

CVEA Marker Balls What They Are & Why They're Being Replaced



Above, a specially trained lineman performing marker ball replacement on a power line from a platform attached to a helicopter

Do you know what a marker ball is? What it does? Have you ever noticed them; the orange, white, or yellow balls attached to electrical lines as you drive between Valdez and Glennallen? Have you ever wondered what they are used for?

Most often referred to as just marker balls, these visibility marker balls are very important for system reliability and safety. Simply put, marker balls are used to help identify the electrical lines, primarily for aircraft, so they can see where power lines exist to avoid flying into them. If an aircraft came into contact with an energized power line, it could cause an outage or costly damage to the system, damage to the aircraft, and injury or worse for the people in the aircraft.

Typically marker balls are located on lines near airports or runways, which is mandated by Federal Aviation

Administration (FAA) regulations. They are also required where electrical lines cross rivers, canyons, and highways as visibility in these areas can be difficult and they are common areas for aircraft to travel or land. Along CVEA's system there is a 2100 foot span between two structures that cross a very impressive gorge and another that is visible from the Richardson Highway that is 1900 feet long and spans the Lowe River. CVEA owns and operates a 106 mile, 138kV, transmission line that connects Valdez and Glennallen. Over the 106 mile area, there are over 250 marker balls installed for the safety of aircraft.

Marker balls are typically 36 inches in diameter and weigh between 15 and 20 pounds each. They are international orange, yellow, or white in color per FAA requirements. These colors



are selected to stand out against all background colors, so colors are alternated to ensure lines are visible.

The average life expectancy of a marker ball is 10-15 years. This is the length of time before fading or damage causes the need for replacement. Currently, many of the marker balls along CVEA's system have faded due to ultra violet light from the sun, are damaged or parts have failed from exposure to ice and wind, or have unfortunately been used as target practice.

To ensure the continued safety of the aircraft flying within the service territory, CVEA will complete a marker ball replacement project along the entire transmission line in 2018.

Due to difficult terrain and accessibility issues surrounding many of the marker balls, a majority will be installed utilizing a helicopter and specialty trained linemen. These linemen will work off of a platform attached to the helicopter high in the air to remove the old marker ball and install the new one. CVEA is projecting to spend over \$1.1 million on this project, with most of this cost due to the required use of the helicopter.

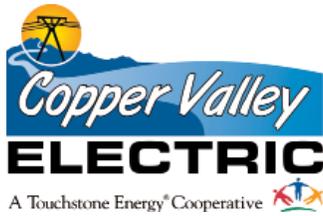
CVEA reminds everyone that marker balls are used for the safety of aircraft and should not be shot at. Shooting and damaging a marker ball creates an extremely dangerous safety hazard for aircraft, is very costly to replace, and can potentially cause a power outage or damage to the power line or other related equipment.

As you're driving on the Richardson Highway between Glennallen and Valdez this summer, keep an eye out for the crew installing the marker balls. After the markers balls have been replaced, if you see someone shooting at marker balls or power lines, or you see damage such as an open ball, pieces of a ball hanging off the line, obviously frayed wires or missing pieces, or smoke or fire, please immediately contact the CVEA office at 822-3211 in Glennallen, 835-4301 in Valdez, or CVEA dispatch at 1-866-835-2832 if it is after office hours.

For additional information on marker balls, marker ball safety, or any related topic, contact Sharon Crisp at 822-5506, 835-7005, or email crisp@cvea.org. ■



**Top left, marker ball with bullet holes and frayed wire from being hit by bullets
 Top right, a brightly colored marker ball stands out against the surrounding terrain to demonstrate the location of the line
 Middle, marker balls crossing a span of line over a gorge between structures
 Bottom, a damaged marker ball**



CVEA Community Foundation Contribution Season Awards

Each year the CVEA Community Foundation (Foundation) contributes funding to local non profit organizations looking to fund new or expanding programs that meet the Foundation's contribution guidelines.

