



Board Summary Report

File #: 25-042

Agenda Date: 2/18/2025

Agenda #:

To: Board of County Commissioners

Through: Gini Pingnot, Director, Open Spaces Department

Prepared By:

Glen Poole, Operations Manager, Open Spaces Department and Dan Payson, Open Spaces Parks and Trails Manager, Open Spaces Department

Presenter: Glen Poole, Operations Manager, Open Spaces Department

Subject:

10:30 AM *Waiver per the Purchasing Policy and Fixed Asset Number for Arapahoe County Fairgrounds Windmill Update

Purpose and Request:

Staff requests BOCC consideration of funding to support a new windmill, with a corresponding new asset number, funding for the repair of the existing windmill for display purposes at the Arapahoe County Fairgrounds, and approval of a waiver per the purchasing policy for a sole source purchase and repair of existing windmill.

Background and Discussion: Windmills have been part of the eastern Colorado landscape since the 1850s and have been part of Arapahoe County's Open Spaces Heritage Areas since the program's inception. Both the 2009 Arapahoe County Fairgrounds Master Plan and the 2014 Master Plan update included windmills as part of the branding for the Arapahoe County Fairgrounds and as educational elements to support the site's visitor experience. Both planning documents provided recommendations to place various types of historical windmills around the Fairgrounds Event Center and within the adjacent Fairgrounds Park.

In the 2015 / 2016 Phase I development of the Fairgrounds, an 18-foot diameter Eclipse windmill was installed on the western side of the central green lawn areas. This windmill served as a centerpiece of the visitor experience at the Fairgrounds campus. The Eclipse windmill was chosen due to its grandeur and historic character. The Eclipse windmill was patented in 1867 and once the patent ran out, it was copied by many

manufactures and could be found all over the American west. The Fairground's Eclipse windmill is an original Eclipse windmill head, but the wooden sails and tail vane were rebuilt as part of the restoration of the windmill before installing it at the Fairground's central green lawn area. Unfortunately, in June 2024 a large wind event damaged the Eclipse windmill and staff had to remove the damaged windmill on July 9, 2024, to protect public safety during and after the 2025 Arapahoe County Fair.

After the County Fair was over and the busy summer season slowed down, staff began to research methods to repair the Eclipse windmill. Staff were notified that the windmill contractor who built, supplied, and installed the Eclipse windmill was no longer in the windmill business and could not assist the Open Spaces Department with the necessary repairs to rebuild the Eclipse windmill. After consulting with several windmill experts, staff determined that part of the reason the windmill sustained damage is because the Eclipse model windmills are not self-governing, meaning they are not designed to stop spinning and fold up during high wind events. There were several other contributing factors to the Eclipse windmill being damaged including the height of the windmill tower, the prominent location on the landscape, which is extremely windy, and the size of the windmill.

Due to the unique nature of sourcing historic windmill heads and the small number of vendors who specialize in restoring, selling and installing historic windmills; staff was not able to get three bids for a replacement windmill or to complete the installation work. Staff reached out to one company in northern Colorado, one company in southern Colorado, one in Grand Junction, the original vendor in Nebraska, and Big Sky Windmills. The three vendors in CO never responded to staff's inquiries and the original builder from Nebraska has since left the industry and no longer works on windmills.

Staff have been working with Big Sky Windmills to develop a replacement option that is better suited for the location at the Fairgrounds campus. Staff decided to go with a new 16-foot Aermotor windmill which will be mounted on the original windmill tower overlooking the central green area.

Aermotor windmills were introduced in the late 1880's, are still produced today, and were part of the Colorado's eastern plains landscape supporting farming and ranching. Aermotor windmills are metal windmills, have a gearbox, and a mechanical system that allows the windmill to be locked during high wind events or when the windmill should not be in operation. In addition, the Aermotor windmills are relatively low maintenance. Staff would only need to change the oil in the gear box every 1-3 years and the metal sails and trail vane will last for decades. The estimated cost of the new Aermotor windmill and installation is \$34,690. This does not include an equipment rental expense to support windmill installation.

As for the damaged Eclipse windmill, staff plans to have Big Sky Windmills repair the damaged Eclipse windmill and display it somewhere on the outside of the Event Center as both an art and educational element for the public to enjoy. Staff is working with Risk Management on an insurance claim to repair the Eclipse Windmill for \$20,980.

Due to the unique nature of sourcing historic windmill heads and the small number of vendors who specialize

in restoring, selling and installing historic windmills, staff were not able to get three bids for a replacement windmill or to complete the installation work. The same research efforts described above were used to try and identify a restoration vendor to no avail. Open Spaces is working with Purchasing to obtain a sole source waiver to hire Big Sky Windmills.

Finally, it is important to note that Open Spaces did not include this windmill replacement on our Capital Improvement Plan that was submitted to the BOCC in June 2024. Both the timing of the damaging wind event and the need to research options made it difficult to anticipate this expense at that time.

Fiscal Impact: The Open Space Fund would support the new Aermotor windmill replacement cost and repair of the Eclipse windmill. The fund balance is sufficient to support the projected project cost of \$61,670.20.

Alternatives: The Board could decide to delay, modify, or deny funding for this project.

Alignment with Strategic Plan:

- Be fiscally sustainable
- Provide essential and mandated service
- Be community focused

Staff Recommendation: Open Spaces recommends the BoCC approve up to \$55,670 for a new windmill asset (and corresponding asset number) and to support the repair of the existing Eclipse windmill for display purposes at the fairgrounds.

Concurrence: N/A