

SWCA

Avian Surveys – AMP Monitoring and Parasitism Control and Evaluation on MSHCP Properties

2023-SWCA-2325B

2019-SWCA-1935A

August 18, 2025 | Presented to

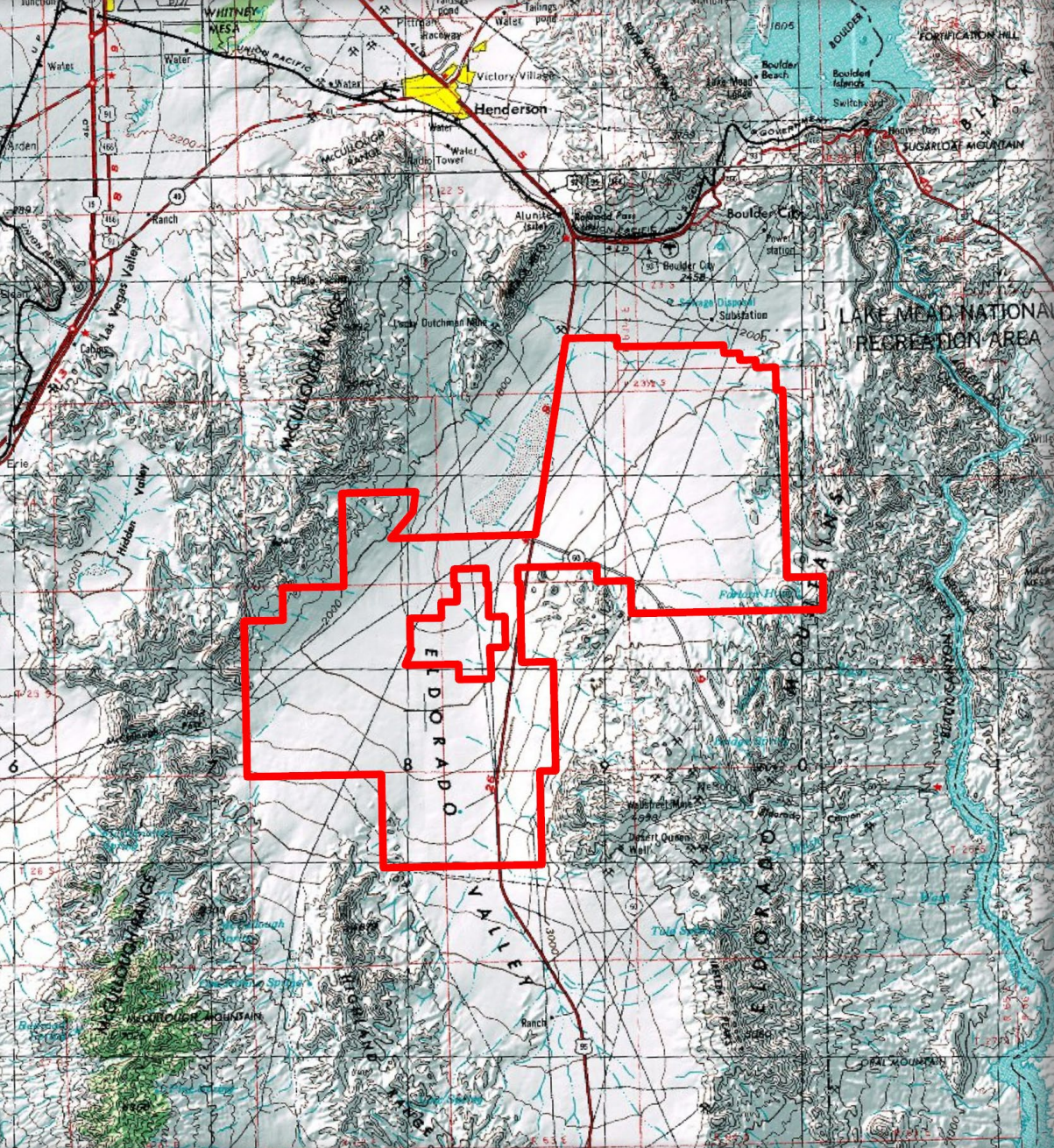


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desert conservation
PROGRAM

2023-SWCA-2325B – Avian Surveys Background and Project Goals



Background – BCCE

Condition P of the Incidental Take Permit (ITP) requires that DCP takes measures to ensure maintenance of connectivity for desert tortoise and other covered species within the Boulder City Conservation Easement (BCCE).



