

Making \$ense:

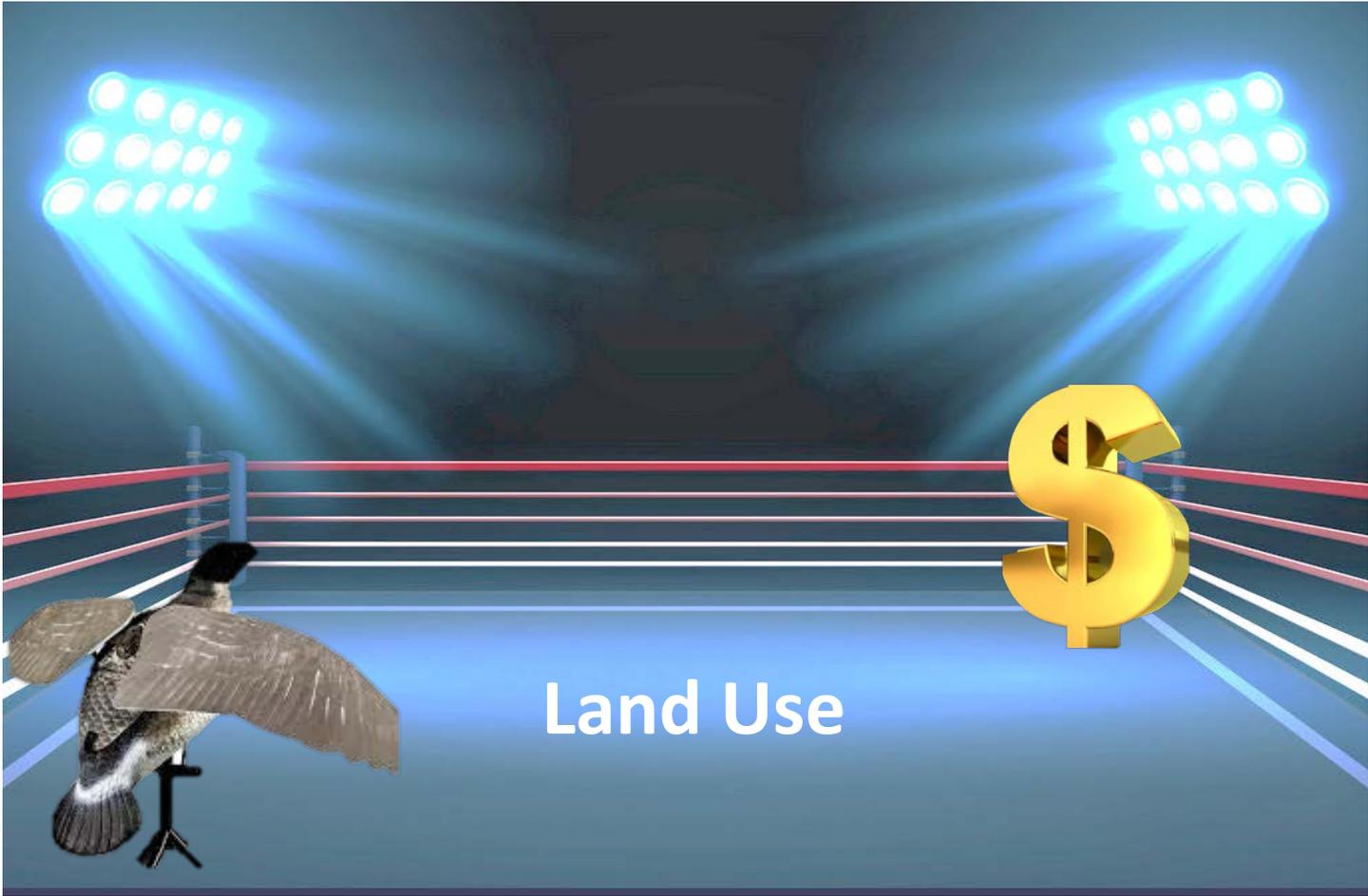
Promoting Wildlife Hazard Management
and Economic Development Near Airports

2019

North American
Bird Strike
Conference

August 12-15, 2019
Halifax, Nova Scotia, Canada

The Conflict: Incompatible Development



Presentation Overview

Conflict

Economic Development v. Potential Wildlife hazards or attractants

Case Study

Thermal Beach Club, Riverside County, CA

Tips/tools

For airports, communities, and project proponents



Historical Overview: Development Near Airports



Airports Attract Development!

Then....

- Available infrastructure!
- Open space (historically)
- Logistics/customers



Now....

- More people
- Less land

How can we promote compatible land uses?

Compatible v. Incompatible Land Use

Compatible Land Use

- No conflict with aircraft operations (current or future)

Incompatible Land Use

Affects or is affected by aircraft operations:

- Noise
- Safety
- Airspace
- Overflight
- Other interference, glare, etc.

Incompatible land uses causes conflicts!

Community v. Aircraft operations



Wildlife and Compatible Land Use

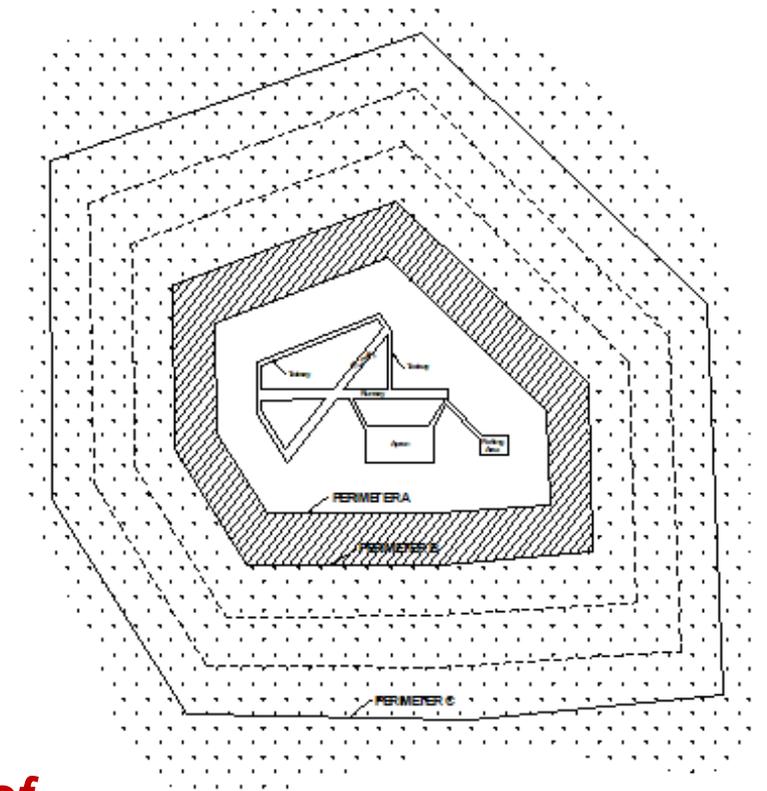
Wildlife Hazards are..

