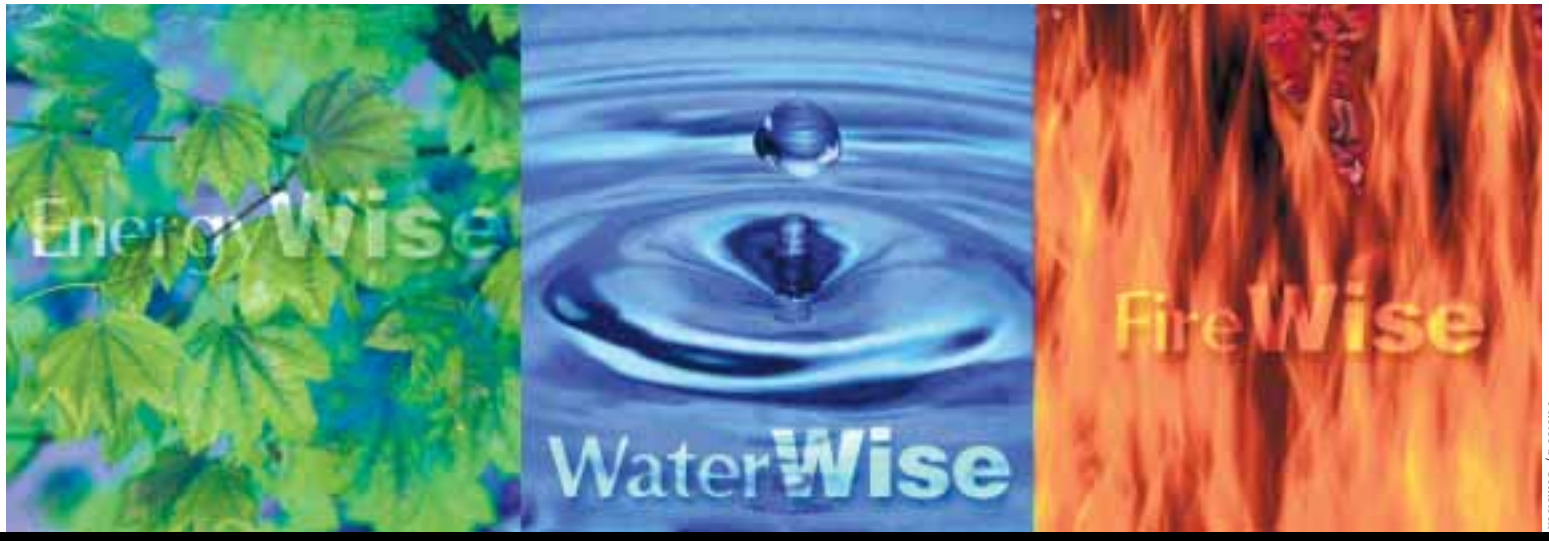


Photos by Comstock

# EcoSmart design software

**Environmentally Conscious • Economically Sound • Science-Based**

## A PRECISION LANDSCAPE EVALUATION & DESIGN TOOL

COMING SOON

**ecoSmart** is a Web-based software program designed to evaluate the economic trade-offs between different landscape practices on residential parcels. The program estimates the impacts of strategic tree placement, rainfall management, and fire prevention practices. Users work in a computer-simulation environment to test various landscape and hydrologic alternatives to arrive at environmentally and economically sound solutions.

## DECISIONS

### EnergyWise

- Add trees, remove trees, grow trees, or move trees to new locations.
- Estimate how different types of trees in different locations influence energy use for heating and cooling.

### WaterWise

- Add cisterns, swales, depressions, dry wells, or low water-use trees.
- Evaluate the effect that these solutions have on rainfall interception, runoff, and landscape water use.

### FireWise

- Remove trees and shrubs, change species, or reduce ladder fuels.
- Clean roofs, change roof material, add double-pane windows, add non-flammable siding, change decking material, close in eaves, add irrigation, or move woodpiles.
- Simulate an actual fire to demonstrate how landscaping and structural decisions affect fire safety.

## OPERATION

- Quickly display buildings and landscape features on graphical user interface.
- Configure the building lot, building footprint, orientation, roof and siding material, roof angle, windows, hardscape, trees (size and species), shrubs, and all other prescriptions.
- Simulate prescriptions for up to 40 years into the future.
- Simulate individual rainfall or fire events.

## FUTURE

This tool is designed so that future work can incorporate other criteria and indicators of sustainable urban landscapes such as pesticide/fertilizer application, recycling green waste, and air quality.

FOREST SERVICE USDA DEPARTMENT OF AGRICULTURE

Center for Urban Forest Research

**DEVELOPED BY:**
**Center for Urban Forest Research**
Pacific Southwest Research Station, USDA Forest Service
1 Shields Avenue, Suite 1103 • Davis, CA 95616-8587
(530) 752-7636 • Fax (530) 752-6634 • http://cufr.ucdavis.edu/