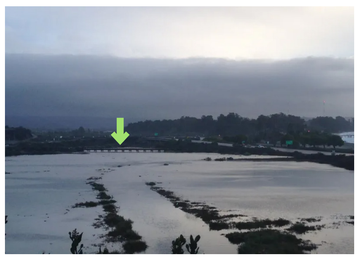
Resilience in the Goleta Slough Coastal Area: Synthesizing Climate Hazards and Regional Priorities

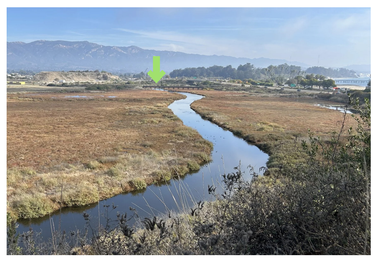
CRISTAL REAGH AND VALARY BLOOM, INTEGRAL CONSULTING INC.

Why the Goleta Slough Matters

A complex and vulnerable coastal system



Closed lagoon mouth—flooded slough (2025 City of Goleta Coastal Hazards Vulnerability Assessment and Fiscal Impact Report)



Open lagoon mouth—tidally influenced slough (RCC)

Open spaces, cultural lands, and fragile ecosystems

- Historic Chumash cultural site
- Estuarine wetland and marine protected area
- Endangered species habitat
- Goleta Beach recreation



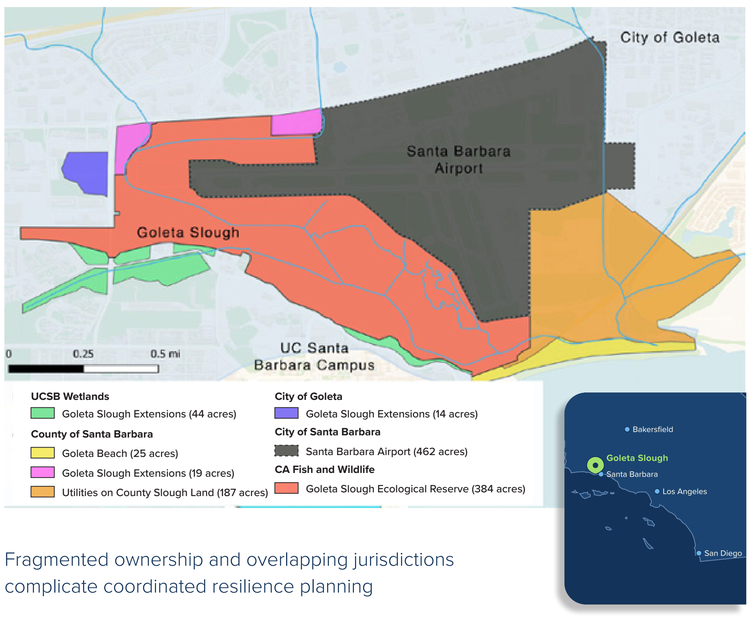




(Top, left to right) Southern California steelhead trout fry (Alex Vejar/California Fish and Game), Belding savannah sparrow (Rinus Baak/USFWS); (Bottom) Tidewater goby (Benton Spies)

Competing infrastructure

- Santa Barbara Airport
- Major roads (including State Route 217)
- Railroad
- Utilities: water, wastewater, gas
- Commercial and residential land use



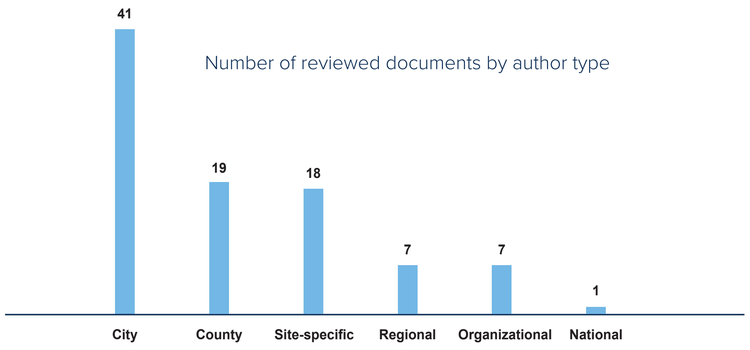
Fragmented ownership and overlapping jurisdictions complicate coordinated resilience planning

Translating Science into Action

Integral reviewed and synthesized 95+ documents, including:

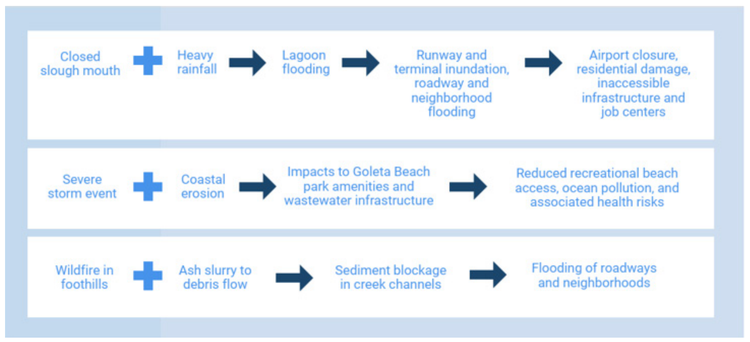
- Scientific studies
- Regional planning documents
- Community and policy reports

Goal: Translate complex data into a shared, accessible narrative.

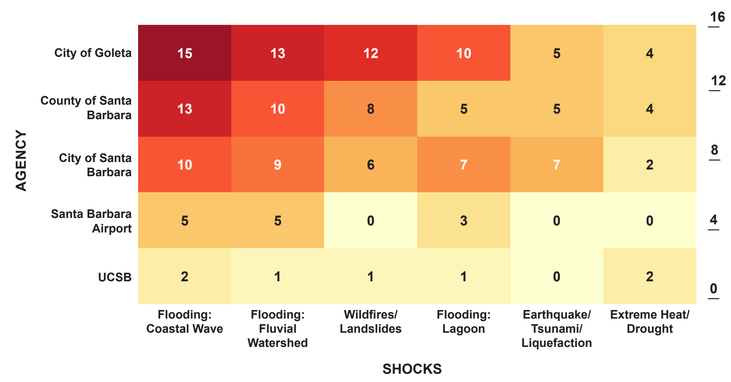


Hazards framing

- **Acute shocks:** flooding, erosion, infrastructure failure
- **Chronic stresses:** sea level rise, environmental degradation, drought/water management
- **Cascading impacts** across systems



Example of cascading impacts linking climate hazards to infrastructure and community outcomes



Heat map of shocks by agency (created with the help of AI)

Stronger Foundations, Smarter Projects

Resilient Cities Catalyst (RCC) took findings and put them into action:

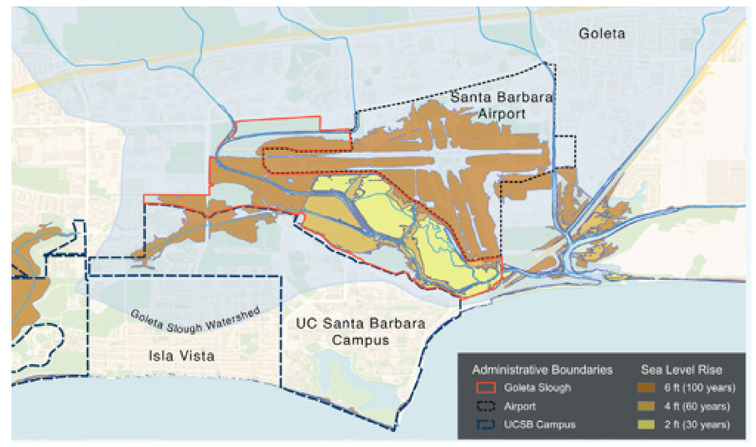
- Stakeholder engagement (2025–2026)
- Shared vision development
- Priority resilience projects identified
- Advancement toward implementation

Shared regional priorities:

- Ecosystem Protection
- Coastal Resilience and Adaptation
- Governance
- Climate Mitigation
- Sustainable Growth
- Community Well-being



2026 flooding of Old Town Goleta: exposure of community and infrastructure (Ryan Cullom/Noozhawk photo; www.noozhawk.com/goleta-officials-say-overloaded-storm-drains-caused-flooded-streets/)



Sea level rise will increase the frequency and extent of flooding (2-, 4-, 6-ft scenarios)

FROM SYNTHESIS TO ACTION

Fragmented plans + technical language
Information was dispersed across agencies, studies, and planning documents.

→

Shared resilience toolkit
A comprehensive report that gave RCC, planning partners, researchers, and the community accessible findings, graphics, and context to support decision-making.

→

Community engagement + project prioritization
Use the shared findings to engage the community, evaluate potential projects, and advance priority resilience actions.

CONCLUSION

Technical synthesis transforms fragmented planning into a shared foundation for communication—enabling more effective stakeholder engagement, reducing conflict, and moving coastal resilience from planning toward implementation.

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