine fabrication, disassembly, and reassembly of all three units. To date, approximately \$65.3 million has been provided through the MOA, and \$6.0 million has been provided through ARRA. Completed milestones to date include crane repairs, mobilization to the site, and disassembly of unit 3.

## Whitney

The Whitney powerhouse is located on the Brazos River approximately five miles southwest of Whitney, Texas. The project contains two 15 MW units with a total rated generating capacity of 30 MW. The units became operational in 1953 and are operated by the Corps' Fort Worth District. The average annual energy at Whitney is estimated to be 73,000 MWh.

The age of the equipment and the powerplant's use as a heavy peaking plant have contributed to numerous failures and unscheduled forced outages at Whitney. The base contract for the rehabilitation of the turbines and rewind of the generators was awarded in 2007. To date, approximately \$10.0 million has been provided through CG funds and \$6.3 million through the MOA. Completed milestones to date include switchyard renovation, switchgear replacement, bridge crane repairs and upgrades, turbine design, and procurement of the turbine runners.

"The rehabilitations at all of these projects are of great significance to our Nation," says Southwestern Administrator Jon Worthington. "When the good work the Corps and its contractors are doing is completed, the units will continue to produce clean, renewable energy, but will do so in a more efficient and reliable manner." 💧

## SPARKS OF INTEREST



### **COLONEL ANTHONY FUNKHOUSER, COMMANDER OF THE TULSA DISTRICT, BECAME THE COMMANDER OF THE SOUTHWESTERN DIVISION**

of the U.S. Army Corps of Engineers (Corps) at a Change of Command Ceremony held in Dallas, Texas, on September 3, 2009. Jon Worthington, Administrator of Southwestern Power Administration, and Marshall Boyken, Director of the Division of Customer Service, attended the ceremony to extend the agency's respects to Colonel Funkhouser as he begins his new responsibilities. Funkhouser will also continue to serve as Commander of the Tulsa District. Brigadier General Kendall Cox, former Commander of the Southwestern Division, is being assigned as Commander and Division Engineer of the Transatlantic Division, with duty in Iraq as the Commanding General of the Gulf Region Division.



### **LT. GEN. ROBERT L. VAN ANTWERP (C) OFFICIATES AS COL. FUNKHOUSER RECEIVES THE DIVISION'S COMMAND FLAG FROM BRIG. GENERAL COX.**



### **COLONEL RICHARD J. MURASKI JR. BECAME THE COMMANDER OF THE FORT WORTH DISTRICT,**

U.S. Army Corps of Engineers, on July 24, 2009. Colonel Muraski holds a Master of Science in Geodetic Sciences from Purdue University, and a Master of Science in National Strategic Studies from the National War College in Washington, D.C., and previously taught at the Defense Mapping School, National Imagery and Mapping Agency, at Fort Belvoir, Virginia. He has served in various leadership and command positions both stateside and abroad. His most recent assignment was Military Assistant to the Secretary of the Army.

**SOUTHWESTERN PUBLISHED A NOTICE OF REVIEW AND PUBLIC COMMENT** in the Federal Register on September 23, 2009, regarding Proposed Integrated System Rates based on the 2009 Power Repayment Study. The Notice can be found at the Federal Register Web site at <http://www.gpoaccess.gov/fr>. Click the "Retrieve an FR Page" link, enter page number 48527, and click Submit. Once the page has been retrieved, use the arrows or input box to go to pages 48528 and 48529. The public comment period ends on November 23, 2009. For additional information, contact Stephanie Bradley, Public Utilities Specialist, at 918-595-6676, [stephanie.bradley@swpa.gov](mailto:stephanie.bradley@swpa.gov); or Jim McDonald, Assistant Administrator of the Office of Corporate Operations, at 918-595-6690, [jim.mcdonald@swpa.gov](mailto:jim.mcdonald@swpa.gov).