In 2017 roughly \$11,400 was awarded to 15 local non profits. Contributions were awarded to the following groups in December:

- Valdez Imagination Library to fund a new book each month for a year for 10 preschool-age children and to support preschool events that foster the love of reading

- Civil Air Patrol Valdez Composite Squadron to fund items that support the community outreach and education program
- Valdez Co-op Preschool to fund a tuition scholarship for low income families
- Valdez City Schools Crooked Creek Salmon Incubation Project to provide fish and egg take education
- HHES fourth grade classes to help fund an educational cruise in Prince William Sound
- SPACE for a third grade integrated STEM unit on aerospace, to include

- materials and a field trip
- Junior Achievement of Alaska/ Valdez for program materials on financial literacy, workforce readiness, and entrepreneurship
- Valdez Junior Rifle Club to help fund equipment for new athletes
- Connecting Ties to fund an industrial shredder
- Valdez Museum to help fund four temporary fine art exhibitions
- Kenny Lake Library to support their summer Literacy Camp
- Copper River Hockey Club to purchase equipment for snow removal and scoreboard
- Copper Basin Shooting Club for a youth shooting program
- Slana School Archery Program to aid in the purchase of new equipment
- Copper River Basin Child Advocacy Center for 'Defeat the Bully', a community based bully prevention class



Top, Sharon Crisp, representing the CVEA Community Foundation, presented a check to members of the Valdez Junior Rifle Club
Above left, Students in Sheri Beck and Katy Thompson's fourth grade classes accepting a check for an educational tour in Prince William Sound
Above right, CVEA CEO, John Duhamel, presenting a check to Gina Hoke of the Copper River Basin Child Advocacy Center

Local organizations who meet Foundation guidelines are encouraged to apply. Applications will be available in July 2018, due in August, and awards will be made in October. For additional information, please contact Sharon Crisp at 822-5006, 835-7005, or email crisp@cvea.org. ■

Scholarships Remove Barriers to Education

By Michael Rovito

One of the most essential ingredients in producing and distributing the electric power that most take for granted is the people behind the machinery. Hardworking and highly trained individuals are at the helm at each electric utility, making certain consumers are afforded safe and reliable electricity.

But those people have to start somewhere. For many, that beginning is in college or technical school. That's where the initial training takes place for future electric utility employees to gain the knowledge necessary to excel in the profession.

Paying for all that education is a challenge. News reports indicate it's not going to get any easier. Students face financial hurdles on their way to achieving their education goals, but it's imperative that as retirees move on, their replacements can take over.

Alaska Power Association, the statewide trade association for the electric utility industry, offers two scholarships—one a partnership with IBEW Local 1547—to help soften the financial blow to the next leaders of our industry.

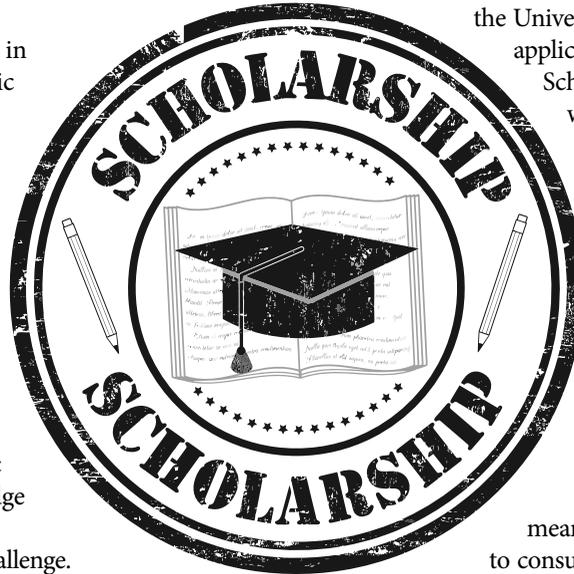
Encouraging young people to work toward a career in the electric utility profession benefits everyone especially those who use electricity every day.

The Hank Nikkels Scholarship for Engineers is APA's memorial scholarship for Hank Nikkels, who died in 2002. A 25-year management employee at Anchorage's Municipal Light & Power. Hank's long and eventful career became the catalyst for his namesake scholarship because of the legacy he left. The scholarship offers up to \$3,000 plus a \$500 book stipend to Alaska residents attending college in Alaska full time or part time and working toward obtaining a doctoral, master's or bachelor's degree in engineering.