Airspace conflicts that require a land use solution

Challenges

- Size of critical zone
- Multiple jurisdictions/regulatory frameworks
- Diverse stakeholders (competing goals)
- Considering where wildlife and wildlife management fit in the planning/decision process

Let's consider off-site wildlife attractants through the lens of compatible land use!



Riverside County Airport Land Use Commission

Mission

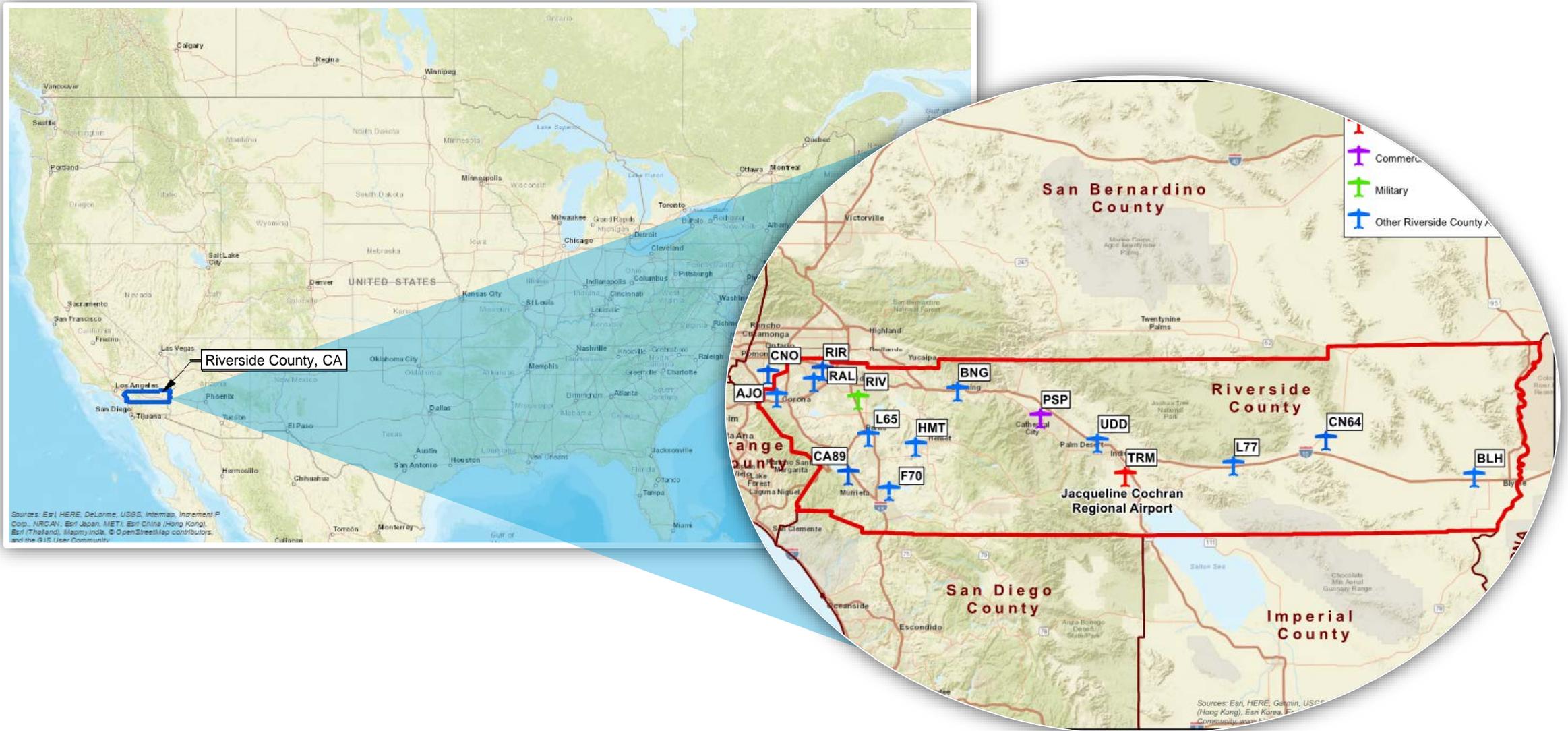
“Protecting People from Airports and Airports from People”

- Advisory body
- Prepares Airport Land Use Compatibility Plans/policies
- Reviews projects, major land use changes, and zoning code in the airport vicinity
- Determines whether a project is “consistent” with compatibility policies

