

Human/Wildlife Interactions at the Corvallis Airport

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Capstone Project

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How best to balance human and wildlife land use needs?

- ▶ We've examined a variety of wildlife habitats as well as restoration projects
- ▶ Airports simultaneously create:
 - ▶ Attractive habitat for birds and animals
 - ▶ Dangerous environments for wildlife/aircraft contact, resulting in damage and death
- ▶ My focus: Corvallis airport
- ▶ Questions:
 - ▶ How commonly do aircraft and wildlife come into conflict?
 - ▶ How do we address those conflicts?

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Airplane-wildlife interactions



Image (not KCVO) from: <https://www.worldbirdstrike.com/>

Airplane-wildlife interactions



Image (not KCVO) from: <https://www.worldbirdstrike.com/>

➤ Wildlife: birds, deer, coyotes, reptiles (!)

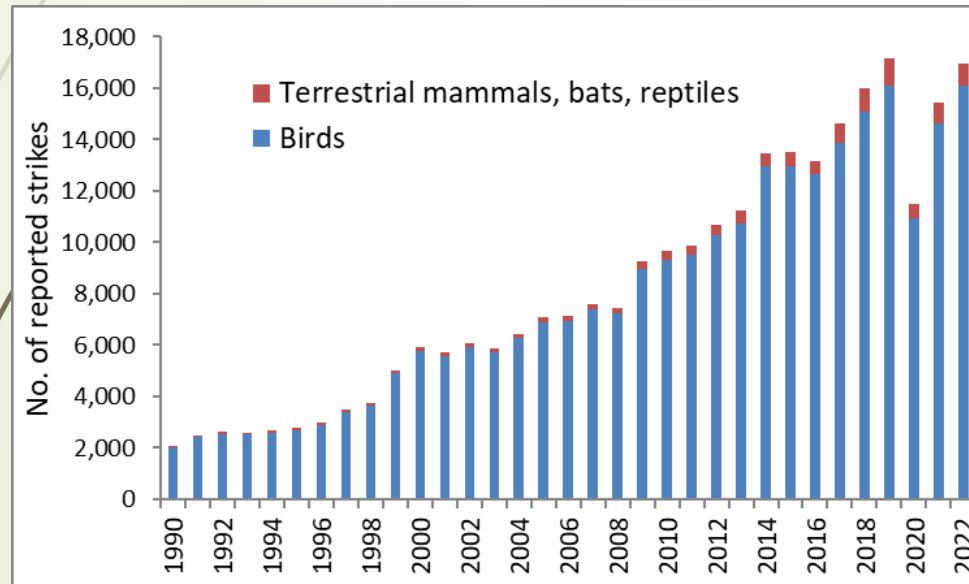
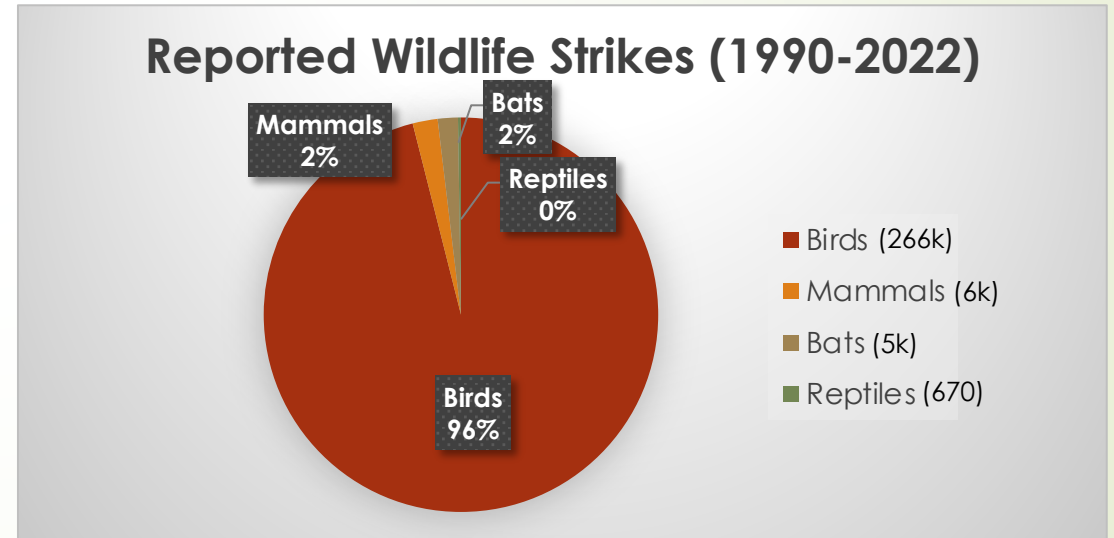


Figure 1. Number of reported wildlife strikes with civil aircraft, USA, 1990–2022. The 272,016 strikes involved birds (261,170), terrestrial mammals (5,653), bats (4,523), and reptiles (670). An additional 4,830 strikes were reported for U.S.-registered aircraft in foreign countries for a total of 276,846 strikes (see Tables 1, 2, and 18).



