

MCBCP Coastal Sage/Chaparral Monitoring Protocol



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Completed Plans:

- ❖ Riparian. Purpose: Recovery post large scale arundo tamarisk treatment
- ❖ Dunes. Purpose: Dune Plant species diversity post invasive plant treatment
- ❖ Grasslands. Purpose: Document Invasive plant dominance
- ❖ Oak-woodlands. Purpose: Diversity age classes and beetle monitoring
- ❖ Wetlands. Purpose: No net loss size function and values (CRAM and National Classification and mapping)

Developing Monitoring Plans

- ❖ Vernal Pools. Purpose: No net loss size function and values (CRAM and National Classification and mapping)
- ❖ Shrublands. Purpose: Ecosystem Integrity with increased wildfire frequency

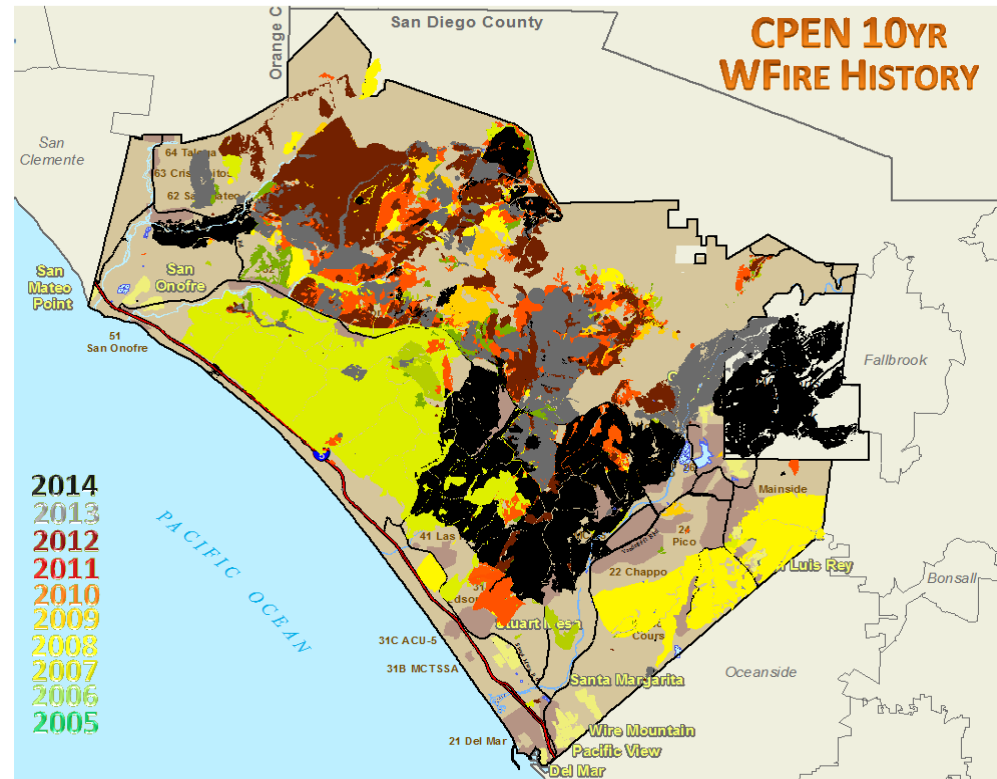
MCB CAMP PENDLETON 10 YEAR WILDLAND FIRE HISTORY

DATA BREAKDOWN

* WFire Management Support Increase

Year	Fires	Acres
2005	61	16,357
2006	30	8,068
2007	57	21,926
2008	30	13,653
*2009	85	12,879
2010	126	10,771
2011	214	14,582
2012	145	15,564
2013	189	11,222
2014	125	24,114
10yr Ave	106	14,914
*5yr Ave	160	15,251

