



San Diego Section of the American Planning Association Luncheon Program Collaborative Planning: A Navy Perspective on Energy & Mission Compatibility

Tuesday, August 27, 2013, 12:00-1:30pm



American Planning Association
California Chapter
San Diego

Making Great Communities Happen



Navy Region Southwest Energy Program

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Strategic Objectives & Policy



Navy's Five Major Energy Goals

Reduce Energy Consumption & Intensity

By 2020, USN will reduce energy consumption & intensity by 50% from a 2003 baseline.

Power from Renewable Sources

By 2020, 50% of total ashore energy will come from renewable sources.

Net-zero installations

By 2020, 50% of installations will be net-zero consumers.

Reduce Non-Tactical Petroleum Use

By 2015, reduce petroleum used in commercial vehicle fleet by 50% from a 2009 baseline.

Increase Energy Security

Provide reliable, resilient and redundant power to increase the energy security of mission critical assets.

Policy, guidance and directives shape the Navy's Energy Strategy



Renewable Energy





Region Southwest

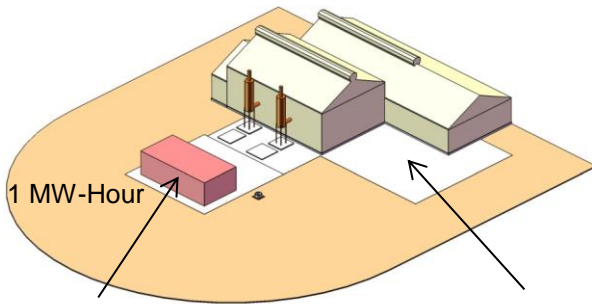




Integrated Renewable Energy Storage System



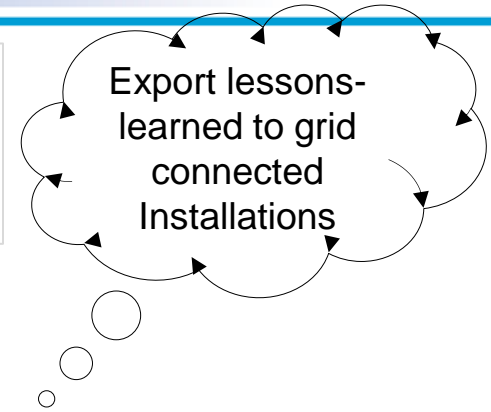
Existing Electric Power Plant



Zinc-Bromine (ZnBr) Battery Enclosure

Wind Turbine Switchgear Pad

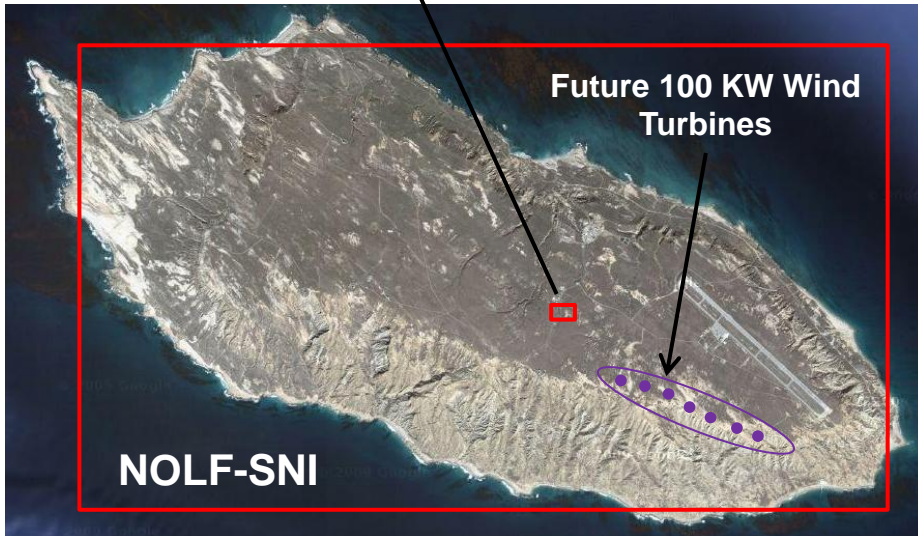
- Energy security
- Reduced liquid fuel consumption
- Operational reliability
- Reduced emissions