Photo by Mike Swink

Background – BCCE

In 1995, as required by the Clark County MSHCP and ITP, Boulder City granted the BCCE to the DCP.

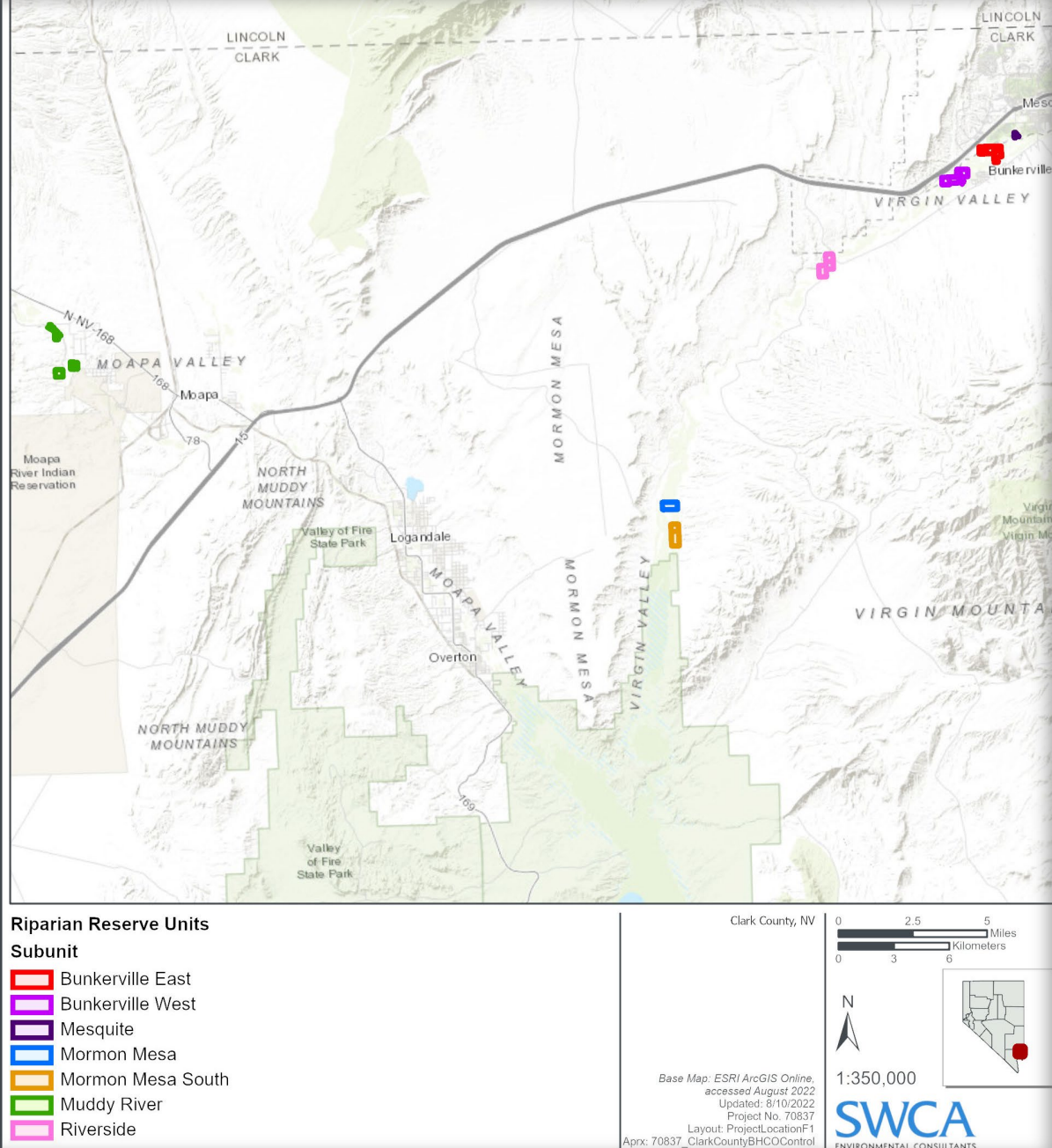
Originally 86,423 acres composed of 97% Mojave desert scrub habitat. Expanded to 87,342 acres.

Potentially includes habitat for covered avian species, such as the phainopepla.