“Wildlife Strikes to Civil Aircraft in the United States 1990 – 2022” (FAA and USDA)

Airplane-wildlife interactions

- Negative impacts
 - Death of wildlife (usually)
 - Damage to aircraft
 - Loss of human life



U.S. Airways 1549 in the Hudson River
Jan. 15, 2009 - AP/Janis Krums

- 1988-2022: Wildlife strikes **killed 464 people** and **destroyed >305 aircraft** [FAA, 2023]

Corvallis airport (KCVO)



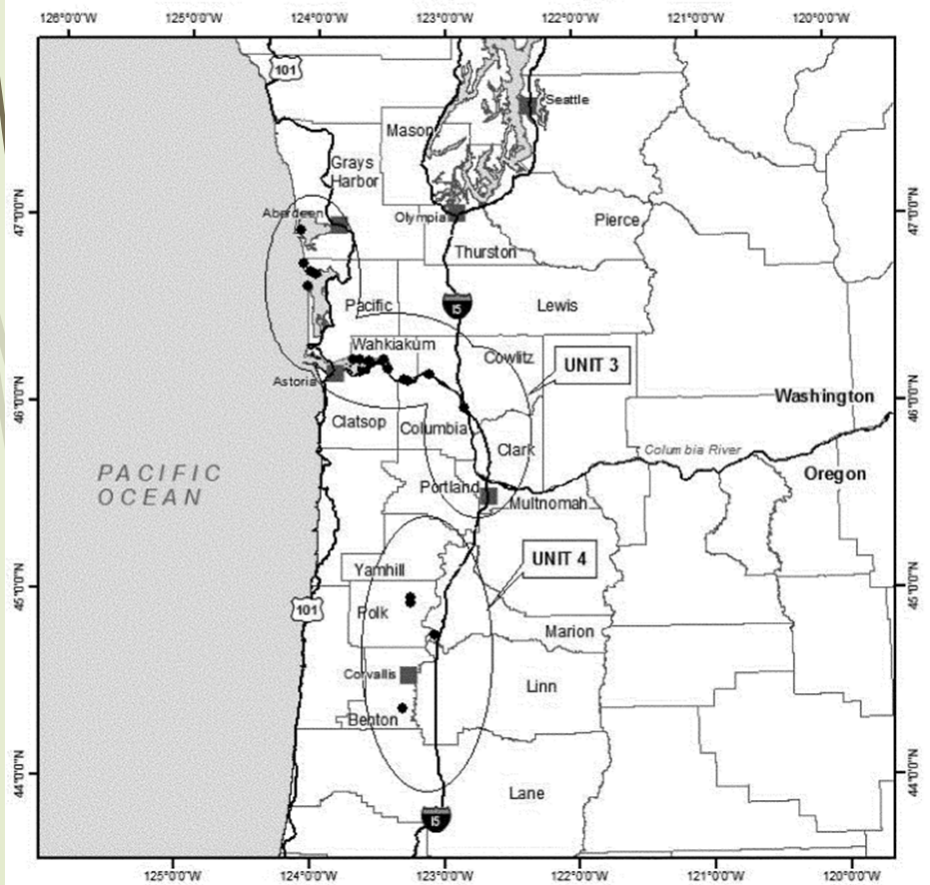
- ▶ Established in 1943 as an Army base for WWII
 - ▶ 1490 acres, elevation 250'
 - ▶ Est. average of **143 operations per day** (based on 2018 data)
- ▶ Goals: provide and corporate transportation of people and goods, recreation, pilot training, etc. in the Corvallis area
 - ▶ Fedex, UPS, Ameriflight
 - ▶ REACH Air Medical Ambulance
 - ▶ U.S. Army National Guard helicopters
- ▶ **Aircraft are not the only users of the airport**