Advanced Micro-grid

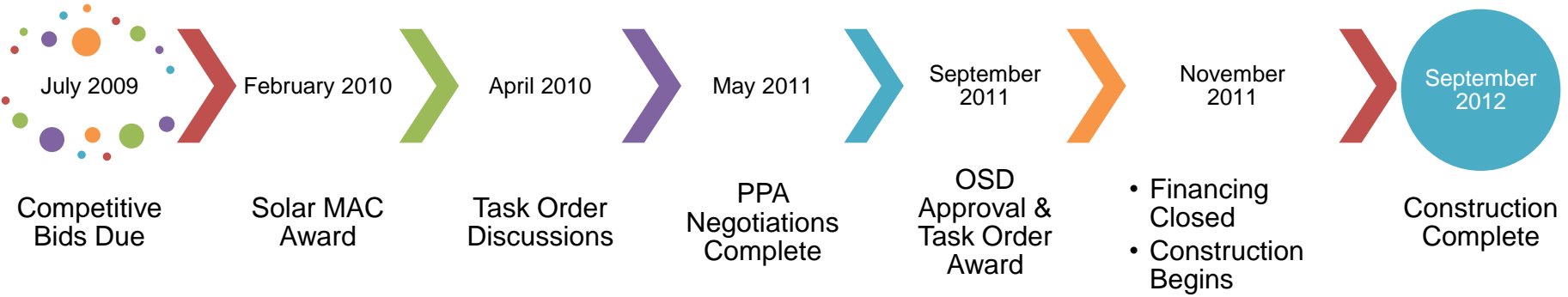
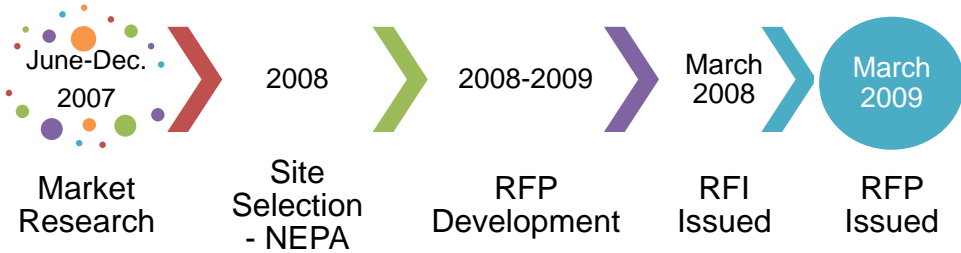