Students applying for the scholarship must be at least a sophomore and have a minimum GPA of 3.25. They must provide a letter of recommendation from an instructor or department chairman, community member, industry member or employer, and a personal reference. A 500-word essay is also required.

While organizing and completing paperwork for a scholarship takes a bit of work, those who have received the Nikkels Scholarship tout its benefits.

Joseph Sandstrom is one of those recipients. He is a



two-time winner. A civil engineering graduate from the University of Alaska, Anchorage, Joseph's application won acclaim from the APA Scholarship Committee, which is tasked with reviewing applications and choosing scholarship recipients.

For Joseph, the scholarship provided peace of mind while he continued his studies.

"I am very thankful to Hank Nikkels and the Alaska Power Association for offering this scholarship," Joseph says. "Receiving this award has enabled me to focus on excelling in school instead of searching for ways to cover the cost of it."

Of course, power generation doesn't mean much if the electricity can't make it to consumers. Most often, maintaining that distribution is left to linemen and other technical employees at an electric utility. Like the engineers, it costs

money to train properly for work on the poles or within power plants. In 2014, APA and IBEW Local 1547 teamed up to help soften the bill.

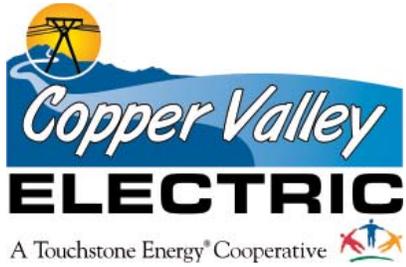
The APA-IBEW Local 1547 scholarship offers up to \$2,000 for Alaska residents who intend to work in the electric industry and who are enrolled in an accredited Alaska vocational school such as the Alaska Joint Electrical Apprenticeship and Training Trust, the Alaska Institute of Technology, the University of Alaska Fairbanks Community & Technical College and the University of Alaska Anchorage Technical Vocational Educational Program.

Scholarship candidates must provide an official transcript and have letters of recommendation—two from instructors and a personal reference. Funds for scholarship winners go directly to the recipients, allowing for the purchase of tools or other necessities—or to help pay tuition—as they continue their training.