# Keystone Transfer Team Praised for Work

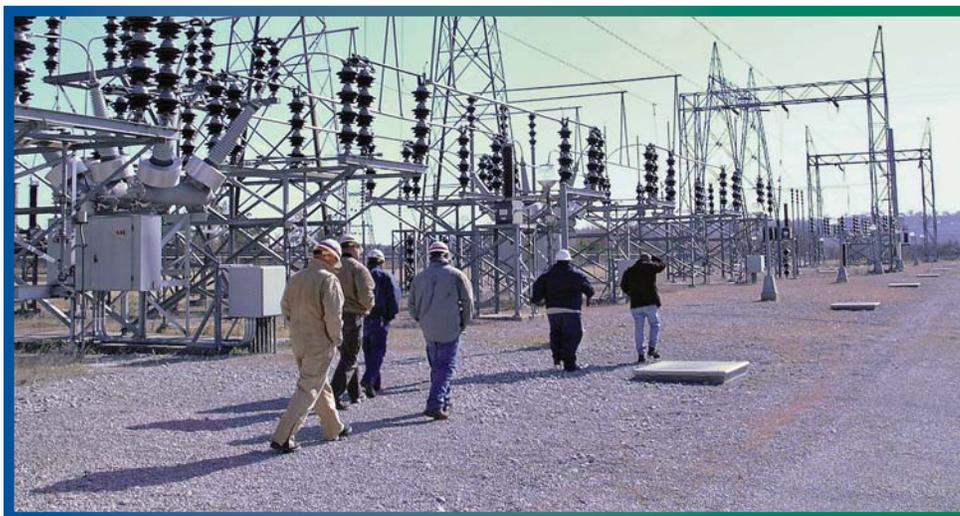
Southwestern employees involved in the transfer of the Keystone Dam Switchyard were honored at a gathering at Southwestern's Headquarters in Tulsa, Oklahoma, on July 16, 2009. Colonel Anthony Funkhouser, Commander of the U.S. Army Corps of Engineers' Tulsa District (Corps), and Southwestern Administrator Jon Worthington presented certificates of appreciation to Southwestern and Corps personnel from the areas of engineering, maintenance, finance, real estate, and operations. The team had worked together for nearly two years to hammer out the details of the transfer, which was completed in December 2008.



**JON WORTHINGTON (CENTER) AND COL. ANTHONY FUNKHOUSER RECOGNIZED THE EFFORTS OF THE KEYSTONE TRANSFER TEAM, INCLUDING (L-R) LINDA MUMMY AND JEREMY ROGERS (SOUTHWESTERN), MALINDA LEFAVE (CORPS), RON BECK AND LARRY HARP (SOUTHWESTERN), ROD SHANK (CORPS), DANNY JOHNSON (SOUTHWESTERN), SAM PATTERSON (CORPS), MIKE LOVE (SOUTHWESTERN), AND NIKKI CARR AND RAY HARRISON (CORPS).**

SWPA employees recognized for their contributions included: Ron Beck, Director, Division of Scheduling & Operations; Marshall Boyken, Director, Division of Customer Service; Scott Carpenter, Assistant Administrator, Office of Corporate Facilities; Gary Cox, Power Operations Specialist; Larry Harp, Director, Division of Engineering & Planning; Danny Johnson, Electronics Engineer; Linda Mummy, Realty Officer (retired); Beth Nielsen, Public Utilities Specialist; Jeremy Rogers, Accountant; and Mike Wech, Supervisory Power System Dispatcher.

Corps personnel who received recognition included: Shekinah Bailey, Realty Specialist; Doug Beck, Attorney; Nikki Carr, Staff Accountant; Ray Harrison, Power Plant Superintendent; Melinda LeFave, Realty Specialist; Mike Love, Supervisory Realty Specialist (now a Realty Officer and Team Lead at Southwestern); Dan McPherson, Chief, Hydropower Section; Janet Patterson, Program Analyst; Sam Patterson, Keystone Powerhouse Superintendent; and Rod Shank, Hydropower Coordinator.