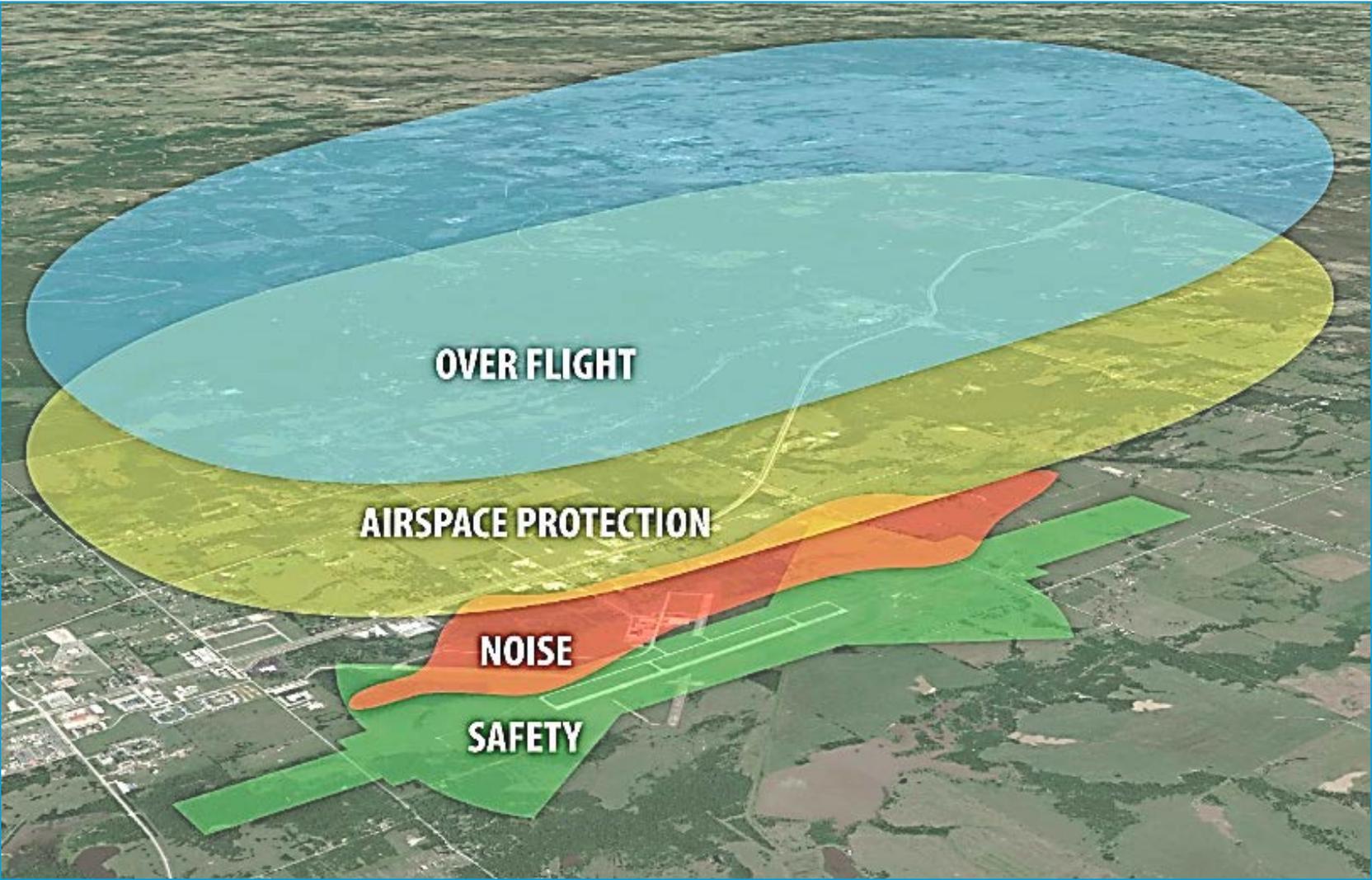


Findings serve as input to local decision making

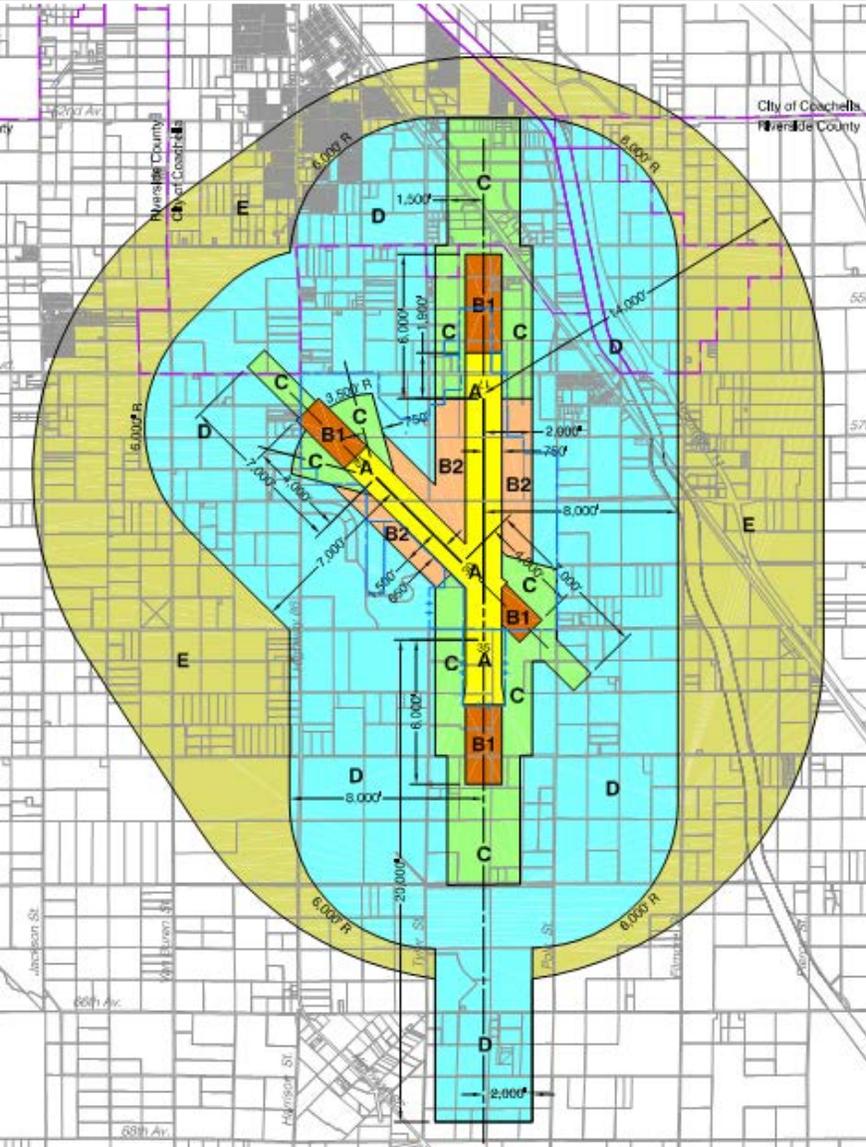
Project Location: Riverside County, CA



Airport-Specific Policies



Airport Influence Area



Site-Specific

- Geography
- Runway length
- Approach
- Existing/Future Ops (ALP)

Policies apply only to this area

Additional Focus on Wildlife Policies

Comprehensive Study on Wildlife Hazards

- All 16 airports
- WHAs, WHMPS, and other countywide data

Developer Guidance

- Landscaping
- Stormwater

Distribute guidance

- Project review applications
- Online

Is it working?



