**Forest Health in the SRW and SRWP?**

General health of watershed and role in forest health.. you are frequently asked to improve organizational capacity, write grants, support collaboration, project management,

**The Sacramento River Watershed Data Program and Forest Health Initiative**

SRWP Forest Health Initiative Introduction

**Data Program Background**

In collaboration with 34 North, the Sacramento River Watershed Data Program project began in 2015 as an effort to aggregate (big picture) Sacramento River Watershed data and make it accessible and usable for all stakeholders. The SRWDP program currently supports more than 300 datasets and spans various disciplines including species, water quality, hydrodynamics, fire and forest health, land use, vegetation, SRW projects, fisheries and more. (see Appendix C for complete data list). Data collected to date has been digitized, cataloged, spatially enabled and used to make workgroup workspaces as well as data/map stories about general watershed and forest conditions. More importantly, the project has aggregated sufficient data for collaboratives and large scale project participants to easily view baseline conditions in most areas. (ex: Battle Creek: <http://data.sacriver.org/projects/5162)>. These efforts and others are underway in various SRW sub-regions and continue to gain momentum.



**Decision Support and Management Tools for FSC and CWPP Framework (Strategic Plans)**

Forest management challenges are many.

The SRWP long term participation in fire and forest health initiatives throughout the region has demonstrated (revealed) a major need for additional organizational capacity and decision support for the planning, implementation, monitoring and reporting of local Community Wildfire Protect Plans. While current SRWP data platform allows for basic data search, analysis and presentation, our involvement with grassroots organizations at the local level tells us that these organizations need additional support for:

1. Collaboration
2. Local Level Baseline Data and Understanding (CWPP and Corresponding Areas)
3. Validate and prioritize assets at risk
4. Engagement of local stakeholder groups
5. Education and Outreach landowners, residents, businesses (regulations, prevention, preplanning)
6. Capacity Building and Grant Access

\*See comprehensive data list in appendix B

* Project Data: (Active, Completed, Maintained, Ongoing, Planned: Site Level, County, Region, Watershed Views)
* Unit Goals and Objectives
* CEQA/NEPA
* Priority Areas and Risk Assessments
* Ignition Analysis and Management Plans
* Project Planning and Permitting
* Develop Shovel Ready Projects
* Web based version of multifaceted plan: fuel reduction, prescribed burning, defensible space inspections fire resistant standard enforcement, land use planning etc.
* Maps and Visuals
* Monitoring and Reporting
* Outreach
* Educate landowners, residents and business owners about the risks and their incumbent responsibilities of living in the wildlands, including applicable regulations, prevention measure and preplanning activities.

**Project Baseline- A Background**

**Building a Baseline for Forest Health Analysis and Orientation**

Forest management is complicated at best.

Insert background for Butte

http://data.sacriver.org/maps/5800

34 North and SRWP are proposing to expand on the SRWDP data platform to develop a a Forest Health Restoration Planning Tool (Planning Tool) to support the prioritization, implementation and monitoring of forest health projects in nine planning areas (3 funded): Paradise Ridge, Forest Ranch, and Forbestown Ridge.

The Planning Tool will be built upon the existing efforts of the Sacramento River Watershed Data Portal (SRW Data Portal). The SRW Data Portal was developed to improve watershed health by providing accurate, timely and graphic information about the Sacramento River Watershed. It currently serves as a critical information hub connecting the region’s stakeholders to data, funding, projects and each other. The Portal is flexible, powerful and comprehensive, with extensive data and information catalogs, project tracking and reporting dashboards, public facing collaboration tools, and advanced geospatial capabilities. The Planning Tool will utilize the underlying functionality of the SRW Data Portal to develop a set of additional tools, dashboards and catalogs that will support cooperative landscape-level planning efforts within the Butte County planning areas.

web-based platform to gather information and input beyond stakeholder meetings.

