



Wildfire Protection Planning Solutions

DTS has a rich legacy in conducting wildfire risk assessments and generating related information and software applications to support fire professionals for fire protection planning and response and suppression. Over the past 10 years our staff has been involved with industry partners in developing the de facto wildfire risk assessment approach used by state agencies across the Nation. A key component in these projects has been the development of wildfire risk and impact analysis software applications that support our clients for on-going monitoring of their risk situation, and deriving the information necessary to support mitigation planning and prevention efforts.

DTS staff has been the technical lead in the following past wildfire related projects that were completed with a team of partners, including the Sanborn Map Company (Colorado Springs, CO) and Fire Program Solutions (Sandy, OR).

- Florida Wildfire Risk Assessment 2002
- Southern Wildfire Risk Assessment 2005 – www.southernwildfirerisk.com
- California Insurance Wildfire Risk Assessment 2006
- Texas Wildfire Risk Assessment Update 2007
- USFS FPA Montana Pilot Wildfire Risk Assessment 2007
- USFS Oregon Analysis of Landscape Fire Probability 2007
- Georgia 2007 On-Site Fire Incident Mapping Efforts 2007
- Western Colorado Wildfire Risk Assessment 2008

Currently, DTS is actively involved in several key wildfire projects that continue to establish the methods and information necessary for effective fire protection planning. These projects are being conducted in concert with industry partners. As of May 2010 these include:

County of San Diego, California

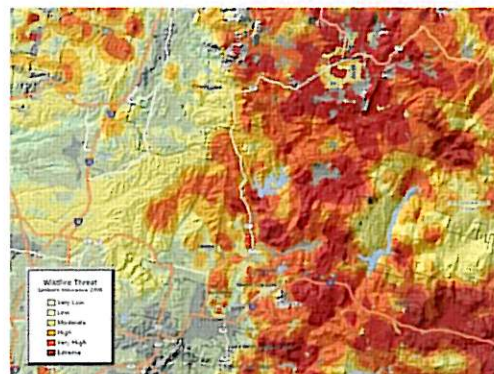
Wildfire Risk Assessment & Economic Impact Analysis

May 2010 – January 2011

Working with industry partners, DTS has embarked on an all lands, county wide wildfire risk assessment for the County of San Diego. This assessment will provide accurate baseline fuels and wildfire risk information to support multiple agencies and jurisdictions.

The risk assessment will provide the baseline information to support CAL FIRE, local fire departments and protection districts, and the county in mitigation planning, monitoring risk reduction accomplishments, and response and suppression.

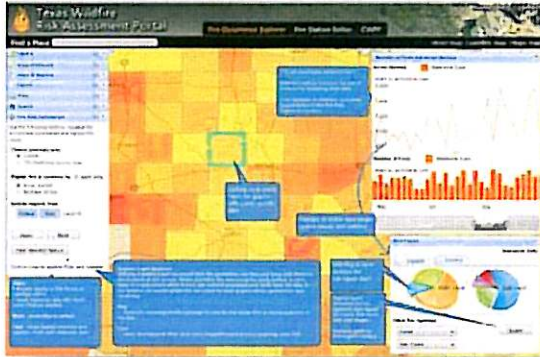
This project is also developing a wildfire impact analysis software application that will allow local planners to quantify the potential economic impact of wildfire on structures, infrastructure and commodity agriculture. Tools are being developed to support the County integrating assessor parcel data with the risk assessment outputs to support on-going monitoring of potential wildfire impacts.



Texas Forest Service

Texas Wildfire Risk Assessment Web Portal – TX_WRAP

December 2009 – September 2012



The Texas Forest Service has been an active participant in the Southern Wildfire Risk Assessment project and updates tailored specifically for Texas fuels and landscape characteristics.

The agency has invested in the development of a wildfire risk assessment web portal in an effort to take the next step in providing risk information to agency and local planners, and the public, in a timely manner.

Named TX WRAP (tex-rap), this web mapping site will provide capabilities for interrogating the risk data and generating custom maps and reports for user defined areas of interest that

are tailored to specific mitigation workflows and reporting requirements. Tools are being developed that allow planners to analyze the specific components of high risk areas, conduct analysis on historical fire occurrence, and develop reports to support the development of local Community Wildfire Protection Plans (CWPPs). These tools are intended to aid planners in evaluating mitigation and prevention options so that more effective use of resources can be employed. As such, TX WRAP will be the primary repository for wildfire risk information analysis in Texas. It is expected that TX WRAP will be the framework for similar portals in other states.