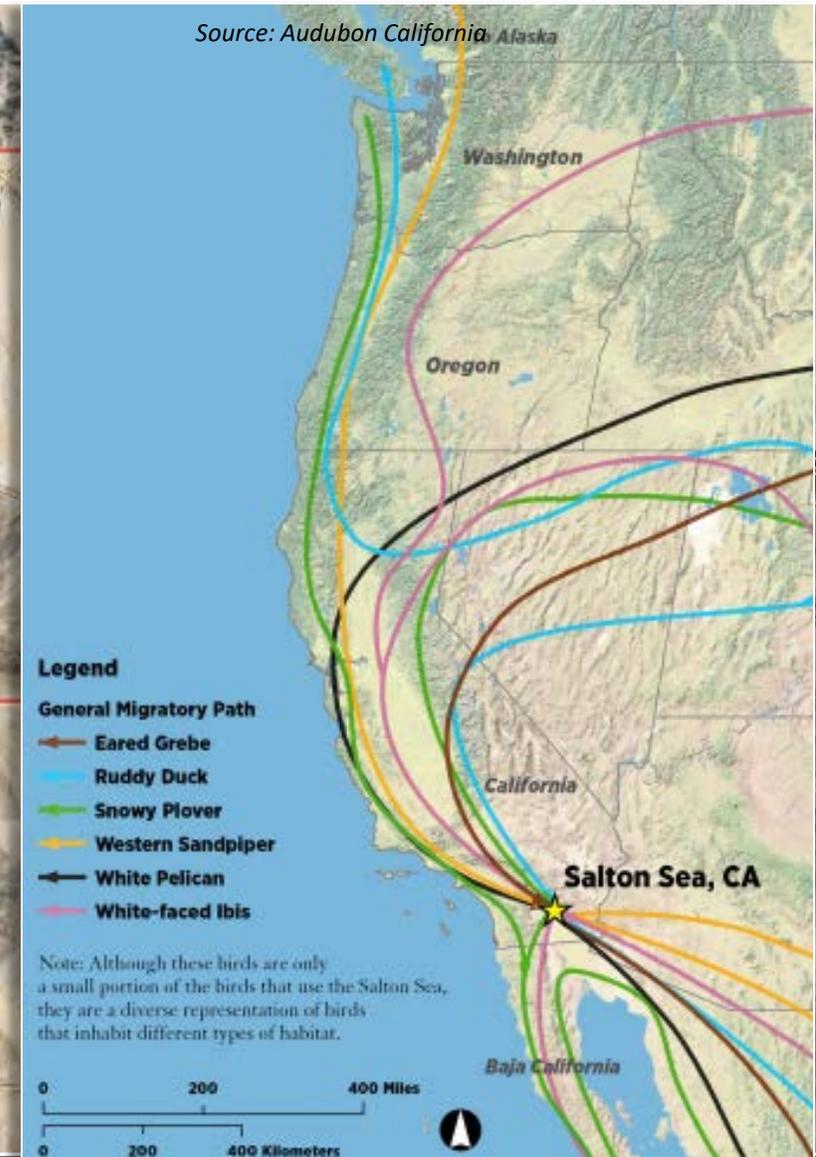
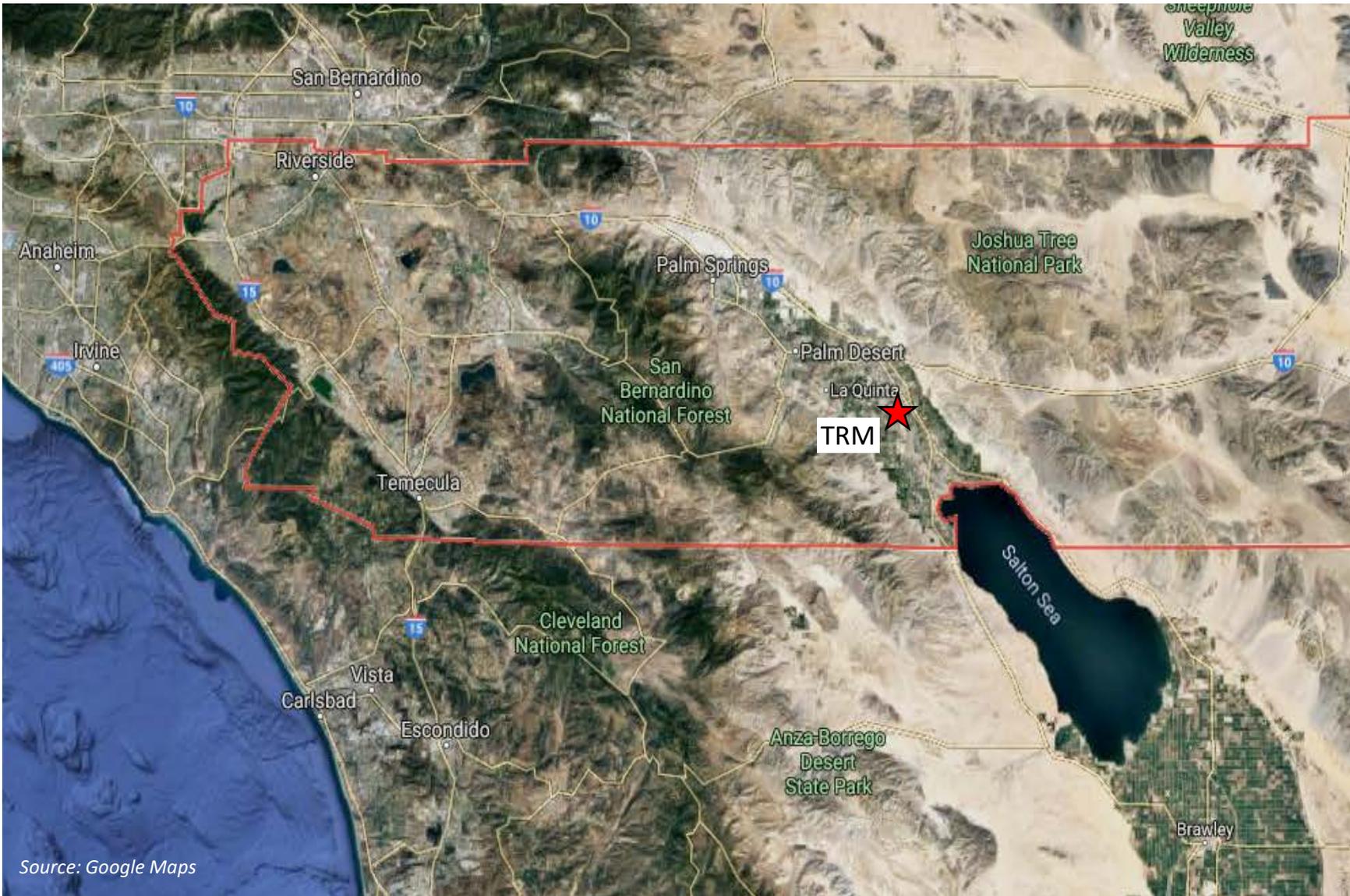
Case Study: Thermal Beach Club near TRM

