

The EcoAtlas Toolset

Applied Aquatic Science: A Business Plan

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Executive Summary

The EcoAtlas suite of tools represents a significant investment of time, energy, thought, scientific testing, technical innovation, and capital from a number of state and federal public agencies, grant programs, and NGOs over the course of its 17-year existence. The toolset embodies the scientific and programmatic investments of the California Wetland Monitoring Workgroup (CWMW), its many related state and federal agencies, non-governmental organizations (NGOs), and private consultants, as well as the goals of the growing set of stakeholders who have expanded the circle of interested parties over the years. It is known by many names -- "WRAMP" being most common -- but in its essence it comprises the following tools:

- EcoAtlas map viewer
- Project Tracker
- The California Aquatic Resources Inventory (CARI) map and editor tool
- The California Rapid Assessment Method (CRAM)
- The Riparian Zone Estimator Tool (RipZET)

Now highly capable, the toolset represents more than science and technology alone, but a distillation of both, customized to meet specific goals associated with the landscape-scale tracking and characterization of California's aquatic resources. The US Environmental Protection Agency (US EPA), for instance, has supported the toolset through multiple development grants so that the collected tools might be complementary to a still-nascent, statewide wetland protection program. Meanwhile, the state's Coastal and Delta Conservancies require the use of the tool, and regional water boards -- including SF Bay, Lahontan, and North Coast -- regularly employ the tool for mitigation and restoration project tracking. Essentially, EcoAtlas has proven critical to a variety of programs and represents a successful product of broad-based collaboration. However, it currently stands at a crossroads, and its stakeholders must direct the toolset's future.

The following plan is intended to ensure the continued vitality of the toolset. The plan's success will depend upon the continued collaboration of the public agencies that have supported the toolset thus far, but it must also integrate principles of resilience as it accounts for the tensions that arise as organizations move in different strategic directions.

Challenge

The major challenge we face is how to fund the continued maintenance, development, and innovation for the broad suite of tools constituting EcoAtlas. Having been reinvented in

2013, the tool is effectively on a trajectory from pilot project to an institutionalized instrument. Yet, the funding needed for such a transition is not yet available. US EPA and other governmental agencies have largely funded development of the EcoAtlas toolset through Wetland Program Development Grants and other in-kind contributions, which are designed to build state capacity but not to implement the toolset. Considering that state agencies presently depend on the tool for information resources, how do we ensure that EcoAtlas remains meaningfully connected to the stakeholders and public programs that have lent the toolset such vitality over the years?

The challenge is therefore chiefly a matter of process, people, and resources, rather than one of technology.

Solution

The toolset adheres to the concept that no one tool can comprehensively address all information gaps across the watershed and therefore collectively produces a synthesized “whole watershed approach.” Whether estimating the ideal riparian buffer width for a given stream or assessing the health of a wetland at the edge of the estuary, the EcoAtlas tools allow practitioners to deploy the right tool for the job in scientifically defensible ways, thereby producing a credible picture through composite outputs.

The following business plan requires a combination of new state investment through a combination of in-lieu-fee agreements, participant fees, and continued project-based funding. It describes both the approach for ensuring the continued development of the toolset in alignment with stakeholder goals and the appropriate funding model to support the sustainable operations and maintenance of the tool. The result is a hybrid funding model that leverages agreements, participant fees, and project-specific funding, all of which will collectively facilitate the continued scientific and technological evolution of the toolset. The hybrid model will provide a diversification of the budgetary infrastructure, allowing for greater sustainability and resilience against unforeseen shortfalls. Furthermore, the regionalization of the tool will operationalize a customization strategy and allow the tool to meet stakeholder demands. In this way, innovation can also continue.

The plan provides an annualized budget for key tasks, including user support, training, outreach, database management, upgrades, and quality assurance, amounting to \$365,000. This serves as a set amount that is reassessed annually. The more contributors pay into this common fund, the less each contributor must pay. New development, on the other hand, would continue as funded by individual grants, foundations, and other sources.

Current Stakeholders and Governance

The toolset has a strong user-base comprising different programs and organizations across California's varied governmental terrain. These groups include:

- regulatory agencies with regional jurisdictions, such as the Lahontan, North Coast, and San Francisco Bay Regional Water Quality Control Boards,
- state agencies with statewide jurisdiction, such as the State Water Board, CalTrans, and California Department of Fish and Wildlife,
- federal agencies, such as the US Army Corp of Engineers and NOAA-NMFS who stores its Southern California eelgrass restoration projects,
- conservancies, such as the State Coastal Conservancy and Sacramento-San Joaquin Delta Conservancy
- Joint Ventures, such as the San Francisco Bay and Central Valley Joint Ventures with whom SFEI signed a three-way MOU of continuing support for EcoAtlas, and
- wetland groups, such as the Central Coast Wetlands Group.

In addition, EcoAtlas, CRAM, CARI and Project Tracker were included in Proposition 1 guidelines for managing information on restoration projects.

The CWMW and its associated Level 1, Level 2, and Level 3 committees will continue to exercise authority for directing the development of the toolset's various core components. Meanwhile, projects that modify peripheral modules can be guided by individual funders.

Roadmap

The future of EcoAtlas requires a strategy for both the continued maintenance and new development of the toolset. The stakeholders of the toolset depend upon reliable updates (software and data) and upgrades (major revisions). These demands are only likely to increase.

For the most part, the toolset is highly centralized and singular. The roadmap calls for a strategic regionalization of the tools that meets specific regional needs while maintaining the consistency of the data and core functions to leverage past investments and retain scientific credibility for the toolset.

Implementation of this plan will require the CWMW to test the viability of the hybrid funding model and then, while clearly illustrating the future opportunities, secure contributions from its target clients.