Background – Riparian Properties

Condition K.1 of the ITP for the MSHCP requires that DCP acquire private land along the Muddy River, Virgin River, and Meadow Valley Wash. These properties are the Riparian Reserve Units (RRUs).

~785 acres





Background – Riparian Properties

Included to help conserve desert riparian habitat for six covered bird species: Arizona Bell's vireo, blue grosbeak, southwestern willow flycatcher (SWFL), summer tanager, vermilion flycatcher, and western yellow-billed cuckoo (YBCU).



2023-SWCA-2325B Avian Surveys

Project Goal and Tasks

- Goal: Continue building a record of federally listed, MSHCP-covered, and non-listed bird species at the BCCE and the RRUs
- Tasks:
 - Point-count surveys at the BCCE and the RRUs
 - Species-specific surveys for southwestern willow flycatcher and western yellow-billed cuckoo at the RRUs

Point-Counts

Point Count Surveys – Methods

Standard 10-minute unlimited radius point-count survey protocol
(GBBO 2010 and Ralph et al. 1993)

20 point-count locations at the BCCE (40 total)

Three survey visits between March 15 and May 15

This schedule was modified from previous years starting in 2024

From 2017–2023, surveys conducted same time frame as RRUs
(May 1–June 30)

29 point-count locations across RRUs (59 total)

Three survey visits between May 1 and June 30

Point-Count Results - BCCE

2025

- 25 species identified
 - Most abundant:
 - Black-throated sparrow
 - Horned lark
 - Common raven
- No MSHCP-covered species
- Two MSHCP evaluation species:
 - LeConte's thrasher
 - Loggerhead shrike
- Two new non-MSHCP species:
 - Spotted towhee
 - Vaux's swift

All years (2018–2025)

- 51 species identified
 - Most abundant:
 - Black-throated sparrow
 - Horned lark
 - Common raven
- One MSHCP-covered species:
 - Phainopepla (2019, 2022)
- Three MSHCP evaluation species:
 - Crissal thrasher (2019 only),
LeConte's thrasher, loggerhead shrike

Point-Count Results – Riparian Reserve Units

2025

- 87 species identified (8 new to the project)
 - Most abundant:
 - Mourning dove
 - Gambel's quail
 - Abert's towhee
 - Eight MSHCP-covered species
 - Arizona Bell's vireo
 - Blue grosbeak
 - Peregrine falcon
 - Phainopepla
 - Southwestern willow flycatcher
 - Summer tanager
 - Vermilion flycatcher
 - Yellow-billed cuckoo*
 - Only incidentally detected
 - Two MSHCP evaluation species:
 - Crissal thrasher
 - Loggerhead shrike

All years (2017–2025)

- 125 species identified
 - Most abundant:
 - Gambel's quail
 - Mourning dove
 - Abert's towhee
 - Eight MSHCP-covered species:
 - Arizona Bell's vireo
 - Blue grosbeak
 - Peregrine falcon
 - Phainopepla
 - Southwestern willow flycatcher
 - Summer tanager
 - Vermilion flycatcher
 - Yellow-billed cuckoo
 - Two MSHCP evaluation species:
 - Crissal thrasher
 - Loggerhead shrike

Species-specific Surveys



Southwestern Willow Flycatcher Surveys – Methods

Conducted at all RRUs where suitable habitat exists

Protocol followed Sogge et al. 2010

Five survey visits between May 15 and July 17

Call-playback technique at locations spaced approximately 30 meters apart in appropriate habitat

Dense willow habitat at Mesquite



Southwestern Willow Flycatcher Survey Results 2018–2025

- Resident flycatchers detected at Mesquite and Mormon Mesa every year
- Two migrant willow flycatchers detected in 2025:
 - Riverside – 1
 - Detected during point-counts
 - Bunkerville East – 1
 - Detected during territory monitoring
- Previous migrant willow flycatchers:
 - Bunkerville East – 3 (2022, 2024)
 - Bunkerville West – 4 (2020, 2021, 2024)
 - Riverside – 4 (2018, 2020, 2021)
 - Muddy River – 2 (2022)