Jacqueline Cochran Regional Airport (TRM)

- Two runways (8,500 feet and 4,995 feet)
- Desert playground/poised for growth
- 110,000+ annual operations
- Substantially damaging strikes (Canada geese, gulls)



Jacqueline Cochran Regional Airport



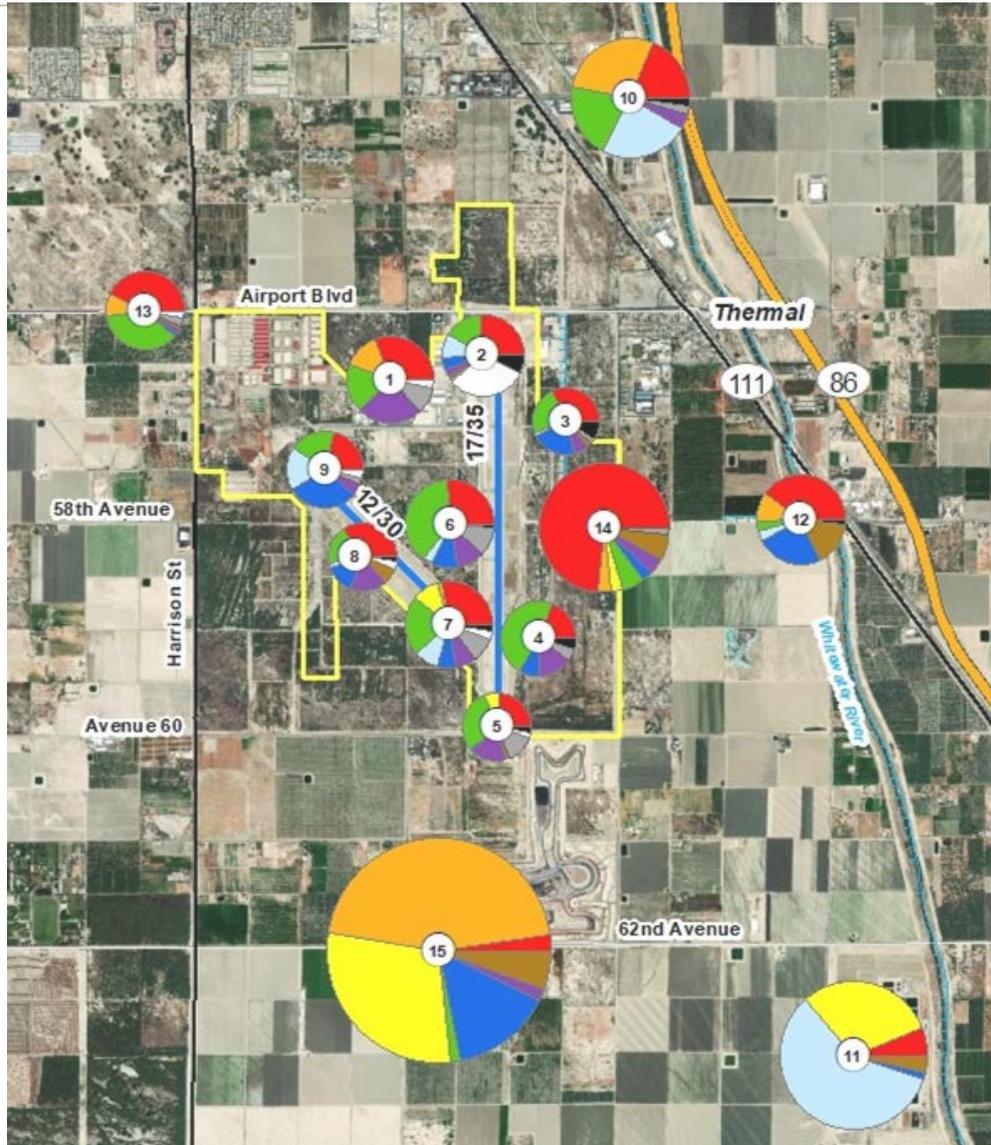
Source: Google Maps

Wildlife at TRM

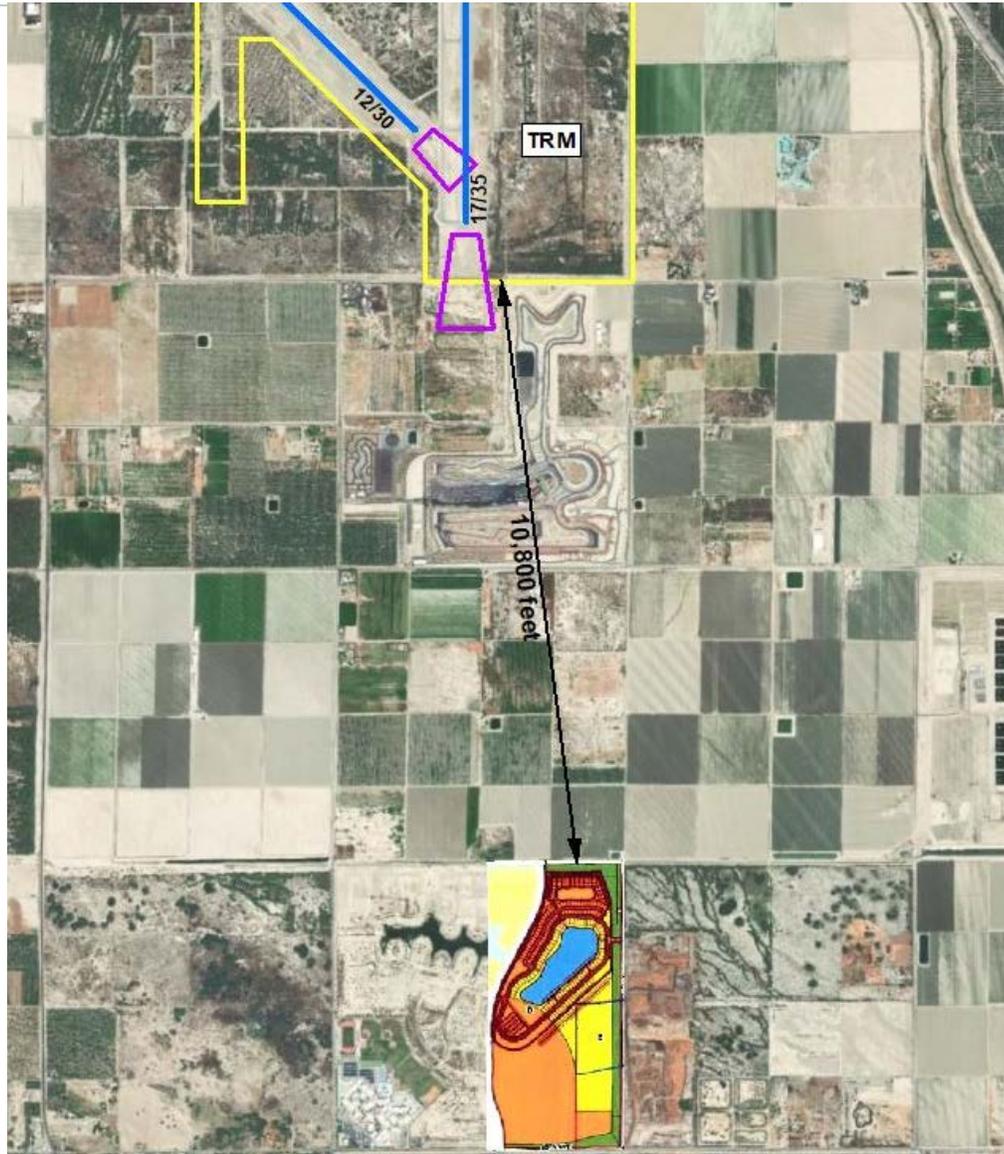
Legend

Size of pie chart is relative to the total number of birds observed at that point.

- Doves and Pigeons
- Blackbirds and Starlings
- Waterfowl
- Sparrows Finches and Warblers
- Gulls
- Swallows
- Songbirds
- Shorebirds
- Other
- Raptors
- Corvids
- Airport Property Boundary (Approximate)
- Runway
- Canal/Ditch
- Stream/River



Case Study: Proposed Thermal Beach Club near TRM



Thermal Beach Club

- Approved Master Planned Community (1999)
- Beach Club features
 - 20-acre wave pool
 - 3-acre reservoir pond
