

# Genies in a Bottle: Conservation Action Planning

*Collaboration supports management decisions*

Land managers must manage budgets so that often-limited dollars are invested to benefit ecological biodiversity while also considering the interests of a variety of stakeholders. LANDFIRE's suite of powerful tools and data helps planners make strategic decisions efficiently and effectively.

The Nature Conservancy's (TNC) Efromson Coaches Network (named after Lori and Dan Efromson) and TNC's Fire Learning Network and LANDFIRE teams have developed a series of *Genies in a Bottle* workshops -- so named because of the "magical" power of LANDFIRE resources -- that educate practitioners in the use of LANDFIRE tools and predictive ecological models. As a result of this training, managers can use LANDFIRE Products to help determine the viability of focal ecosystem targets, assess potential threats, test alternative management options and develop cost-effective strategies. Ultimately, the goal is to develop landscape-scale Conservation Actions Plans (CAPs) that are vital for TNC's strategic program design.

The *Genies/CAP* process design has four steps:

- **Identify Conservation Targets** by mapping ecological systems across landscapes using geospatial data layers downloaded from LANDFIRE, satellite imagery and remote sensing.
- **Assess Viability** by using landscape-level measures to evaluate ecological conditions, the ecological departure of each landscape from its natural range of variability and reference departures so as to represent current conditions and identify "high risk" vegetation classes.
- **Assess Future Threats** through the use of predictive ecological models and the ecological departure metric.
- **Develop Conservation Strategies** that can improve ecological condition and abate future threats. Through the use of computer simulations, managers can test whether strategies could achieve the highest return on investment and still meet biodiversity goals.

The National Park Service is working with TNC to apply these methods in the Great Basin National Park. The USDA Forest Service and the Bureau of Land Management are focusing on 200,000 acres of basin-and-range lands in eastern Nevada. Further, the US Fish & Wildlife Service is also interested in using these tools and methods for the 1.5 million-acre Desert National Wildlife Refuge.