Western Yellow-billed Cuckoo Surveys – Methods

Conducted at all RRUs where suitable habitat exists

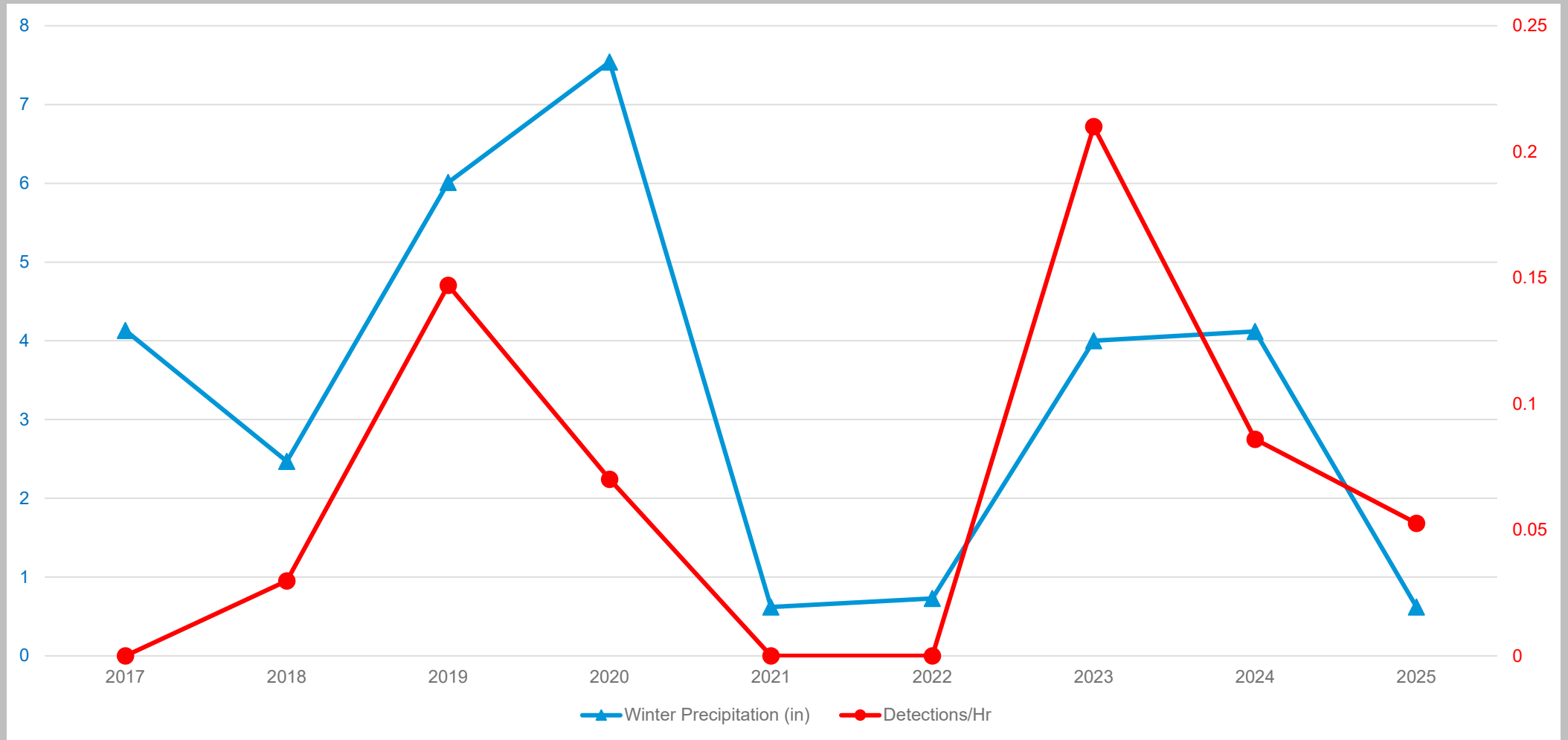
- Protocol followed Halterman et al. 2015
- Four survey visits between June 15 and August 15
- Call-playback technique at locations spaced approximately 100 meters apart in appropriate habitat



Western Yellow-Billed Cuckoo Survey Results 2018–2025

- Two survey detections in 2025:
 - Riverside
 - Muddy River
 - First detection in the mesquite-dominated survey area since first surveyed in 2024
- Two incidental detections in 2025:
 - Mesquite
 - Mormon Mesa
- Previous survey detections:
 - 2018 – 1
 - 2019 – 9
 - 2020 – 5
 - 2021 – 0
 - 2022 – 0
 - 2023 – 13
 - 2024 – 3

Winter Precipitation vs Yellow-Billed Cuckoo Detections



Precipitation Data from Overton, NV Source: Western Regional Climate Center (2025)