Western Forestry Leadership Coalition & Council of Western State Foresters

www.westwideriskassessment.com

West Wide Wildfire Risk Assessment

July 2009 – October 2011



**WESTERN
WILDFIRE RISK
ASSESSMENT
FORESTRY**

Wildfire risk in the western U.S. is increasing and becoming a more complex problem that warrants coordinated assessment, planning and response. The Council of Western State Foresters (CWSF) and the Western Forestry Leadership Coalition (WFLC) has embarked on a wildfire risk assessment of all lands for the 17 western states and selected Pacific islands.

Working with industry partners, DTS is the technical lead for this assessment acting as the primary liaison with the Project Steering Committee and WWA Project Manager as well as directly the technical team. In addition, working with Fire Program Solutions (Sandy, OR), DTS is designing the risk model components leveraging the established methods from previous risk assessment projects, supplemented by integration new methods for analyzing fire effects and communities-at-risk. DTS will also be the lead for the technology transfer components of the project once the assessment is complete.

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 project is scheduled for completion in December 2011.

Texas Forest Service

Texas Wildfire Effects Software Application

April 2010 – September 2010

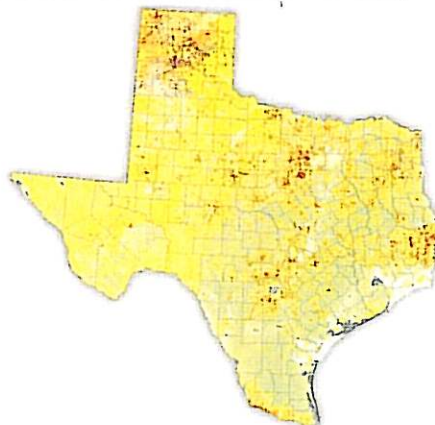
In support of an updated wildfire risk assessment underway for the state, the Texas Forest Service has embarked on the development of an enhanced GIS fire effects model to better analyze the impacts of wildfire to valued assets across the state. This GIS software application is being developed to incorporate some of the latest research developments to analyze potential impacts to Urban Wildland Interface areas (*where people live in the wildland*), and related infrastructure. The software application is being developed to leverage existing investments in the Texas Wildfire Risk Assessment Portal project, as well as new datasets now available from the Department of Homeland Security. A team of wildfire subject matter experts has been established to ensure that the new software model adheres to the best fire science available.

Texas Forest Service

Texas Wildfire Risk Assessment Update

May 2010 – September 2010

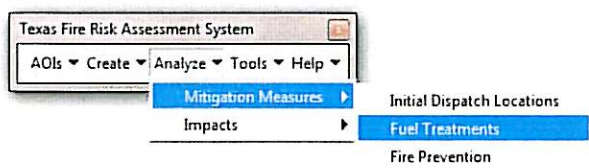
Working with the Sanborn Map Company (Colorado Springs, CO) and Fire Program Solutions (Sandy, OR), DTS is conducting an updated wildfire risk assessment for all lands in Texas. This assessment update will be employing updated surface fuels and canopy datasets developed by the Texas Forest Service over the past few years. These updated fuels, in conjunction with enhanced fire occurrence data, will provide the basis for a more accurate risk assessment that reflects current conditions. Scheduled for completion by August 2010, this updated assessment data will be deployed in the Texas Wildfire Risk Assessment web portal (TX WRAP) for use by local planners, stakeholders and the public.



Texas Forest Service

Texas Wildfire Risk Assessment Software Training

April 2010 – May 2010



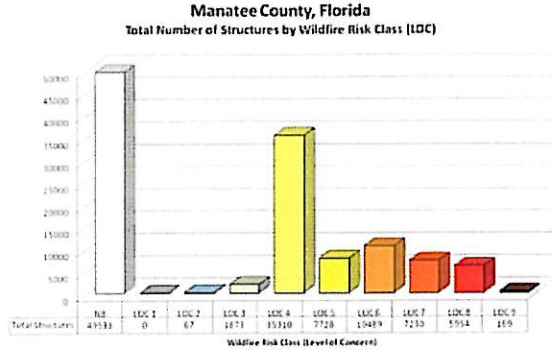
Working with the Sanborn Map Company (Colorado Springs, CO) and Fire Program Solutions (Sandy, OR), DTS conducted on-site training for Texas Forest Service and federal agency staff on the Texas Fire Risk Assessment System (TXFRAS).