Streaked Horned Lark



Randy Moore

Critical Habitat for Streaked Horned Lark in Washington and Oregon



- Ground-nesting bird
- Threatened species; <2000 remaining
- **Preferred habitat:** large, flat, open (treeless), sparse vegetation
 - Previously: Willamette and Puget prairies, floodplains/islands of the Columbia and Willamette Rivers, ocean beaches
 - Designated critical habitat locations in WA and OR

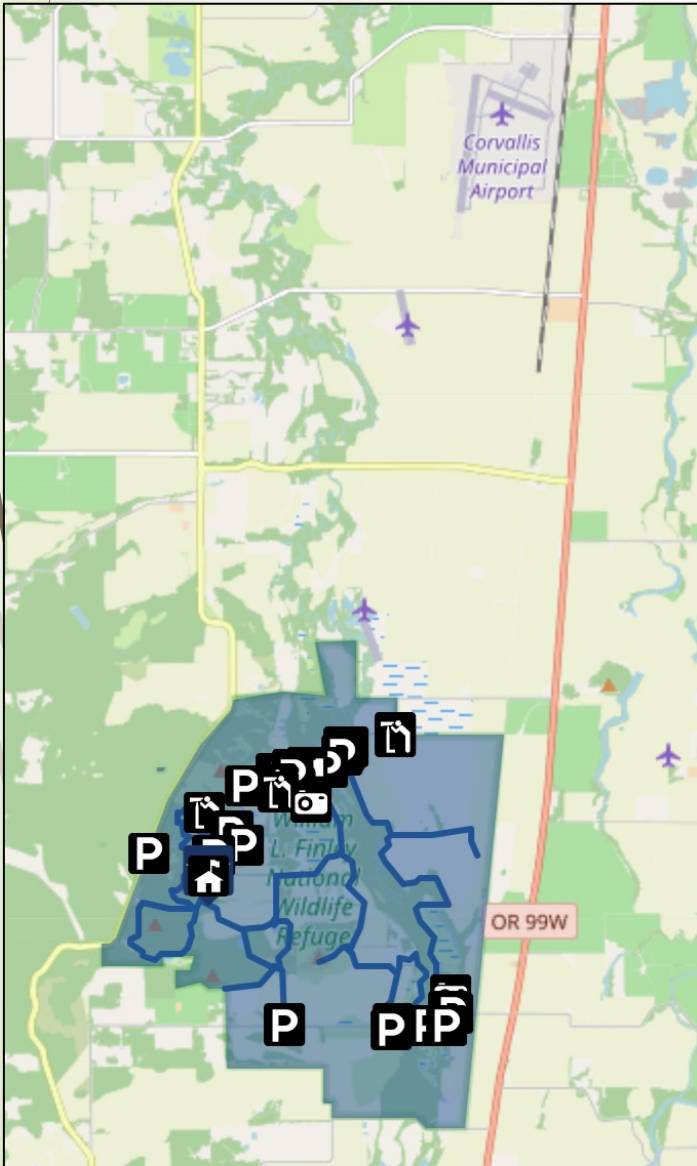
Corvallis airport habitat



July 4, 2022

- ▶ **Airport habitat:** large, flat, open (treeless), sparse vegetation
- ▶ KCVO is “Larktopia” (U.S. Fish and Wildlife Service)
 - ▶ Largest known breeding population in existence (Dr. Randy Moore, OSU)

Airplane-wildlife interactions: Corvallis



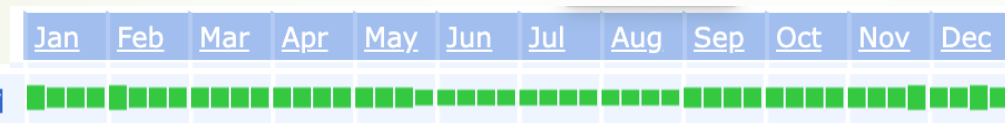
- William L. Finley National Wildlife Refuge is only 5 miles south
- Est. 1964 to provide habitat for Dusky Canada geese (5,325 acres)



May 7, 2023

Airplane-wildlife interactions: Corvallis

- Red-tailed hawks
- Meadowlarks
- Herons



Red-tailed Hawk



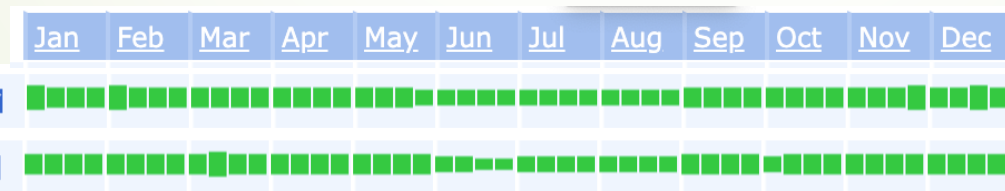
[ebird data, Benton County]