FIRE MAP



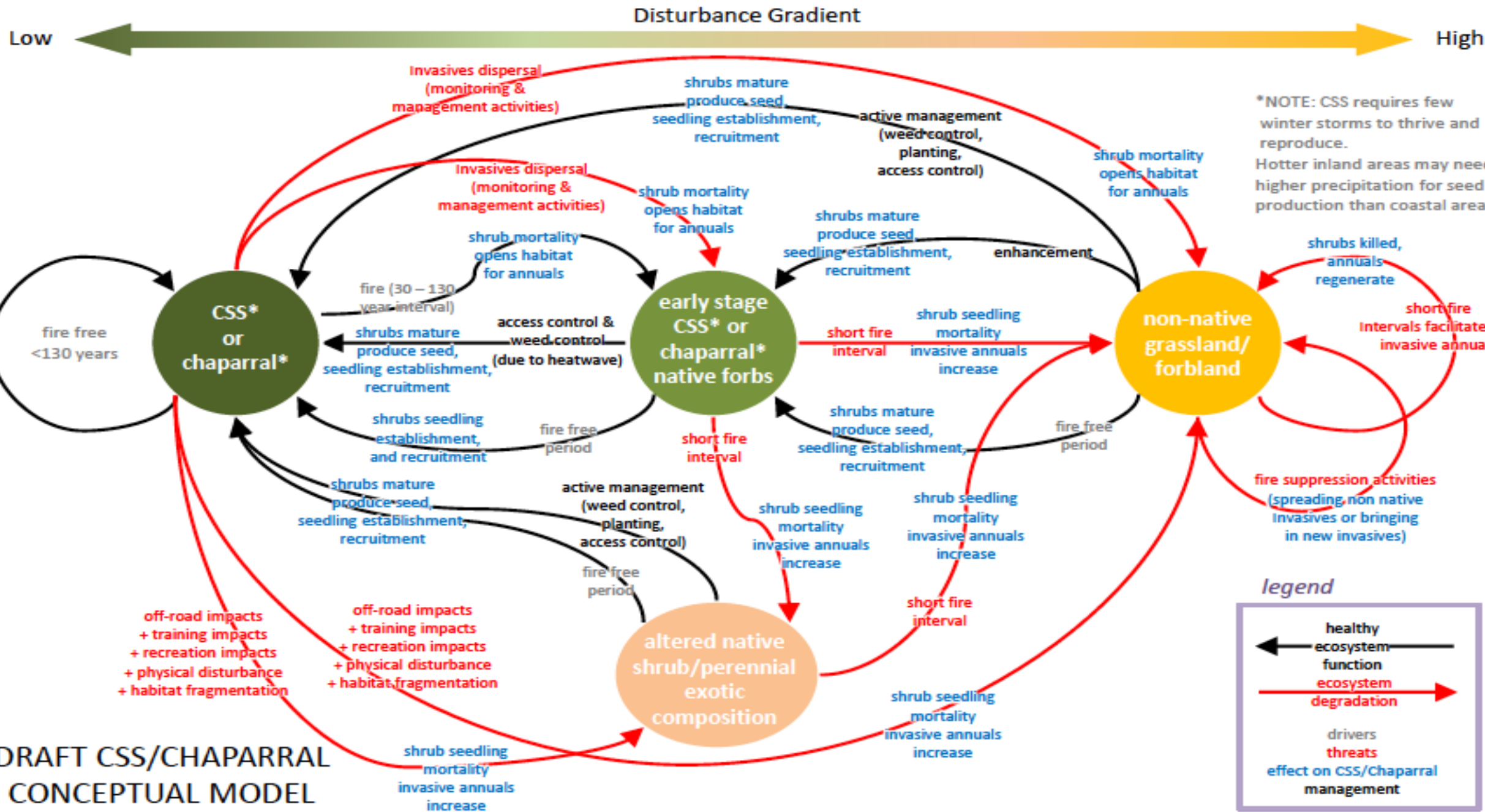
Goals

- ❖ Determine if shrublands (CSS and Chaparral) are degraded.
- ❖ Document if increased wildfire frequency is type converting shrublands to a disturbed state.
- ❖ Regionalized Protocol works across boundaries
- ❖ Simplified color coded reporting apparatus

