



West Wide Wildfire Risk Assessment

Project Update – November 2010



This update provides a summary of the current status of the West Wide Wildfire Risk Assessment (WWA) project being conducted on behalf of the Council of Western State Foresters (CWSF) and the Western Forestry Leadership Coalition (WFLC). Links to more detailed information are listed at the end of this update. The Sanborn Map Company is the primary contractor.

Highlights – Recent Activities

- Investigations into which data will be used for the Fire Effects components of the assessment are continuing with Project Steering Committee (PSC) guidance. Three new data sets to assess potential fire effects on Wildland Development Areas, Important Forest Assets and Riparian Forest Assets have been compiled for four pilot counties in California, Oregon, Colorado, and Nebraska. The PSC is currently evaluating the data for use in the WWA.
- A contract modification was signed to accommodate a change in the project completion date to November 2011, to incorporate additional work necessary to compile and assess the Riparian Forest Asset pilot data, and reflect a change in a key person identified in the contract.
- Marsha Henderson, state Fire Operations Forester for Alaska, replaced Marc Lee as the Alaska representative on the Project Steering Committee.
- Fire occurrence and weather data acquisition is complete for the 17 western states. Compilation and analysis are well underway. Sanborn is actively working with the states on the cleanup of fire report datasets.

Recent Activities

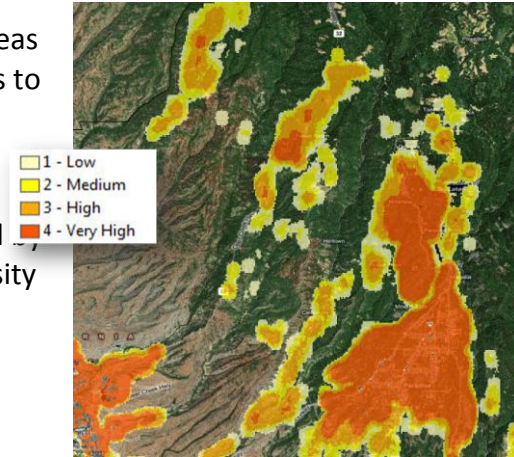
Fire Effects Investigation:

To define the “risk” of a wildland fire, an “effect” is needed. Investigations into which data will be used for the Fire Effects components of the assessment are continuing with (PSC) guidance. In recent months, the PSC approved the data sources to assess fire effects (impacts) on Wildland Development Areas (where people live), critical infrastructure and watersheds important for drinking water. They have also investigated and considered numerous options to assess the effect of fire on important forest assets, including the contribution of riparian areas to water and ecological values.

Three new data sets to assess potential fire effects on Wildland Development Areas, Important Forest Assets and Riparian Forest Assets have been compiled for four pilot counties in California, Oregon, Colorado, and Nebraska. The project is a joint effort of in-kind resources from CAL FIRE and the “pilot” states, in supporting the project technical team. The PSC is currently evaluating the data for use in the WWA. The project technical team is now incorporating the data into a risk model (adding suppression difficulty and threat) for two of the pilot counties where existing threat data already existed. When completed later in November, the PSC will be able to see all of the fire effects inputs and how they influence overall risk.

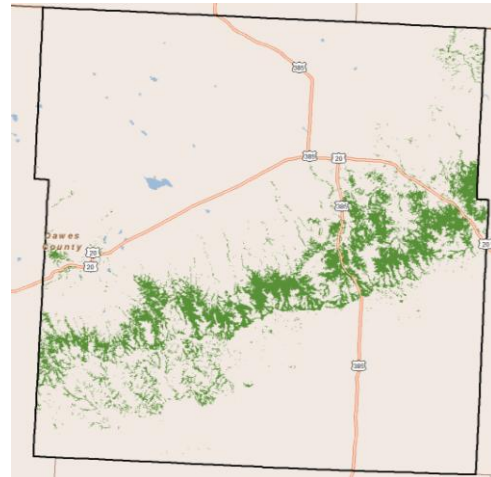
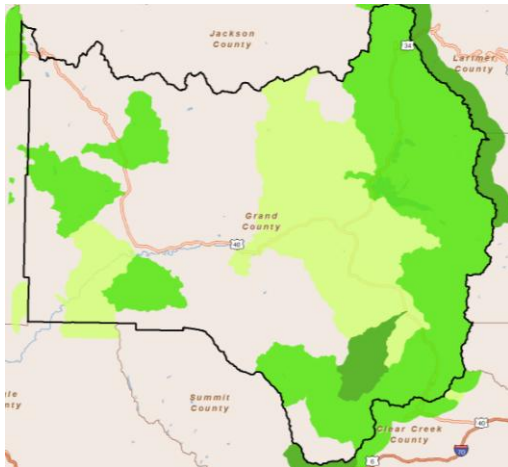
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□ **Wildland Development Areas (WDA)** – Interface areas are now referred to as Wildland Development Areas to avoid confusion with the WUI term as used in legislation to allocate funding. The PSC agreed that DHS LandScan data will be used as a data source to define areas where people live. The WDA is derived modeling LandScan population count data into density classes. Some filtering of the LandScan data occurs using “influence layers” to eliminate outlying low density pixels. The PSC will help define model parameters later on as the technical process is developed.