Western Yellow-Billed Cuckoo Survey Area Adjustments

- Adjusted our survey areas in 2024 to include large areas of mesquite (or as is the case at Muddy River, a relatively small sliver adjacent to a large area of mesquite)
- Both survey detections in 2025 were located in the mesquite survey areas

Top left: Muddy River Parcel F
Bottom right: Riverside Parcels 3-A and 3-B

2019-SWCA-1935A Parasitism Control and Evaluation



2019-SWCA-1935AB Parasitism Control and Evaluation

Project Goals and Tasks

- Goal: Maintain and/or improve habitat for the southwestern willow flycatcher and help identify lands where habitat enhancement may be implemented to expand flycatcher habitat
- Tasks:
 - Brown-headed cowbird control
 - Southwestern willow flycatcher monitoring

Brown-headed Cowbird Control

Brown-headed Cowbird Control – Methods

Conducted at Mesquite West (includes Clark County Parcel 1-A)

Netting for females from early May through the end of July

13 net mornings in 2021 (18.6 net-hours)

17 net mornings in 2022 (27.2 net-hours)

15 net mornings in 2023 (26.3 net-hours)

15 net mornings in 2024 (28.5 net-hours)

19 net mornings in 2025 (39.0 net-hours)

Females euthanized via decapitation

Also included

Cowbird egg addling (2021)

Cowbird egg addling or replacement (2022–2025)

Cowbird nestling euthanasia





Cowbird Net Setup

Target netting involves use of a female cowbird decoy and two Bluetooth speakers for playing cowbird calls

Relatively short vegetation is ideal



Brown-headed Cowbird Control Results

Target Netting

- 14 females in 2021
- 11 females and 1 juvenile in 2022
- 4 females in 2023
- 10 females in 2024
- 18 females in 2025

Egg addling/replacement

- 3 in 2021
- 1 in 2022
- 1 in 2023
- 0 in 2024
- 1 in 2025 (nest fledged 1 flycatcher)

Nestling euthanasia

- 1 in 2022



Southwestern Willow Flycatcher Monitoring

Southwestern Willow Flycatcher Monitoring – Methods

Conducted at Mesquite West (includes Clark County Parcel 1-A) and Mormon Mesa

Conducted approximately every 4 days once a territorial flycatcher was detected (mid-May to mid-August)

Includes determining territory status, locating nests, and monitoring known nests

Color-banding adults and nestlings to aid in determining territory association and confirming nest success

Mesquite West Flycatcher Monitoring Results

Nest Success and number of fledglings per year:

2020 – 5 nesting attempts; 0 successful (0%) – 0 fledglings

2021 – 6 nesting attempts; 2 successful (33%) – 3 fledglings

2022 – 9 nesting attempts; 7 successful (78%) – 13 fledglings

2023 – 12 nesting attempts; 6 successful (50%) – 11 fledglings

2024 – 12 nesting attempts; 7 successful (58%) – 18 fledglings

2025 – 10 nesting attempts; 5 successful (50%) – 8 fledglings

10% cowbird parasitism in 2025



Mesquite West Flycatcher Monitoring Results (continued)

