

FOREST FIRST:

WHAT THE SAN BERNARDINO NATIONAL FOREST,
THE CLEVELAND NATIONAL FOREST
& THE SANTA ANA WATERSHED MEAN TO US

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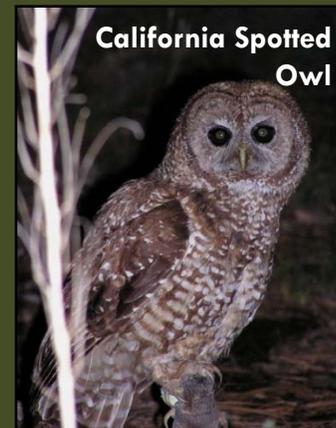
FORESTS ARE OUR PLAYGROUNDS

The San Bernardino National Forest and the Cleveland National Forest, combined provide:

- 150 miles of wilderness trails
- 36 miles of motorized trails
- 352 miles of hiking, biking and equestrian areas
- 60 miles of paved roads & highways
- Numerous lakes/rivers for boating and other water activities

Besides recreational activities, the SBNF & the CNF:

- Are home to over 440 wildlife species & thousands of plant species (over 30 of which are threatened or endangered)



But lets not forget the most valuable resource our forests provide . . .

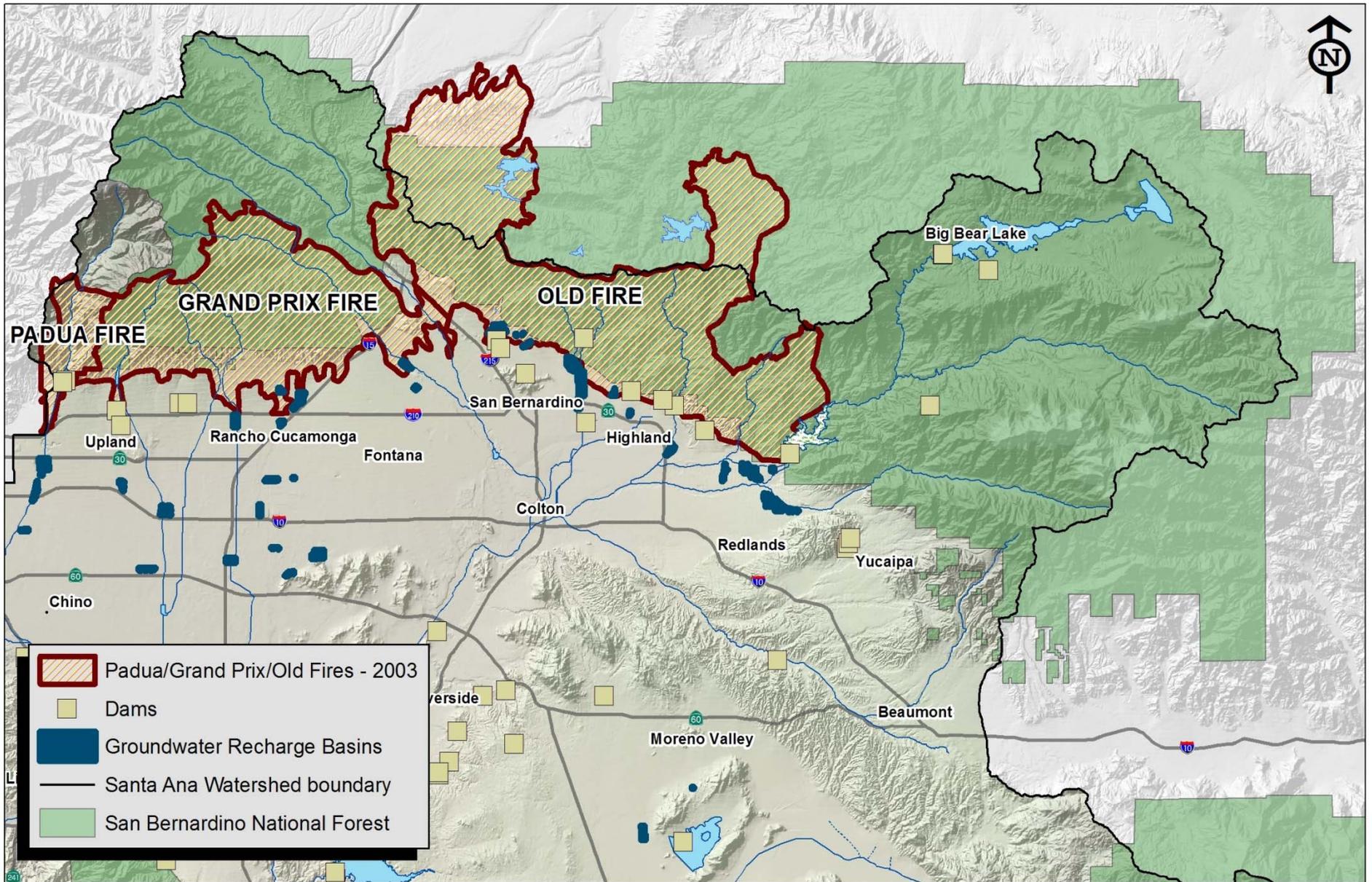
FOREST = WATER

- According to the USFS, “About 124 million Americans rely on national forests & grasslands as the primary source of clean drinking water.”
- Here in Southern California, the Santa Ana River Watershed supplies most of the drinking water for over 5 million of the watershed’s residents.
 - The Santa Ana River Watershed covers 2,840 sq miles of land, of which 847 sq miles (approx 30%) is occupied by the SBNF & the CNF.
 - 90% of the water that falls in the Santa Ana River Watershed falls in those forested areas.
- By looking at the numbers it makes it easy to understand that by managing our forests’ better, we have the potential to increase water yield now and for generations to come.