**TULSA DISTRICT CORPS PERSONNEL STROLL INTO THE KEYSTONE SWITCHYARD DURING TRAINING ON SOUTHWESTERN'S SWITCHING PROCEDURES SHORTLY BEFORE THE YARD OFFICIALLY TRANSFERRED TO SOUTHWESTERN CONTROL IN DECEMBER 2008.**

The Keystone Switchyard transfer was first proposed by Southwestern as a way to alleviate the Corps' concerns about limited appropriations in the midst of ever-expanding transmission maintenance and operations requirements. The remaining switchyards in the Tulsa District are slated for similar transfers in the future. 💧



**THE TOUR GROUP IS DWARFED BY THE BULK OF TABLE ROCK DAM AS THEY PREPARE TO ENTER THE POWERHOUSE.**

### INTERN TRIP FROM PAGE 3

Smith adds that the CU staff was excited to have people from Southwestern come see their facility. "They said we could come back any time," he says.

On the final morning of the trip, the group travelled to Branson, Missouri, to tour the Table Rock dam and powerhouse as guests of the Little Rock District of the U.S. Army Corps of Engineers. Powerhouse Superintendent Stan Jones took them through the facility, including underneath the turbines and all the way to the bottom levels of the dam.

Corker appreciated getting to see so much of the dam that is not usually open to visitors. "We went all over the dam, through the control room, past the generators, to the turbines as they were spinning, past the penstocks, down into the bowels of the dam, then all the way up to the catwalk," she recounts.

"The Table Rock tour really helped me visualize the funding and sub-agreements that Southwestern develops with hydropower customers and the Corps to maintain the dams," says Perryman. "It's really gratifying to see the equipment and know you had something to do with keeping it running."

and tour several of the dams and interconnection sites, and that was such an invaluable experience," he says. "I wanted our current interns to have that same kind of opportunity, to meet customers and power personnel, interact with them, ask questions, and learn as much as they can. I am a strong believer in experiential training." 💧

As a former intern who hired on at Southwestern in 2006, Smith was instrumental in getting the tour organized. "When I first started here at Southwestern, I had the opportunity to visit our Operations Center

## Washington Update

BY MICHAEL BRAIRTON

October 1, 2009, marked the beginning of Fiscal Year (FY) 2010. However, out of 12 Appropriations bills, the FY 2010 Legislative Branch Appropriations is the only one the President has signed into law so far. The House passed all 12 Appropriations bills before the August Recess, and the Senate continues to chip away on its versions of the unfinished bills. The Legislative Branch Appropriations included a 30-day Continuing Resolution to keep the Federal government operating past the fiscal year deadline.



On October 1, 2009, the House passed the final Conference Report for the Energy and Water Development Appropriations bill, which funds the three Power Marketing Administrations, the Department of Energy (DOE), the U.S. Army Corps of Engineers, and other related Federal agencies. The bill passed the House by a vote of 308 to 114 and awaits action in the Senate before going to the President for signature.

As part of the final Conference Report, Southwestern, Southeastern, and Western Area Power Marketing Administrations (PMAs) received authorization from Congress to permanently reclassify receipts from mandatory to discretionary to offset annual expenses. This change allows for better program planning, improves funding certainty, and allow PMAs to operate in a more business-like manner by tying expenditures for expenses directly to receipts.

The action by the House and Senate to finalize the FY 2010 Energy and Water Development Appropriations bill likely means Southwestern will only operate under the Continuing Resolution for a short period of time rather than the full 30 days. Compared to recent trends regarding the completion of Appropriations bills, this circumstance represents a significant change for DOE and Southwestern. 💧

## NEW EMPLOYEES

**Chad Holmes**  
EQUIPMENT OPERATOR  
JONESBORO MAINTENANCE UNIT

**David A. Kenney**  
POWER SYSTEM DISPATCHER  
DIVISION OF SCHEDULING AND OPERATIONS

**Joshua Standridge**  
LINEMAN HELPER 2ND CLASS  
SPRINGFIELD MAINTENANCE UNIT

**Daniel D. Young**  
POWER SYSTEM DISPATCHER  
DIVISION OF SCHEDULING AND OPERATIONS



# WATTS INSIDE?



Page 1 - Major Rehab Status

Page 2 - Interns Learn  
Through On-site Tours

Page 5 - SPARKS of Interest

Page 6 - Keystone Transfer  
Team Praised

Page 7 - Washington Update

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