Our primary concern is fire driven type-
conversion



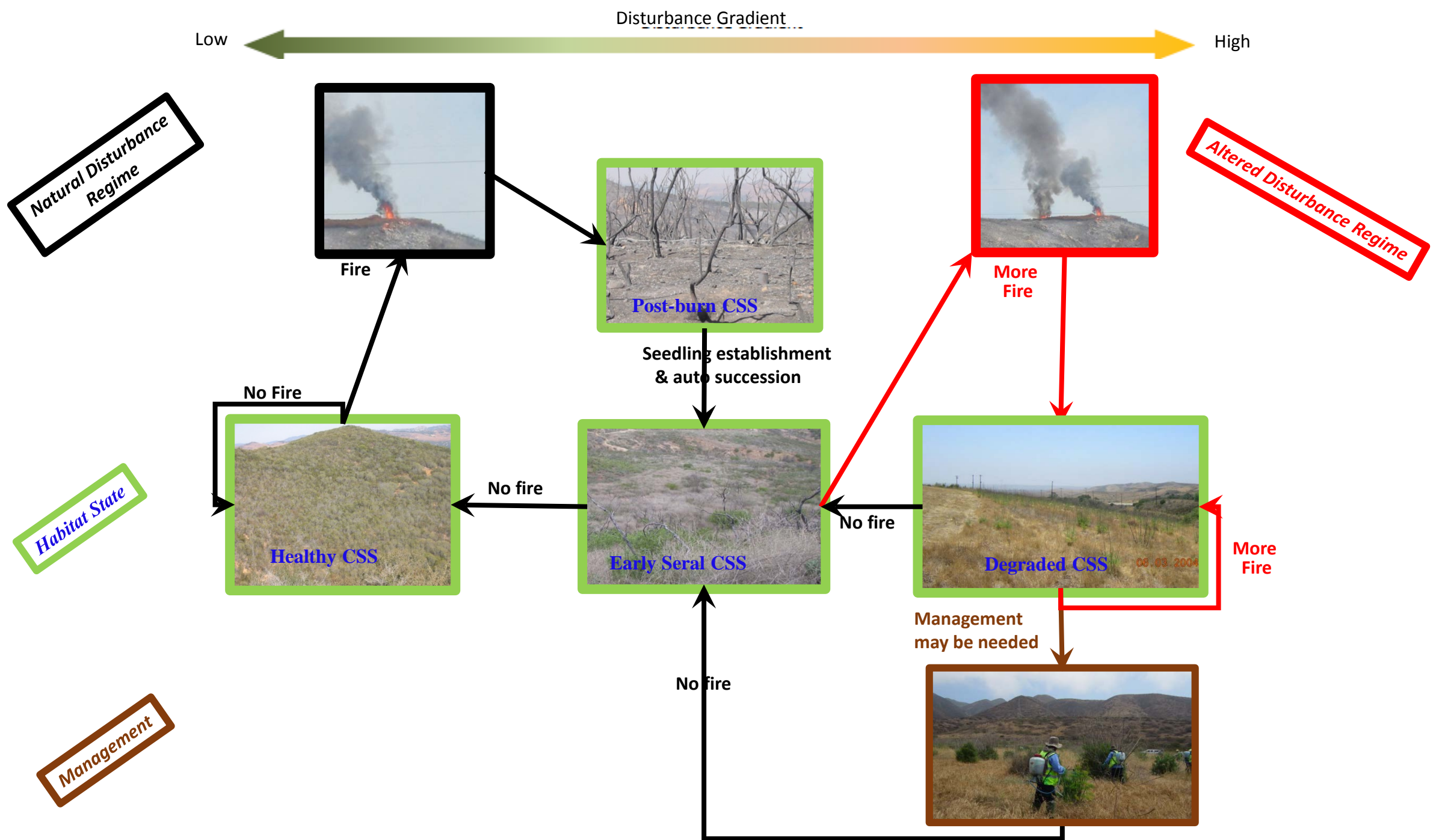
Detailed Conceptual Model



*NOTE: CSS requires few winter storms to thrive and reproduce. Hotter inland areas may need higher precipitation for seed production than coastal areas.