Above: Concept WDA's for Butte County, California

□ **Important Forest Assets (IFA)** – An extensive review of available data to represent wildfire effects on landscape forest values has found no single source satisfactory to the PSC. Landscape forest values vary greatly from state to state across the west and Pacific Islands. The PSC is now investigating having each state provide a layer that represents Important Forest Assets for their state. The layer is currently defined to include those priority landscapes within the state that reflect important forest assets that would be most adversely affected by wildfire. Each state would be free to define what type of forest asset, or value, is considered most important. This layer could reflect potential economic value, such as production forest, tree farms or plantations; or other criteria, such as forest stewardship or legacy areas; or forested areas key to recreation or biodiversity. It is up to each state to define what criteria is most important for defining these important landscapes.



Above: Pilot IFA data provided by states for Grand County, Colorado (left) and Dawes County, Nebraska (right). Colorado data reflects a low, medium, and high rating of drinking water erosion risk that was part of their recent state forest resource assessment. Nebraska's data were derived to show all forested areas.

For more information visit the WWA project web site at www.westwideriskassessment.com
Questions may be directed to Jim Wolf, WWA Project Manager, at jwolf@westwideriskassessment.com
11/30/2010

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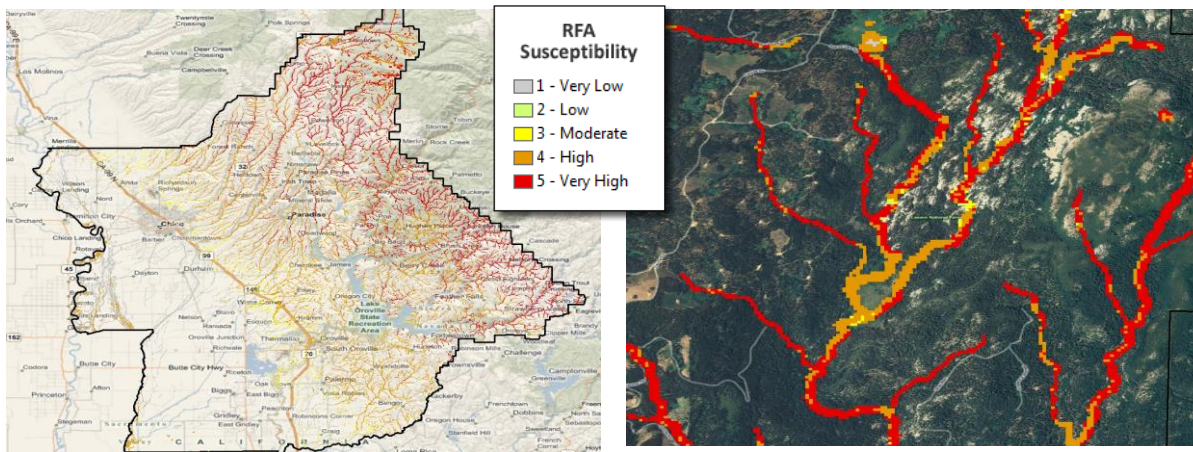
- **Riparian Forest Assets (RFA)** – One value common to all western states is the importance of forested riparian areas for water quality and quantity and for ecological functions. Development of this input layer is beyond the current scope of the project, however, the PSC felt it was important to explore the potential benefit of such a layer and approved a statement of work to include a RFA layer in the fire effects pilot.

