Submitted: October 20, 2026

Re: Case study on the Cottonwood Ranch Credit Project of considering pivot irrigation as a anthropogenic disturbance

Dear Kathleen:

I wish to submit comments to the Sagebrush Ecosystem Program regarding proposed reductions in credits from pivot irrigation on the Cottonwood Ranch Credit Project. As a now retired Forester with the Nevada Division of Forestry, I have had prior, continuous experience as a Verifier (Photomonitor in 2026) on this project, dating back to the initial HQT Sampling in 2016.

Besides annually sampling ten permanent SETT photo-monitoring points, Cottonwood Ranch voluntarily collects and submits to SETT photo-monitoring protocol data for the Sagebrush Ecosystem Program on all the HQT points established in 2016 and 2019. As you know, only two SETT transects are within existing pivot irrigation: #2 on the west pivot and #8 on the east pivot. These are sampled every year. There are two additional sets of transects being sampled once every ten years. These are transects 3, 4, 61, 63, 64, 66 and 103 within the west pivot and transects 79, 100 and 101 within the east pivot. Thus, 12 transects (10% of the total CCS project transects) are within existing pivots. The ten additional transects afford us opportunities for further insights into the uplift that pivot irrigation has yielded on the Cottonwood Ranch CCS Credit Project.

There are presently five pivots in which floristic data has been compiled for pivot pre-construction and post-construction conditions. **All five transects have shown an increase in the number of forbs present after conversion to pivot irrigation.** The following forb counts represent meadow habitat adjacent to and along the transects. **The annual data consistently shows pivot irrigated meadow habitat as becoming more floristically diverse over time since conversion.** SETT transect #2 increased from zero forbs in 2016 to 8 forbs in 2022 and then 9 forbs in combined 2025 & 2026 counts. SETT transect #8 increased from zero forbs in 2016 to 8 in 2022 and 11 forbs in 2025 & 2026. To date, 3 transects from the "once every ten years sampling group" have been sampled for both pre-construction and post-construction conditions. Transect 66 increased from 6 forbs in 2016 to 7 forbs in 2022. Transect 79 increased from 6 forbs in 2016 to 10 forbs in 2025. Transect 100 increased from 3 forbs in 2016 to 7 forbs in 2026. An additional 7 transects await their resampling over the next 4 years.

Due to changes in SETT's annual photo-monitoring protocol and the template for the annual monitoring report, the government employees conducting annual monitoring did not necessarily have to submit data from the "once every ten years" group of transects. Thus, this additional data on floristic diversity from non-SETT transects was not always required for submission.

If necessary to reduce credits due to presumed predator perches on the pivot booms, I would recommend treating the pivot irrigation systems as linear anthropomorphic disturbances, rather than round ones radiating from the footprint of the irrigated fields. The booms only rotate for a few

months, depending on sufficient water being available from Cottonwood Creek. When that spring mountain runoff water is exhausted, the booms remain parked through the middle- and late-brood rearing seasons, up until the next spring. Thus the linear area that an avian predator can observe would be much reduced from what a circular model would present.

In recent years, I and my wife have conducted bird surveys on the ranch. While ravens were noted in the holding corrals near the tack room, we have no records of ravens on the booms. I would caution against assuming, through a "one size fits all" credit deduction, that ravens frequent the booms for perching. Perhaps it would be better science to gather supporting or refuting data through a census of birds observed as utilizing the pivot irrigation systems? One method to collect such data could be to adopt a common protocol survey, such as a Migratory Bird Treaty Act survey methodology? In that case, extending the survey duration to the end of late brood rearing could reveal whether avian predation are even an issue on the pivot irrigation at the Cottonwood Ranch.

Note that in the vicinity of the pivot irrigation systems, there is a powerline, a long irrigation ditch and perimeter fences. These were noted as anthropogenic disturbances in the 2016 HQT sampling of the 12 transects that had uplift to pivot irrigated altered meadows. How does the proposed reduction in credits from avian predator perching interact with credit reductions already applied for avian predator perching on the power distribution lines?

Thank you for the opportunity to comment on the proposed revision and how I see it relating to conditions my team has documented at Cottonwood Ranch.

Respectively submitted,

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cc: Agee Smith, Skyler Monaghan