The foundational component of the Planning Tool is a comprehensive data and information catalog that will increase organization capacity by eliminating the need to compile data from numerous external sources. The Planning Tool provides access to real time hydrologic and environmental datasets and visualizations, a GIS library with detailed shapefiles and rasters that have undergone various geoprocessing tasks prior to being added to the site, and an extensive document catalog. With the Planning Tool, datasets can be spatially displayed and modeled for changes over time and users can implement layer functions such as clipping, drawing buffers, selecting features. There is an extensive amount of GIS data, databases and sensor data necessary for this type of interactive plan. Much of the GIS data needed to form management decisions on a landscape scale will be geoprocessed (mathematical calculations performed on data) prior to web publication. Layers will need to be combined into objective function weighted rasters to identify priority areas. Geoprocessing tasks include creating weighted rasters from a combination of environmental data layers such as vegetation, fire history, fuel loads. The initial list of GIS layers will include:

* Planning Unit boundaries
* Battalion boundaries
* watershed boundaries
* land ownership
* parcel boundaries
* vegetation types
* fire history
* critical habitats
* fuel loads
* resource locations
* asset locations
* access and yarding capability
* no treatment zones
* board-feet equivalents of forest stands
* canopy cover
* meadows
* riparian zones
* tree mortality
* infrastructure (roads, water sources, power)
* LANDFIRE layers
* historic response to wildfire in an area

The initial list of documents for the catalog will include:

* a list of projects (completed, current, planned)
* CEQA/NEPA project areas and details
* forest management plans
* Watershed Assessments
* Federal Land Policy and Management Act
* USFS Ecological Restoration Implementation Plan
* USFS Land and Resource Management Plans
* USFS Travel Management Plans
* Watershed Condition Framework
* Regional Coordinated Resource Management Group Strategic Planning Documents (Ex: Feather River Coordinated Resource Management Group)
* BLM Resource Management Plans, General Plans (County and City)
* CEQA – EIR,
* NEPA – EIS
* CDFW Wildlife Management Plans
* Integrated Regional Water Management Plans
* Fire Safe Council Firewise Assessments and Management Plans
* Resource Conservation District Management Plans
* CA Natural Resources Agency Stewardship Council Land Conservation and Conveyance Plans
* CalFire Forests and Rangelands Assessments

A critical and often time-consuming component of landscape-level planning is the collection of stakeholder input. Restoration managers rely on this input to inform project priorities and design restoration activities. The Planning Tool aims to simplify this process by providing a suite of comment feeds and survey tools to efficiently gather stakeholder feedback on planning documents and proposals. The Planning Tool will include interactive and intuitive map tools that allows users to draw on maps to mark priority areas, make corrections, and leave comments. While these tools will not entirely replace the need for in person stakeholder interaction, they will simplify the process, increase efficiency, and create an ongoing

The Tool will further support project development and permitting by providing a CEQA Assist workspace. This workspace will host all GIS and environmental data necessary for filing a Negative Declaration or Mitigated Negative Declaration (e.g. USFWS critical habitat, CDFW special status species critical habitat, protected wetlands, FMMP important farmland, FEMA 100 year flooding, CalFish anadromous fish habitat, etc.). This aggregation of data will simplify the CEQA process, allowing restoration project managers to increase organizational capacity. The Tool will support compliance with the Butte County Oak Woodland Mitigation Ordinance, by providing high resolution oak woodland vegetation layers and accurate canopy cover estimates using remotely sensed imagery. Each restoration project manager will be able to create their own project tracking workspace. This workspace will serve as a repository for relevant planning and environmental assessment documents, host interactive maps with project specific GIS layers, and provide a public outreach page with information on project status and success. The Planning Tool is built on the flexible and highly adaptable OPENNRM framework, which allows for customizable data dashboards and project workspaces. As the Planning Tool is further developed, specialized dashboards and tools will be developed to address specific landscape-level planning needs. The flexibility of the SRW Data Portal ensures that the Planning Tool can be regularly adapted to improve its usefulness and meet the demands of the users.

Butte CWPP Data Package Web Service for SNC WIN (WFS)

* LLPF Planning Areas
* LLPF Planning Units
* LLPF Project Locations
* Fuel Reduction Programs
  + Mechanical Treatment Areas
  + Hand Treatment Areas
* Prescribed Burns
* Shaded Fuel Breaks
* Wildland Urban Interface Zones
* Evacuation Routes
* High Risk Communities
* Sensitive Parcels
* Local and County Fire Stations
* Fire Lookouts
* Historical Fire Boundaries
* Federal/State/Local Responsibility Area Boundaries
* Large Landowner Parcel Boundaries (i.e. PG&E, SPI, Soper, etc.)
* Transmission Lines
* Natural Gas Pipelines
* Forest Stand Conditions
* Rare Plant Surveys
* Wetlands