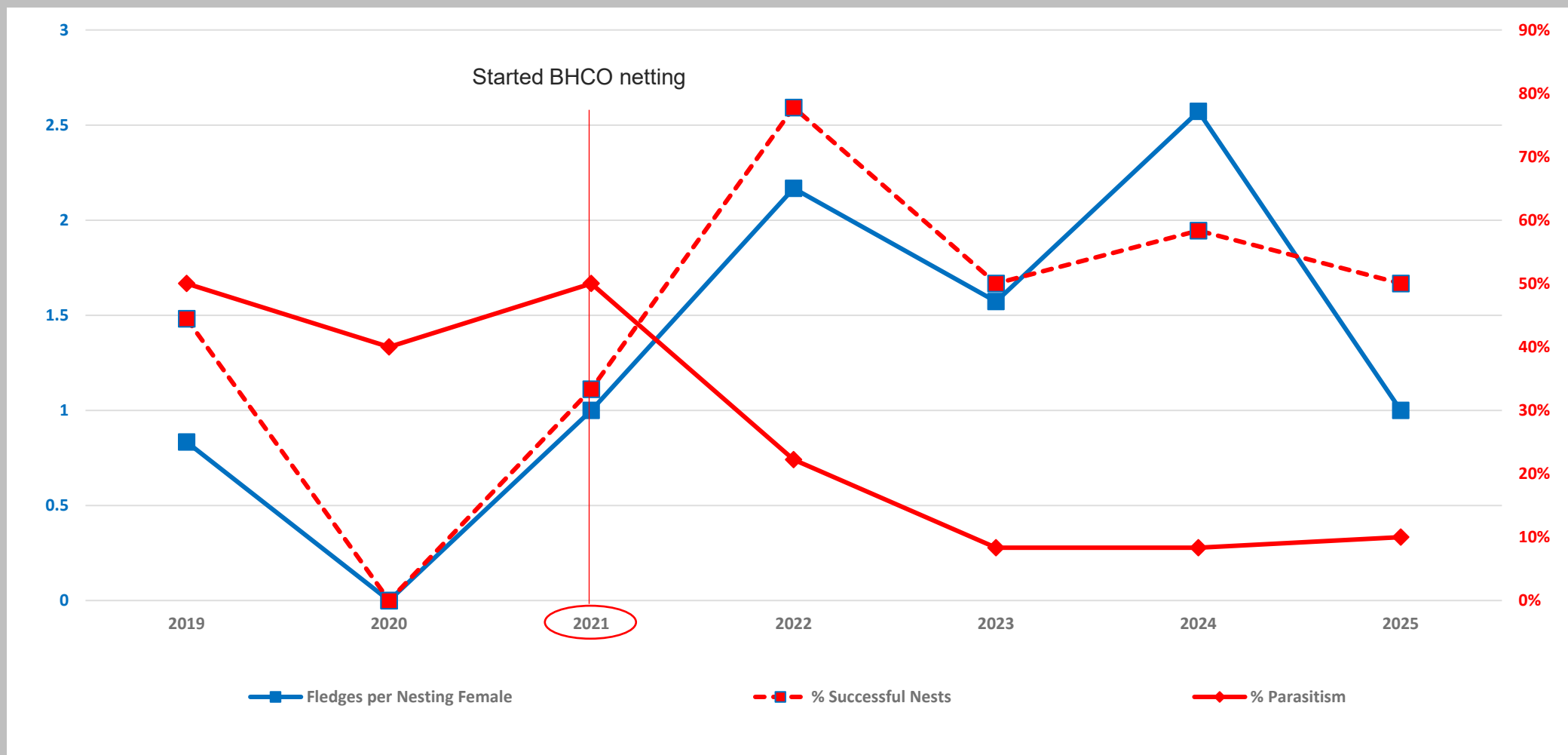
8 fledglings

8 females

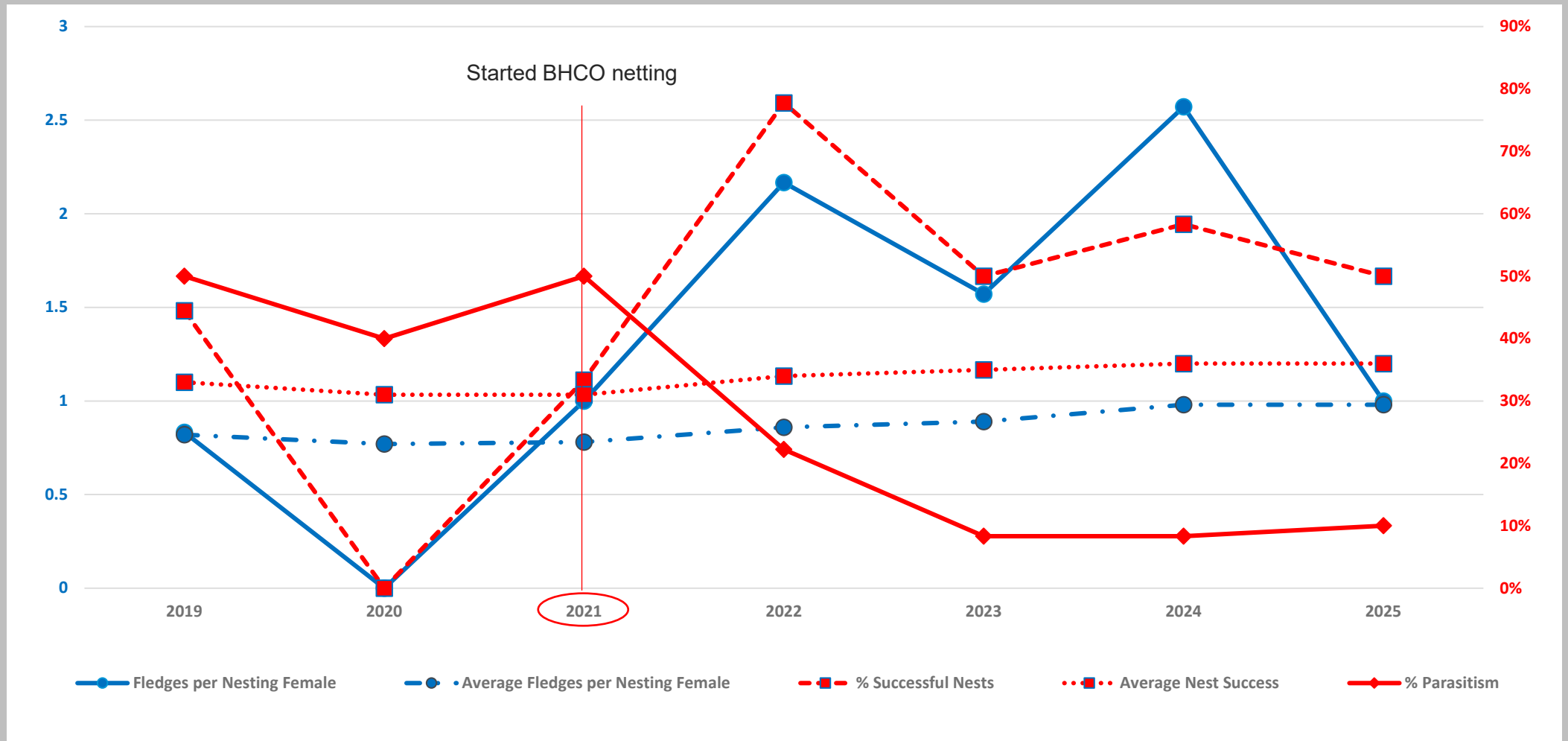
Number of fledglings produced per
female in 2025 (1.0) is:

- Lower than 2022–2024
 - Ranged from 1.6 to 2.6
- Equal to 2021
- About the same as the average
over all monitoring years (2003 –
2024) (0.98)

Flycatcher Nesting at Mesquite West



Flycatcher Nesting at Mesquite West



Mormon Mesa Flycatcher Monitoring Results

Mormon Mesa Parcel 5-A and north

2020 – 4 adults, 1 successful nesting attempt – 1 fledgling

2021 – 1 adult

2022 – 2 adult males

2023 – 3 adults, 1 nesting attempt failed due to parasitism

North of parcel

2024 – 2 adults, 1 nesting attempt; failed

North of parcel

2025 – 4 adults, 1 nesting attempt; failed

North of parcel

One or two territories annually



Mormon Mesa Flycatcher Monitoring Results (cont'd)

Within-year, between-study area movement

Xs:BY observed at Mormon Mesa through July 3

No longer detected as of July 8

During a netting attempt at Mesquite West on July 9, Xs:BY was unexpectedly captured. This bird was observed singing on July 22 in a different area of Mesquite West.



Bunkerville Flycatcher Monitoring Results

South of Bunkerville East Parcel 2-B

Willow flycatcher briefly detected in the same area in July 2024

Another detection in 2025 was of a bird that was determined to have been previously banded

After several attempts at resighting, the bird was captured

This male was banded as a nestling at Mesquite in 2024



Flycatcher Banding Results

2 adults and 9 nestling
flycatchers banded in 2025

- 23 in 2024
- 19 in 2023
- 24 in 2022
- 10 in 2021
- 8 in 2020



Conclusions



Conclusions – Point-counts

Phainopepla remains the only covered species at the BCCE

MSHCP covered bird species are consistently recorded across the RRUs each year

Blue grosbeak and Bell's vireo remain the most detected MSHCP species at the RRUs

Property acquisition does result in conservation of habitat for riparian bird species



Conclusions – Cuckoo

Detections highly variable year to year

Still adjusting our idea of potentially suitable habitat

- Inclusion of mesquite habitat has increased detections
- If not for mesquite habitat, we would have had zero survey detections in 2025



Conclusions – Flycatcher

We've gotten a little spoiled! It wasn't a great year, but it wasn't bad either.

The lowest parasitism recorded since 2023. Only 2% higher in 2025. And much higher nest success than the 20+yr average for the site. However, had fewer fledglings and lower nest success than the past three years.

Cowbird netting still seems to be aiding flycatcher nest success.

Questions?



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