 - Restaurant/Clubhouse
 - Residential

Case Study: Proposed Thermal Beach Club near TRM

Wildlife - chief concern

ALUC Requested Developer to:

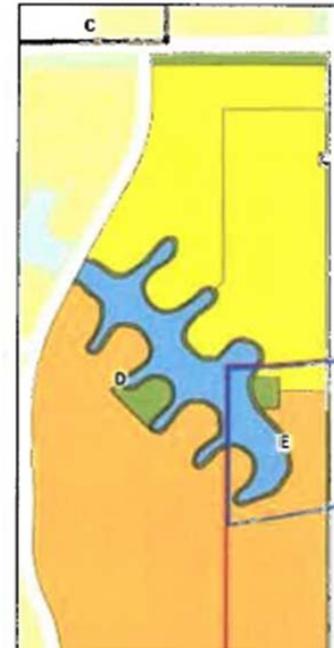
- Obtain QAWB for design review
- Prepare site-specific WHMP

QAWB and Design Revisions

- Removed coves
- Increased slopes
- Sand-gravel shoreline
- Covered reservoir
- Trained on-site staff (dispersal)

Wildlife management is condition of consistency determination.

Jacqueline Cochran Regional Airport



Original Design



Revised Design

Case Study: Proposed Thermal Beach Club near TRM

Bird Mitigation/Management Plan

Passive Measures

- Selective landscaping
- Trash and food management (restaurant, beach area)

Active Measures

- Developer provides dedicated, **trained** wildlife hazard management staff on site
- Sonic devices
- Trained dogs

Please **do not** feed the birds.



Case Study: Who Wins?