The week long training walked staff through the principles of the Texas risk assessment models and how the desktop ArcGIS software application can be used to apply risk assessment data for evaluating mitigation and prevention options. Future training sessions are planned for this summer and fall 2010. TXFRAS is the desktop complement to the TX WRAP web portal.

Florida Division of Forestry

State Hazard Mitigation Plan Update – Wildfire Annex
November 2009 – September 2010

Working with planning partner Continental Shelf Associates (Stuart, FL), DTS is the technical lead in providing county based analysis as part of the 2010 Wildfire Annex Update to the Florida State Hazard Mitigation Plan. DTS is integrating county parcel and assessor data for all counties in Florida, with the latest Florida wildfire risk assessment information, to derive population-at-risk and structures-at-risk summaries. This analysis provides county level summaries to support the FEMA approved Hazard Mitigation Plan update process. Mitigation planners will use this information to propose recommendations for mitigation project priorities across the state. This project reflects the first time that detailed assessor data has been integrated with wildfire risk information to support hazard mitigation planning.



Highlands County, Florida

www.highlandswildfire.com

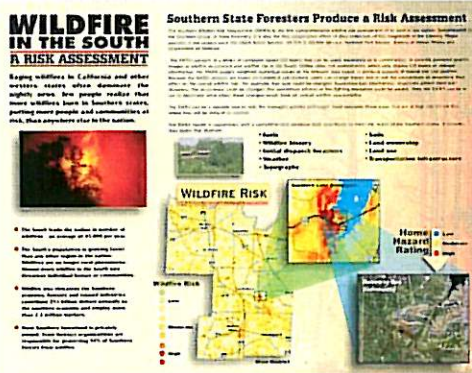
County Wildfire Risk Assessment Update & CWPP Development
June 2009 – June 2010

Working with CSA (Stuart, FL) and other industry partners, DTS provided the technical resources to conduct a wildfire risk assessment update for Highland County, FL. This update was part of a county wide effort to develop a comprehensive Community Wildfire Protection Plan. The project included working with local fuels experts to update the most recent surface fuels datasets, and derive an updated risk assessment using the new fuels data. The updated risk assessment results were then used to quantify the wildfire risk to 300+ subdivisions in the county to support mitigation and prevention activity planning. Fuel treatment simulations were then conducted as part of the CWPP education process, to evaluate the potential impact of the treatments on reducing the risk to high risk areas. The results of the project are being used to support public education sessions as part of the collaboration and feedback process.

Southern Group of State Forests

www.southernwildfirerisk.com

Southern Wildfire Risk Assessment Support & Maintenance Program
December 2006 – On-going



The SWRA was a 13 state wildfire risk assessment completed in 2006 for the Southern Group of State Foresters (SGSF). Since project completion, DTS staff have managed the annual support and maintenance program that includes frequent updates to the Southern Fire Risk Assessment System software, help desk support, and project support. DTS staff work with the Project Steering Committee to help coordinate project updates and provide technical guidance to define priorities in support of SGSF initiatives. Staff from the Sanborn Map Company (Portland, OR), provide technical support working under DTS leadership.

Tahoe Basin Integrated Info Management System Web Site

December 2007 – June 2008



TIIMS represents a collaboration of local Tahoe Basin federal, state and local government agencies, stakeholders and the public in both California and Nevada. This multi-agency consortium has established an Internet based information framework for integrated resource planning and information sharing. DTS provides services for development of the web site framework and specific geo-web mapping applications to aid local planners in sharing Lake Tahoe project information and data. Examples include the tracking of prescribed burning projects (fuel treatments) in the basin area.

The project involved the design and development of a content management system web framework that could be managed by the TIIMS staff, in addition to

custom web mapping tools. TIIMS is the central portal for collaboration, public outreach and sharing of information about resource management activities in the basin.

Tahoe Basin Defensible Space Enforcement Program

May 2010 – July 2010

As an enhancement to the TIIMS framework, DTS is developing a web application to allow local agency staff in tracking the enforcement of wildfire defensible space planning by homeowners in the various fire protection districts across the region. This web application supports staff in multiple agencies, with different reporting protocols, by providing a single interface for recording survey information into a centralized basin wide database. This program is another in the long line of collaborative efforts by the Lake Tahoe basin government agencies for wildfire prevention and mitigation planning.

For more information about the DTS suite of fire protection planning solutions contact David Buckley at dbuckley@dtsgis.com or at 905.727.8352.