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 feet 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