Airport WIN

- Project has reduced potential for wildlife hazards
- Off-site wildlife management by others
- Stakeholder support



Developer WIN

- ALUC consistency determination
- Design strategy - Not costly retrofit
- Predictable review process (**delays are costly!**)
- Input for projects



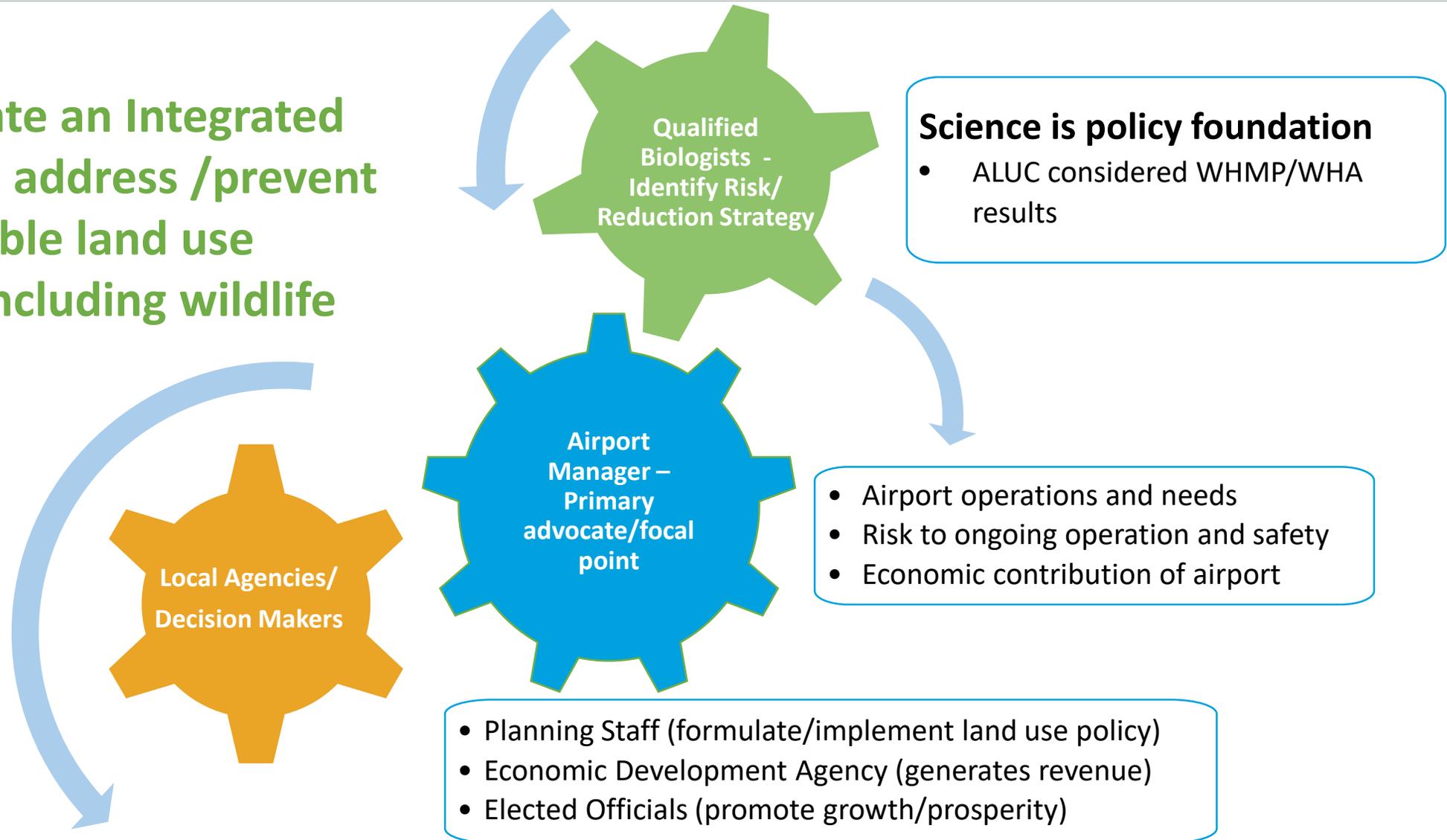
Community WIN

- Economic development
- ALUC policies resulted in a de facto wildlife hazard management policy that considers wildlife as airspace/land use issue

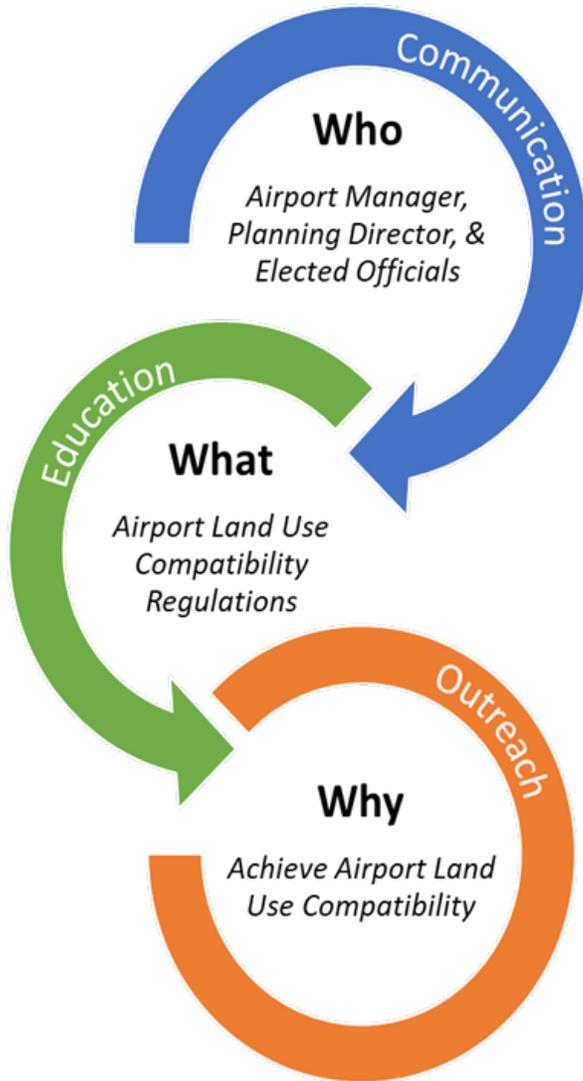


Elements of Success: Who, What, and How

Goal: Create an Integrated Process to address /prevent incompatible land use conflicts including wildlife hazards!