Existing Micro-grid



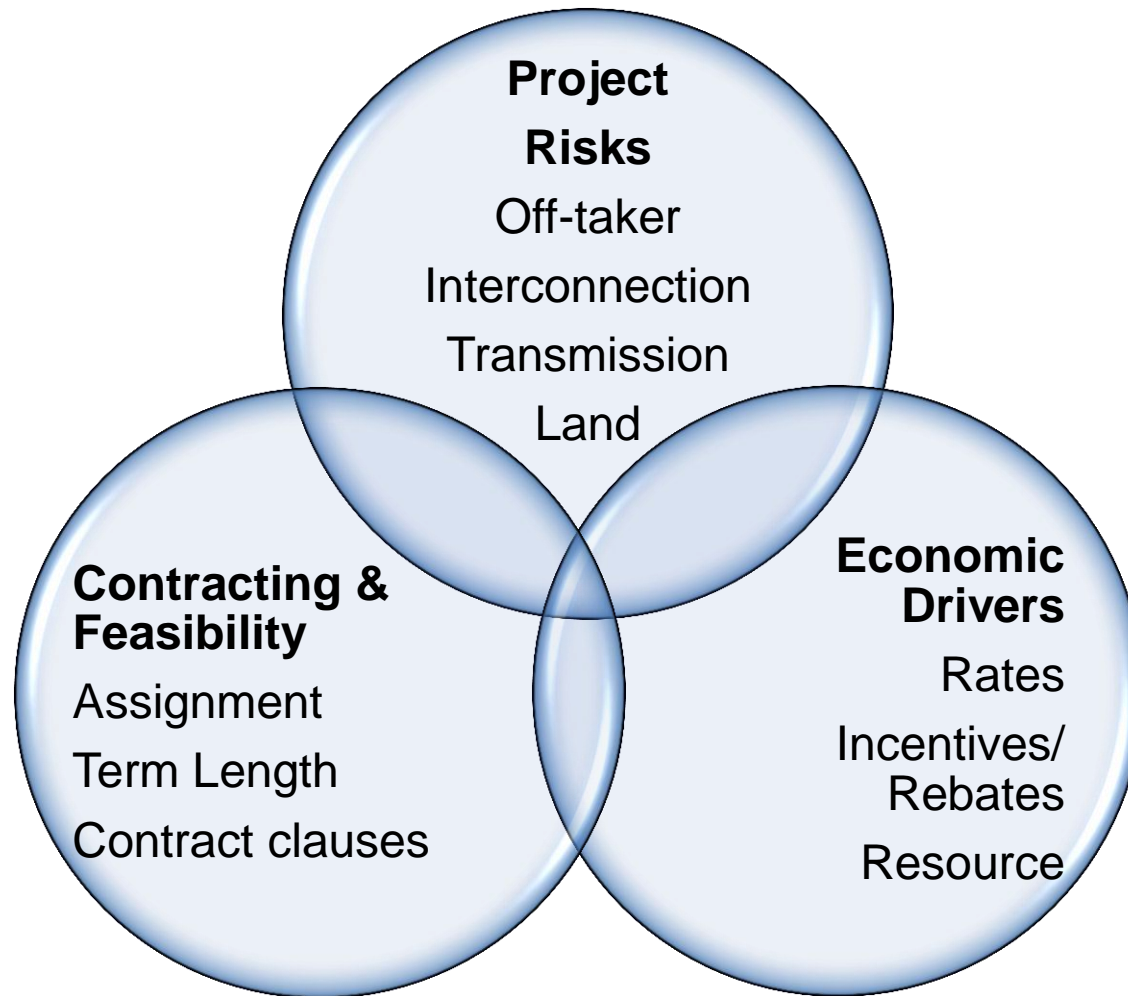


Power Purchase Agreement Execution



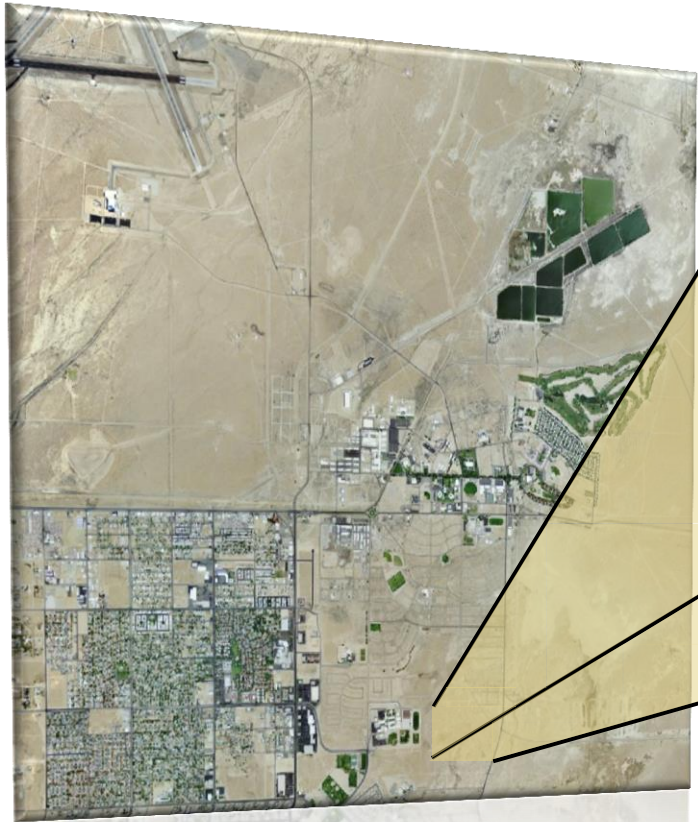


What Drives Renewable Energy Project Viability





NAWS China Lake Solar PPA



29,000 MWh Annually

- 30% annual requirement
- 50-70% summer day peak
- 70-90%+ winter day peak
- 20 Year PPA (First in Federal Gov't)
- Fixed Price PPA Below Utility Rate
- Buy-American Compliant Modules
- High Efficiency Modules maximized land use
- Panels installed on ~118 acres

Term: 20 years (10 USC 2922(a))
Technology: Single Axis Tracking Solar Array
Capacity: 13.78 MW



***Navy Region Southwest
Naval Air Facility El Centro Alternative Energy Development***

**David Hulse
Community Plans and Liaison Officer**



Planning Considerations



Site Clearance Constraints

Electromagnetic Interference

Projects that produce electromagnetic signals may interfere with installation communications, ordnance safety, and radar.

**Present Value/
Useful Life**

Facilities past their useful life may not be appropriate locations for significant capital investment.

Anti-terrorism Force Protection

Constraints include setback, line of site (i.e., Air Traffic Control), proximity to fence line.

Backup Power Source or Redundancy

Methods available to supply power during emergency (grid, generators, storage systems).

**Energy Demand/
Source/Storage**

Steps to determine project feasibility to ensure reliable, resilient and redundant power to increase the energy security of mission critical assets.



Alternative Energy Project Types

Naval Air Facility El Centro



- **Photovoltaic Electrical Dual Use**
- **Photovoltaic Lighting**
- **Photovoltaic Roof Panels**
- **Solar Hot Water Heating**