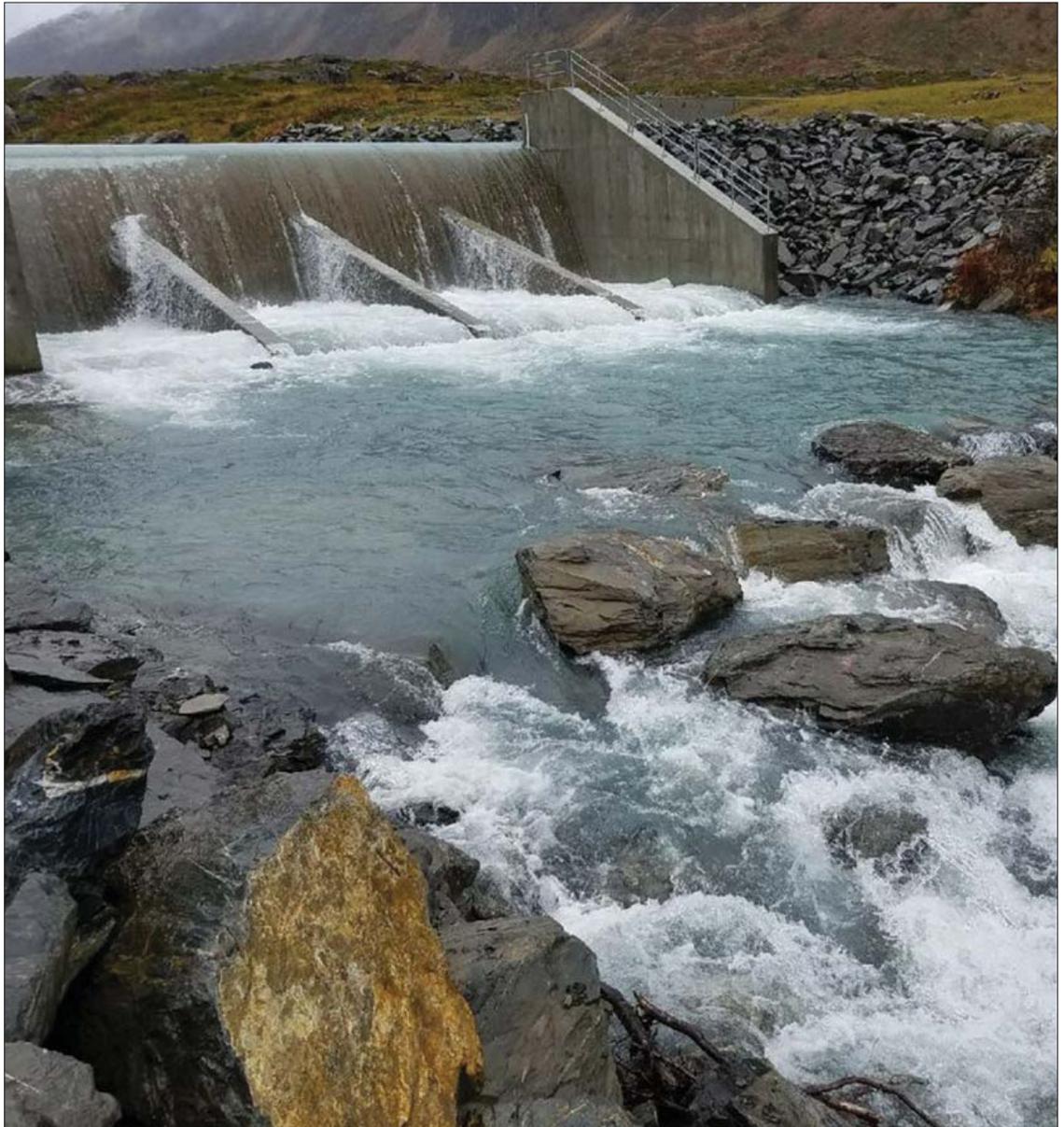
The baby boomer generation is beginning to retire en masse. For the sake of continuity, it is extremely important to have a workforce that can step in and keep it all running.

With a little financial help, that next generation is in the classrooms and out in field training, preparing to carry the banner of reliable electricity into the future. ■

For more information on the Hank Nikkels Scholarship for Engineers and the APA-IBEW Local 1547 Scholarship, email Michael Rovito, director of member and public relations, at mrovito@alaskapower.org, or call (907) 771-5711.



Allison Creek First Year Benefits Helped Set Hydro Record



Above, water flowing over the diversion structure in Allison Creek

Water was not the only thing flowing out of Allison Creek in 2017; benefits to the Membership also came rolling out of the new hydroelectric project during its first full year of operation!

2017 was a record year for total hydro generation for CVEA producing nearly 57,500,000 kilowatt hours of electric energy, and Allison Creek had a big hand in reaching this number. Nearly 63 percent of the electricity needed for CVEA members came from CVEA's renewable hydroelectric power plants. What is remarkable about this record is that it was set during a year CVEA would traditionally characterize as a low water year.

Historically, a low water year for Solomon Gulch, such as the case in 2007, would have resulted in running the diesel or cogeneration plants in the summer to meet the power supply needs of the members.

The Solomon Gulch Hydroelectric Plant is able to generate year round utilizing a dam to store water in Solomon Lake. Typically the snowmelt in the spring fills the lake within 10 feet of full, then the summer glacier and high elevation snowmelt and rain fill the lake the remainder of the way.

The goal with the Solomon Gulch project is to have a full lake going into winter to be utilized throughout the winter months. Typically Solomon continues to produce nearly 30 percent of the generation needs throughout the winter.

This spring, the snowmelt didn't fill the lake to the level needed to fully utilize the two 6 megawatt (MW) Francis turbine generators. Thankfully, Allison Creek came to the rescue providing an additional 6.5 megawatts of electricity.

This gave CVEA the ability to serve all members while running just one, instead of two, of the hydro units at the Solomon Gulch Hydro Plant, allowing the lake to fill to capacity last summer as needed.