The model to derive RFAs is being developed by the WWA technical team with support from state representatives. CAL FIRE is providing in-kind technical resources to define analytical procedures for deriving RFA data layers for the pilot counties. Additional technical support has been provided by partner states and the Rocky Mountain Forest & Range Experiment Station. The process involves identifying the footprint of riparian areas and then assigning a rating based upon two important riparian functions – water quantity and quality, and ecological significance. Prototype results have been generated and are being incorporated into the fire effects pilot project for the PSC to evaluate.

The PSC is currently looking for funding opportunities to add the RFA to the project.

Forested watersheds are essential to sustaining the nation's freshwater supply. In the Western United States, 65 percent of the water supply comes from forests. Forested watersheds reduce storm runoff, stabilize streambanks, shade surface water, cycle nutrients, and filter pollutants. Streams in forested watersheds also often provide high-quality habitat for sensitive aquatic species and provide habitat for rare and endangered species.

Excerpts from *Water, Climate Change, and Forests* (PNW-GTR-812)



Above: Prototype RFA data provided for Butte County, California. The range of RFA Susceptibility values from very low to very high are derived based on key riparian area characteristics: rainfall, slope, soil erosion potential, and riparian vegetation life form.

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Project Steering Committee change:

In September, Marsha Henderson replaced retiring Marc Lee as the Alaska representative on the Project Steering Committee. Marsha is the Fire Operations Forester for the Alaska Department of Natural Resources. Her career has included work in Alaska as well as the lower 48 states with both state and federal agencies.

Contract Modification:

A contract modification was signed to accommodate a change in the project completion date to November 2011, incorporate additional work necessary to compile and assess the Riparian Forest Asset pilot data needed to complete the pilot data, as well as reflect a change in a key person identified in the contract.

Data Acquisition, Compilation, and Analysis:

Acquisition and validation of key input data sources, and compilation of that data into a form required to conduct the assessment are the project's first technical components.

- **Fire occurrence** data from 17 partner states has been received. Sanborn's team is processing and analyzing the data. Data from Pacific Island partners will be acquired in the coming months.
- **Weather Influence Zones (WIZ)** have been established by Sanborn's fire weather meteorologist and reviewed by partner states. Weather data is being processed for each WIZ to generate the needed percentile weather for the fire behavior calculations.
- **Improved fuels** data were received from the LANDFIRE Project in May 2010. A fuels briefing paper is being prepared by Sanborn's team that describe how the various LANDFIRE datasets will be used and to provide guidance for developing fire and insect disturbance data.

About the West Wide Wildfire Risk Assessment

The WWA will document the risk from wildfire by quantifying the magnitude of the current wildland fire problem in the West. The WWA is unique because it will assess all lands across the west using consistent data and methods, therefore providing information to support planning and decision making at national, regional, state and local scales. The WWA results will provide a foundation for coordinating policy and baseline data for state and county level planning, especially for those states with limited resources.

The WWA is a separate, regional effort with potential to complement the State Forest Resource Assessments and Strategies recently completed by individual states as required by the 2008 Farm Bill and part of USFS State and Private Forestry Redesign.

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Project Timeline

The project began in July 2009 with a projected two year timeframe focusing on delivery of the assessment results and final report in November 2011. A complete project schedule is available on the WWA web site.

Helpful Links

The West Wide Wildfire Risk Assessment project has a dedicated web-page - <http://www.westwideriskassessment.com/>



- Partner States**
- Alaska
 - Arizona
 - California
 - Colorado
 - Hawaií
 - Idaho
 - Kansas
 - Montana
 - North Dakota
 - Nebraska
 - New Mexico
 - Nevada
 - Oregon
 - South Dakota
 - Utah
 - Washington
 - Wyoming
 - Territory of Guam
 - Republic of Palau
 - Federated States of Micronesia
 - American Samoa
 - Commonwealth of Northern Mariana Islands

Southern Wildfire Risk Assessment project website for methodology and reports - www.southernwildfirerisk.com/

LANDFIRE project - www.landfire.gov

Questions may be directed to Jim Wolf, WWA Coordinator jwolf@westwideriskassessment.com, 541-324-3446