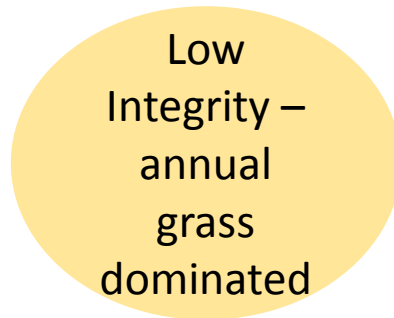
DRAFT CSS/CHAPARRAL CONCEPTUAL MODEL

Simple Model

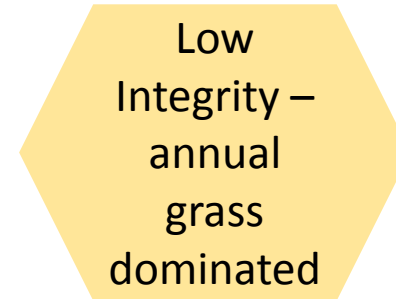


Working Model

Coastal Sage Scrub

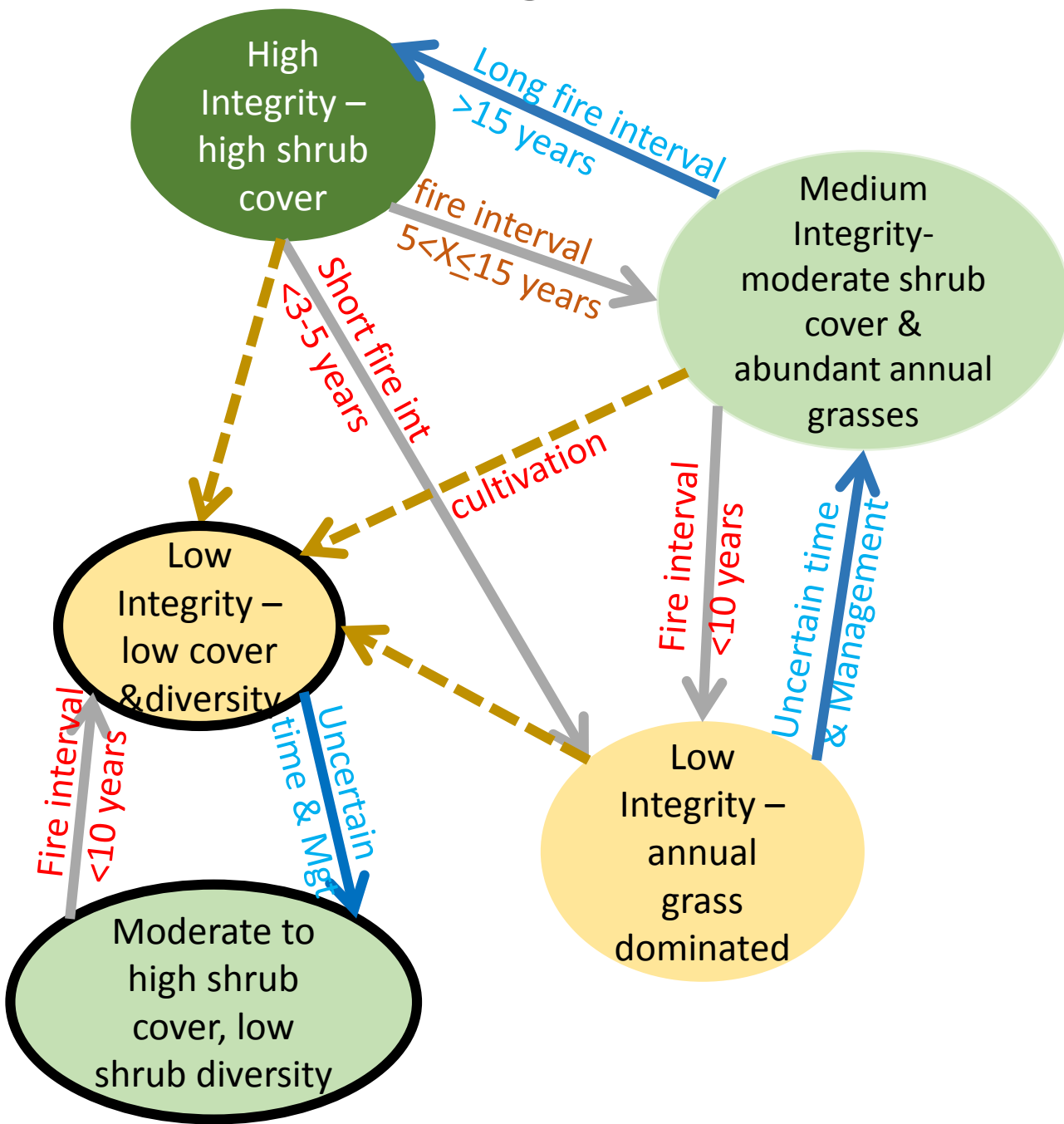


Chaparral

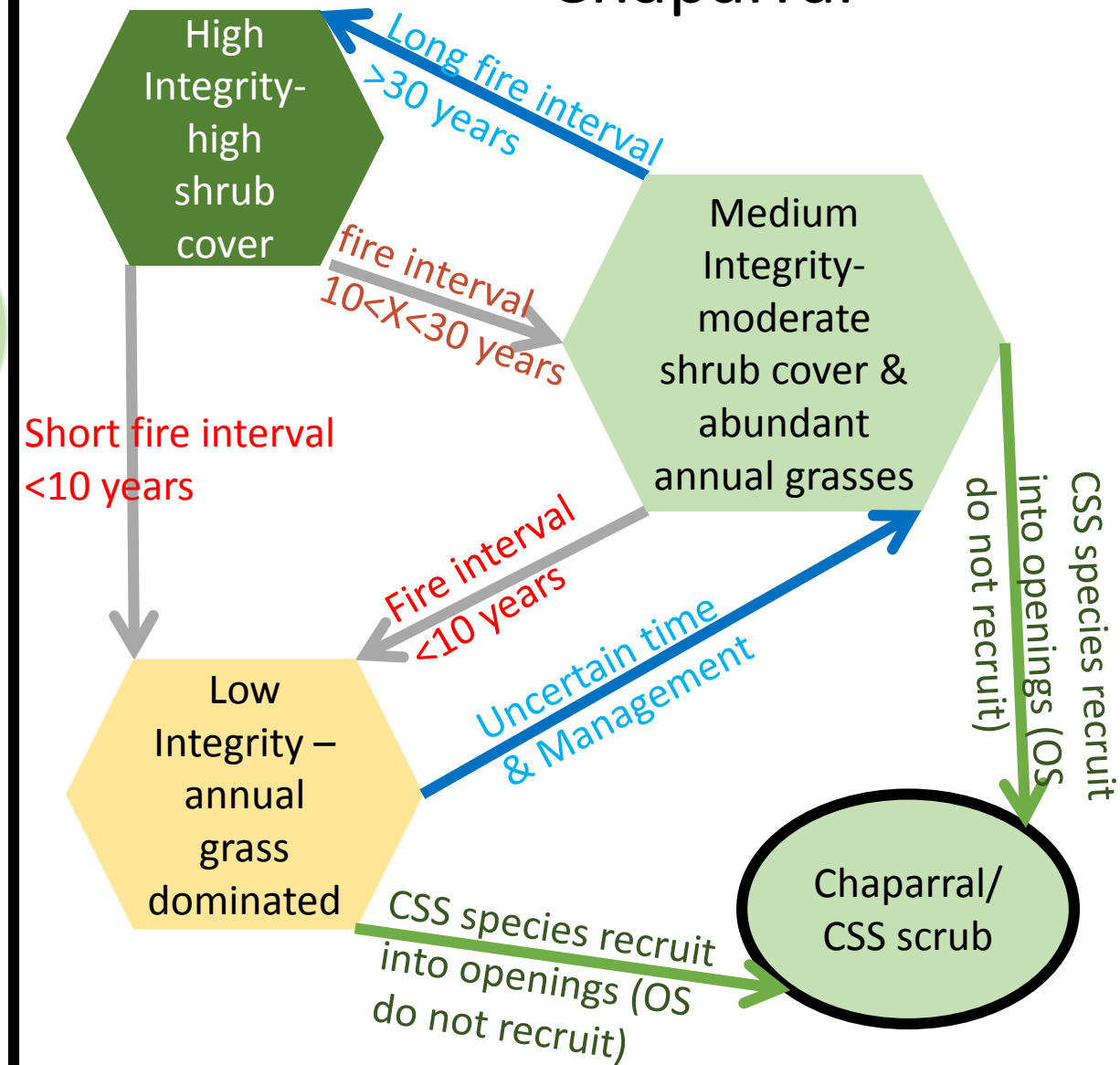


Thresholds between integrity classes defined by shrub and annual grass cover and for stands recovering from fire – shrub density

Coastal Sage Scrub



Chaparral



Protocol Elements

- Uses **community integrity** defined by the degree of non-native grasses, **to define condition**.
- Based on ecosystem components (shrub and grass composition) readily understood by non-specialists.
 - 1) categorizes shrublands into three ecosystem integrity classes,
 - 2) forecasts integrity class changes caused by threats (e.g. short fire interval) and environmental conditions (e.g. annual patterns in precipitation), and
 - 3) provides a simple reporting mechanism (annual maps) that can be overlain with data on conservation status and vulnerabilities.