Alternative Energy Projects Naval Air Facility El Centro



Solar Powered Streetlights



Carport Photovoltaic System



Alternative Energy Projects Naval Air Facility El Centro



Swimming Pool Solar Thermal



Roof Mounted Photovoltaic System



Alternative Energy Projects Naval Air Facility El Centro



Future Photovoltaic Project Site



Navy Region Southwest Encroachment Management Program

**Kimberly Peacher
Intergovernmental Planner**



Encroachment Management Overview



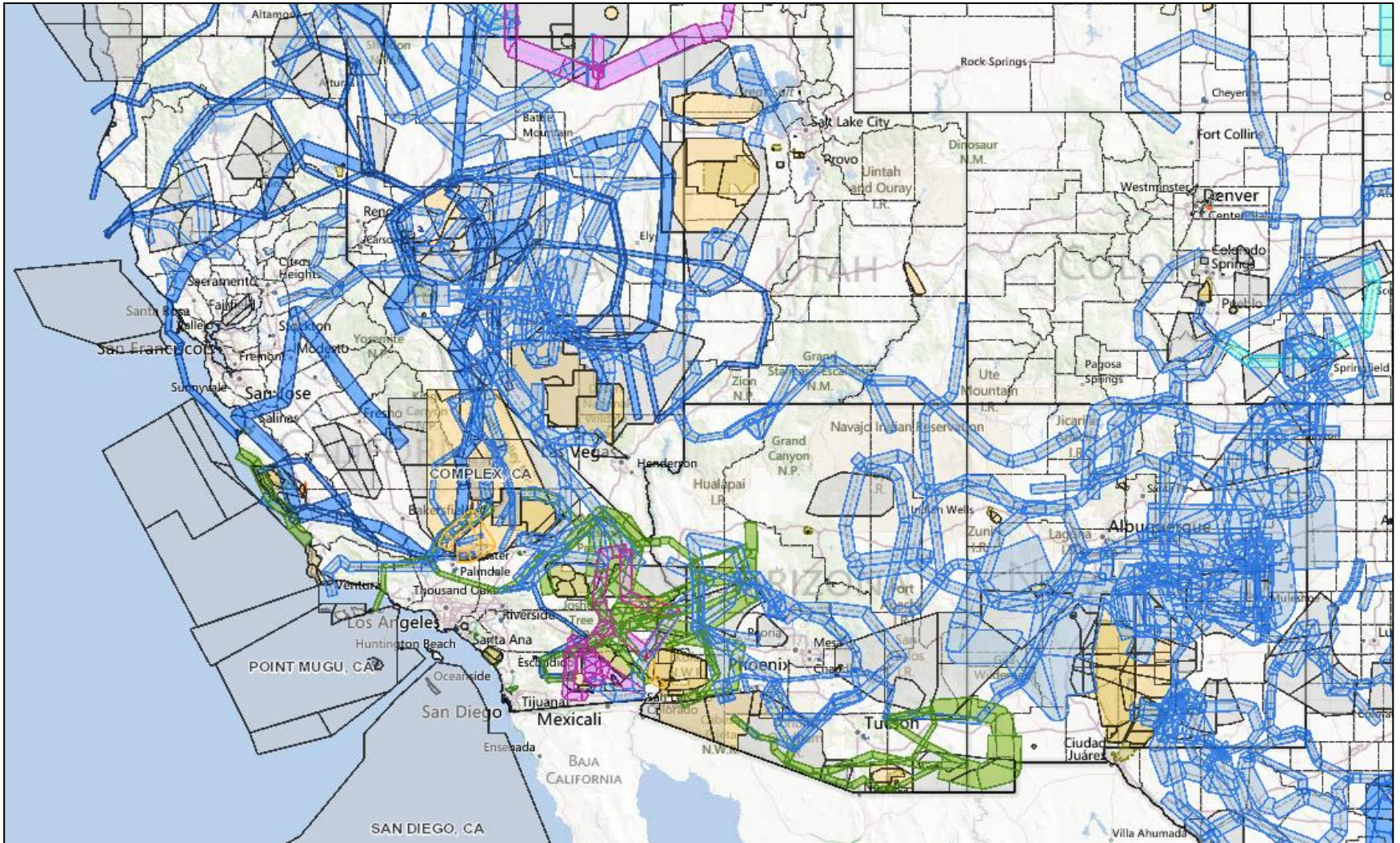
The Navy Region Southwest (NRSW) objective is to protect DoD Military Operating Areas (MOAs) from incompatible land uses through engagement with:

- Private landowners,
- Local land use jurisdictions, and
- All other major land owners including the USFS and BLM

through the implementation of plans and ordinances that disclose the MOAs to the public and establishes a project notification and DoD engagement procedure to limit potential encroachment proximate to installations and under military airspace.



NRSW





Analysis and Notification Required



California Government Code section 65302 (a)(2), states the land use element of the General Plan:

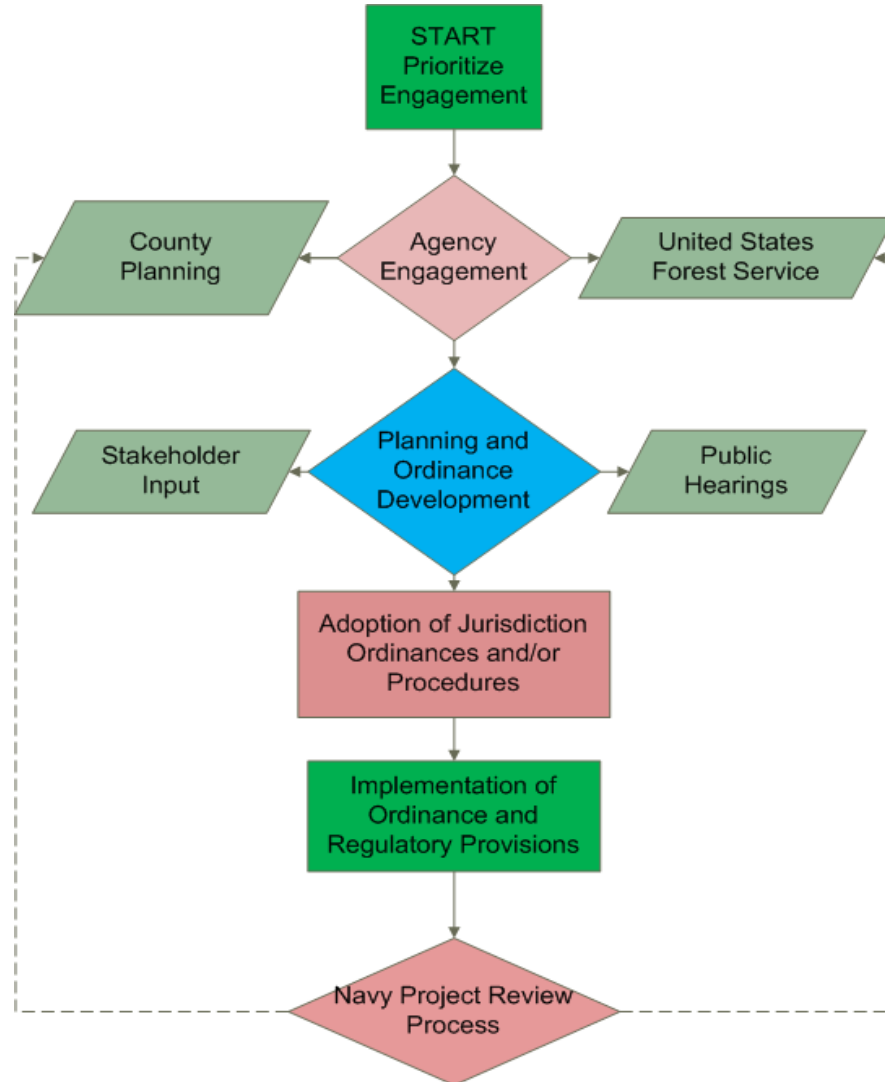
"shall consider the impact of new growth on military readiness activities carried out on military bases, installations, and operation and training areas, when proposing zoning ordinances or designating land uses covered by the general plan for land, or other territory adjacent to military facilities, or underlying designated military aviation routes and airspace."

To ensure early notification to the military of proposed discretionary development projects within Military Operating Areas, California Government Code Sections 65352 (a)(5) and (6)(A), 65940, and 65944 require the exchange of project related information pertinent to military operations :

"when the proposed action is within 1,000 feet of a military installation, or lies within special use airspace, or beneath a low-level flight path..."



Encroachment Management Engagement Process





Update on Engagement



- There are 58 counties in California with 28 containing Navy air operations. There are approximately 72 counties in the NRSW.
- To date NRSW has engaged 22 of the 28 local jurisdictions with Navy air operations in California and Region 5 Forest and 7 associated Forests.
- Currently engaging the State of NV, NV counties, and US Forests and counties in Utah, and the remaining CA US Forests



Example: Through a collaborative partnership, the General Plan revisions provided to Plumas County includes a notification process for all upcoming major industrial and commercial projects, as well as renewable energy projects that would be located in our MOAs.



Thank you!



Upcoming Events

October 6-9:

California APA Conference in Visalia, CA

November 1:

Corridor Planning Workshop

More information on upcoming events at:
<http://sdapa.org>