Conclusions: Science Informs Policy



- Wildlife management is a land use issue
- Biology and science must inform land use policy
- Wildlife Managers are key players in policy development by providing:
 - Biological and ecological data to airport operators and communities
 - Education policy makers
 - Outreach to communities



Tools: Managing Wildlife through Compatible Land Use

Federal Grant assurances

20. Hazard Removal and Mitigation.

[The Airport Operator] will take appropriate action to assure that terminal airspace as is required to protect instrument and visual operations to the airport...will be adequately cleared and protected by removing, lowering, relocating, marking, or lighting or otherwise mitigating existing airport hazards and by preventing the establishment or creation of future airport hazards.

21. Compatible Land Use.

It will take appropriate action, to the extent reasonable, including the adoption of zoning laws, to restrict the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations, including landing and takeoff of aircraft.

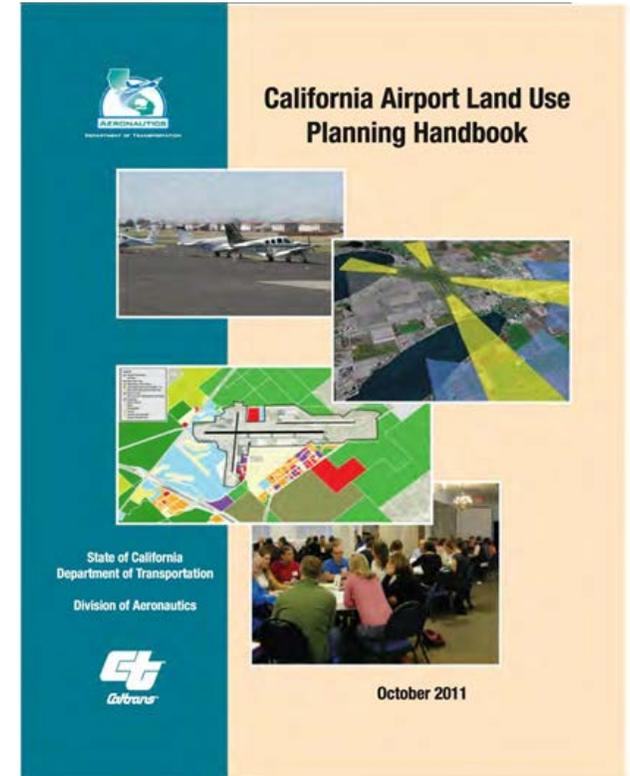
https://www.faa.gov/airports/aip/grant_assurances/



Tools : Managing Wildlife through Compatible Land Use

State Guidance

- State Transportation Codes
- 45/50 States have Airport Land Use Regulations
 - Mandatory legislation
 - Enabling legislation
- State Guidance Manuals:
California, Florida, Wisconsin, Iowa, etc.



Tools : Managing Wildlife through Compatible Land Use

Local Plans and Regulations

- State Transportation Codes
- Zoning Codes
- Local Planning Documents
 - Comprehensive Plans, Area Plans
 - Regional Transportation Plans
- Airport Master Plans – plan for the future!

Tools: Managing Wildlife through Compatible Land Use

Federal Guidance

- 14 CFR Part 77 - Safe, Efficient Use, and Preservation of the Navigable Airspace
<https://www.ecfr.gov/cgi-bin/text-idx?rgn=div5&node=14:2.0.1.2.9>
- FAA Advisory Circular (AC) 150/5190-4A - A Model Zoning Ordinance to Limit Height of Objects Around Airports
https://www.faa.gov/airports/resources/advisory_circulars/index.cfm/go/document.current/documentNumber/150_5190-4
- FAA Land Use Compatibility and Airports, a Guide for Effective Land Use Planning
https://www.faa.gov/about/office_org/headquarters_offices/apl/noise_emissions/planning_toolkit/media/III.B.pdf



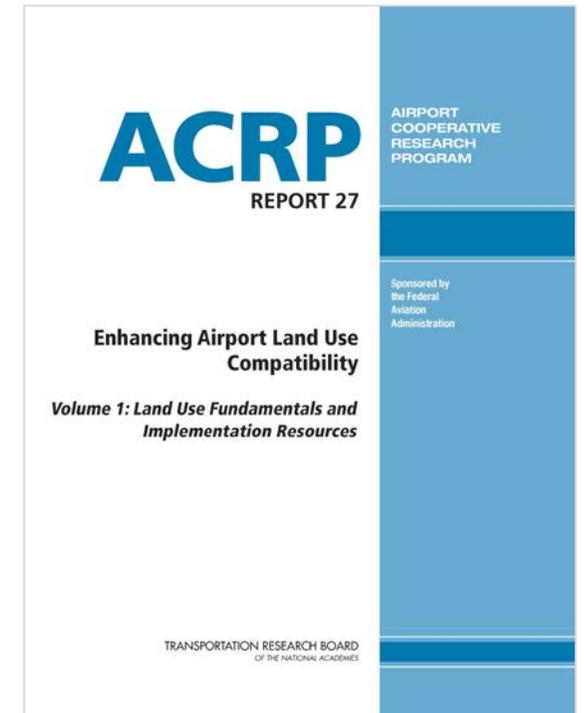
Tools and Publication: Managing Wildlife through Compatible Land Use

Airport Cooperative Research Program (ACRP)

- ACRP Report 27: Enhancing Land Use Compatibility:
- ACRP Legal Research Digest 14: Achieving Airport-Compatible Land Uses and Minimizing Hazardous Obstructions in Navigable Airspace
<http://www.trb.org/ACRP/Blurbs/167127.aspx>

Forthcoming Publications: ACRP Project 04-22: Airport Zoning Ordinances

- Necessary stakeholders
- Tools for preparing an ordinance
- Sample ordinances (Winter 2019)



Conclusions: Science, Policy, and Community,

- Science is the foundation of policy
- Science-based compatible land use policy provides a standard to evaluate proposed projects.
- Incorporating wildlife hazards into project review processes provides a defined, predictable process to further appropriate economic development.
- Considering Wildlife Strikes as a Land Use Compatibility issue enables us to do this.
- Many stakeholders

Let's translate science to policy!



Thank you.

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