November 8, 2020

Airplane-wildlife interactions: Corvallis

- Red-tailed hawks
- Meadowlarks
- Herons
- Canada geese



[ebird data, Benton County]



March 22, 2022

Airplane-wildlife interactions: Corvallis

- Red-tailed hawk
- Meadowlarks
- Herons
- Canada geese



Jan Feb Mar Apr May Jun

[Red-tailed Hawk](#)



[Canada Goose](#)

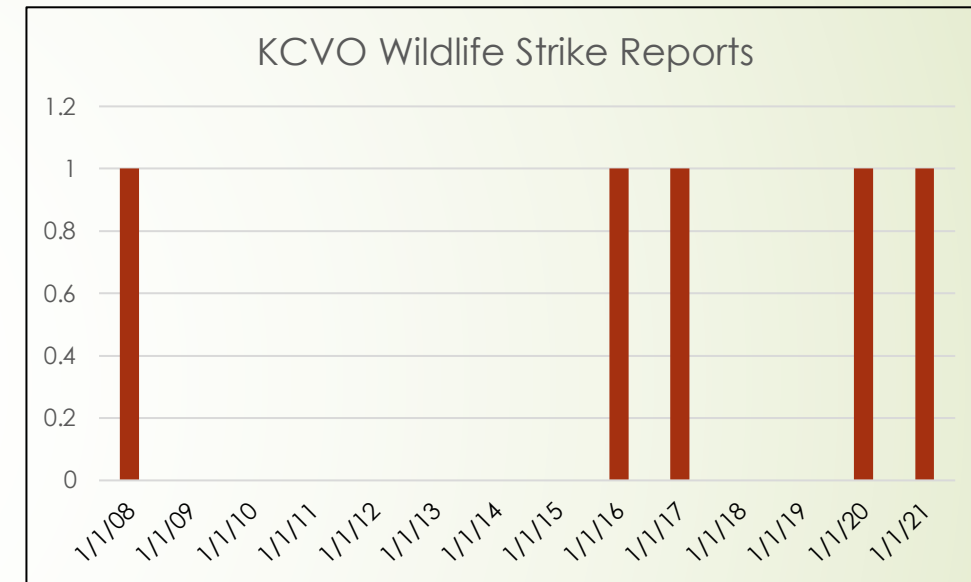


[ebird data, Benton County]