The Allison Creek project is a run-of-river hydroelectric plant. The difference between Allison and Solomon is that Allison does not dam up a large

reservoir to utilize water throughout the year. The project diverts water from Allison Creek at elevation 1300 feet and routes the water through a 42-inch penstock, or pipe, to the power house near tide water.

Having said that, the water is only available when it is flowing down the creek, typically between the months of April and November, and the amount of power that the project can produce is solely dependent on how much water is flowing down the creek.

In addition to salvaging what would have otherwise been a low water year, the Allison Creek project provided enough water, later in the fall, to extend the typical summer generation season further than in the past.

Prior to Allison Creek, the reduction in water available for hydro generation typically forced CVEA to begin running the diesel or cogen plants mid October.

In 2017, however, CVEA was able to extend the summer generation season from October to half-way through November. In addition, CVEA generated 100 percent of power needs utilizing hydro the months of September, October, and until Allison Creek was brought offline in November.

At that time, the Allison Creek project was secured for the winter and fossil fuel generation was brought online.

In 2017 alone, the Allison Creek project provided members lower cost hydroelectricity for an additional month.

CVEA is pleased with Allison Creek's results from the first full year of operation and are confident the project will bring even greater benefits during a normal water year.

If you have any questions on this topic, contact Sharon Crisp at 907-822-5506, 907-835-7005, or email crisp@cvea.org. If you are interested in details regarding the Allison Creek Project, visit cvea.org and click the Allison Creek logo. ■



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(907) 822-5586 (fax)
Mile 187 Glenn Hwy.

Valdez District
(907) 835-4301
(907) 835-4328 (fax)
367 Fairbanks Dr.

After hours outage line
(866) 835-2832

Important Dates

February

CVEA Board Meeting: The February meeting of the Board of Directors is 1 p.m. Thursday, February 15, 2018, in Glennallen

CVEA Offices Closed:

The CVEA offices will be closed Monday, February 19, 2018, for President's Day

Scholarship Application Deadline: Friday, February 23, 2018, prior to 5 p.m.

Director Nomination Deadline: Friday, February 23, 2018, prior to 5 p.m.

March

CVEA Board Meeting: The March meeting of the Board of Directors is 1 p.m. Thursday, March 15, 2018, in Valdez

CVEA Offices Closed: The CVEA offices will be closed, Monday, March 26, 2018, for Seward's Day

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Save the Date!

CVEA 2018 Annual Membership Meeting

Valdez, Tuesday, May 1, 2018

Copper Basin, Thursday, May 3, 2018

Help Wanted

CVEA needs you! Serve your community and your electric cooperative by volunteering to serve on the CVEA Board of Directors or annual meeting committees.

Run for a Seat on the CVEA Board of Directors

If you have been a member of CVEA for at least 12 continuous months, are a member in good standing, and are not an employee or close relative of an incumbent director or employee, you may be eligible to be a director. For a complete list of director qualifications, please refer to CVEA's Bylaws Section 4.02, Qualifications, at cvea.org.

Candidates must complete a petition signed by at least 15 active CVEA members and submit the petition to the CVEA office in their district by 5 p.m., Friday, February 23, 2018. Nominations packets can be picked up at either CVEA office.

Credentials & Election Committees

Credentials & Election (C&E) Committees are responsible for validating signatures on the back of director election ballot envelopes and counting the ballots for Director elections and Bylaws amendments.

The committees, one for each district, are comprised of interested members who are not employees, directors, candidates, or close relatives of these persons.

Service on the C&E Committees will take place during April, with most of the work performed the week prior to the meeting.

CVEA Community Foundation Scholarship Selection Committees

CVEACF Scholarship Selection Committees review scholarship application packets, determine which students to interview, conduct the interviews and select who will receive the scholarships being offered this year.

Participation on the committees requires attending three or four meetings as well as time for reviewing and scoring applications, and is estimated to take up to 10 hours.

If you would like more information, or would like to volunteer for any of these opportunities to serve, please contact Sharon Crisp at 822-5506, 835-7005, or email crisp@cvea.org. The committee volunteer deadline is Wednesday, February 14, 2018.