March 22, 2022

Airplane-wildlife interactions: Corvallis

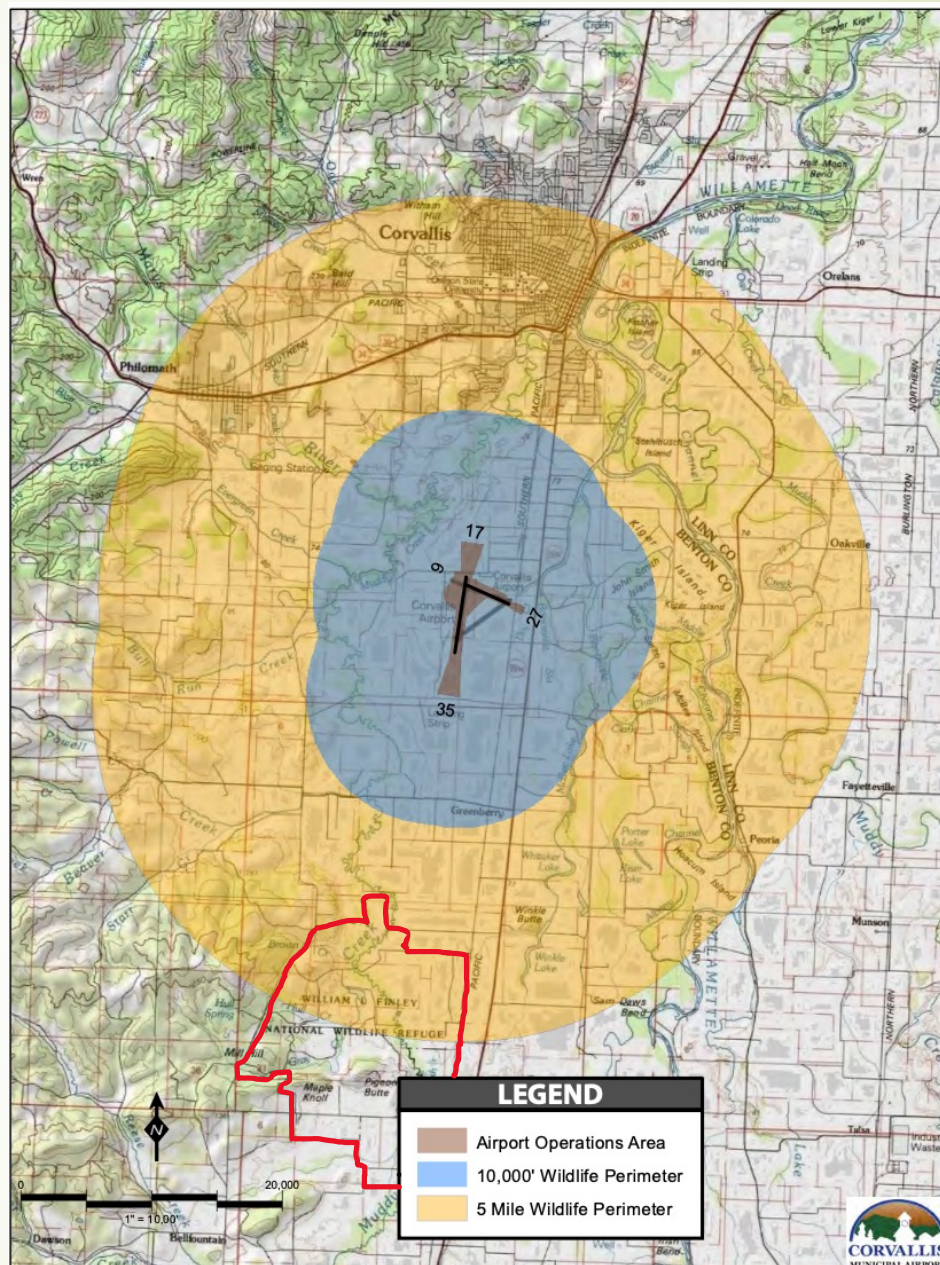
- Only 5 reported wildlife strikes since 2008
 - 2 struck the windshield
 - 1 struck the wing during takeoff
 - 1 was “ingested” by the engine
 - 1 was inferred because the dead bird was found on the runway (no report)
- One caused airplane damage
- Almost certainly there are far more wildlife strikes happening!



FAA Wildlife Strike database

FAA/USFWS guidance

- Conduct a wildlife survey
- Avoid wildlife attractants within 10,000' / 5 miles
 - Finley is within the 5-mile perimeter
 - So are the Willamette and Marys Rivers
- Adjust flight times
- Tools: mowing, fences, trap & relocate, “hazing”, use of drones
- Increase reporting



What I've done

- Assembled this presentation with links to more in-depth information
- Created a website to raise awareness
 - Will share with the local pilot community and on social media
- Requested National Wildlife Strike Reporting posters from the FAA
 - Will share with the Corvallis airport manager and Fixed-Base Operator (Corvallis Aero Service)
- **What you can do:**
 - Help brainstorm more ideas to deter birds from airport environments
 - Observe and identify birds at KCVO to help inform operational strategies (times of day, habitat preferences)



References



Tools and data

- ▶ FAA Wildlife Strike database: <https://wildlife.faa.gov/>
- ▶ Avian Hazard Advisory System (AHAS): predicts risk of bird strike by location using NEXRAD data + SOAR model of soaring bird activity + Bird Avoidance Model of seasonal bird mass: <http://www.usahas.com/> (U.S. Air Force)
- ▶ Birdcast: <https://dashboard.birdcast.info/region/US-OR-003>
- ▶ Smithsonian Institution Feather identification Lab - https://www.faa.gov/airports/airport_safety/wildlife/smithsonian

Procedures

- ▶ FAA: Wildlife surveys and mitigation plans
- ▶ FAA Advisory Circular
- ▶ FAA letter on permits and procedures for using unmanned aircraft systems (drones) to disperse wildlife at airports (Oct. 3, 2023): https://www.faa.gov/sites/faa.gov/files/Ltr_UAS_Wildlife_2023_10_03.pdf

Organizations

- ▶ Bird Strike Committee (BSC) USA: <https://www.birdstrike.org/>
 - ▶ Collect and analyze wildlife strike data, develop new techniques, providing training for airport wildlife management programs
- ▶ World Birdstrike Association: <https://www.worldbirdstrike.com/>
 - ▶ Offers Wildlife Hazard Management courses