The quantity and quality of water we receive from the forest is directly correlated to how we manage the forest.





A history of bad forest management means that looking forward, in order to ensure a sufficient, high quality water supply for Santa Ana River Watershed residents, we must begin methods of precision restoration – 4 restoration strategies have been identified.

1. MEADOW RESTORATION

Meadows:

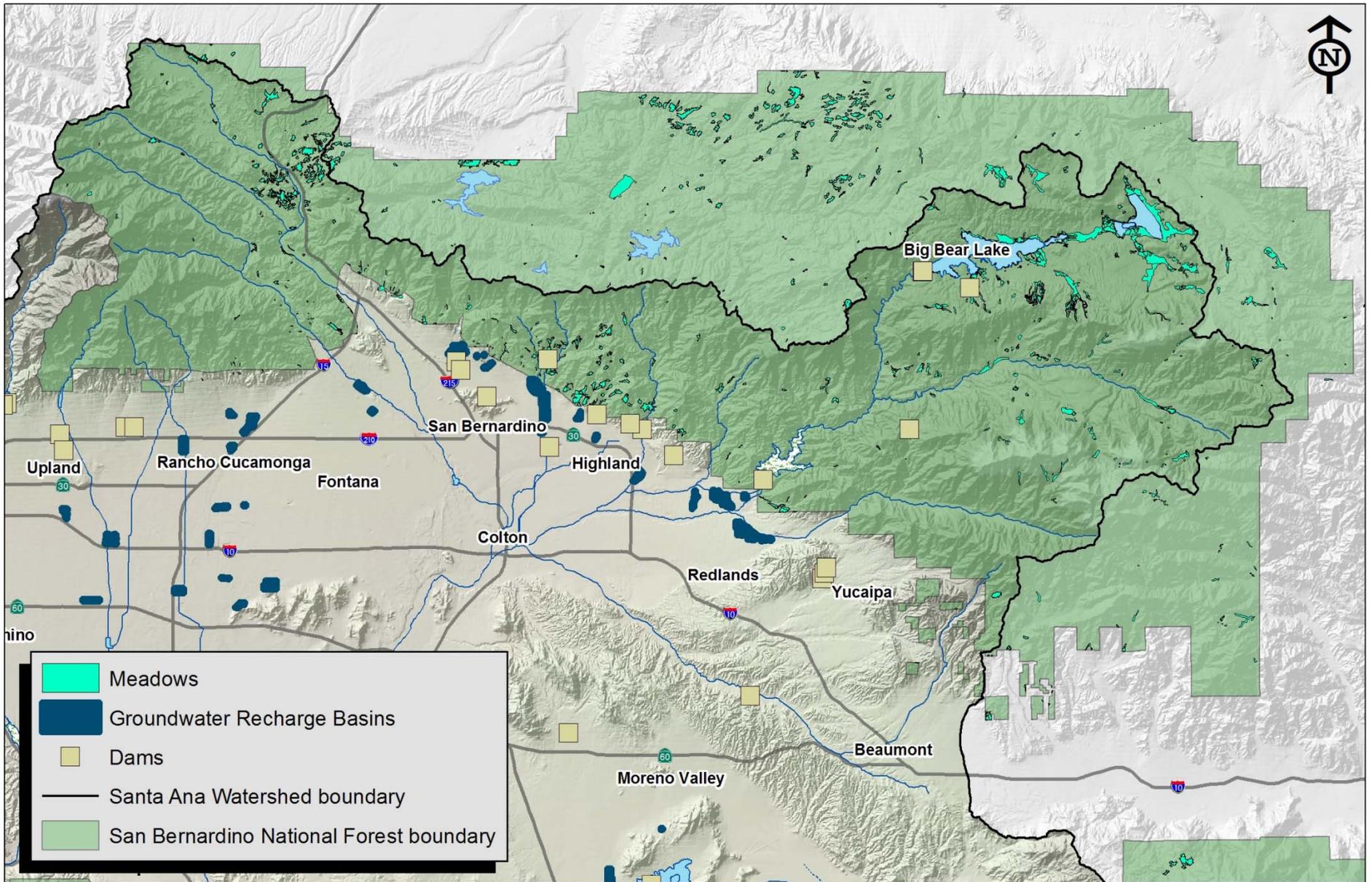
Are areas of high moisture availability in an otherwise water limited landscape

Attenuate flood flows by acting as natural water storage reservoirs which enhance floodwater retention & groundwater recharge

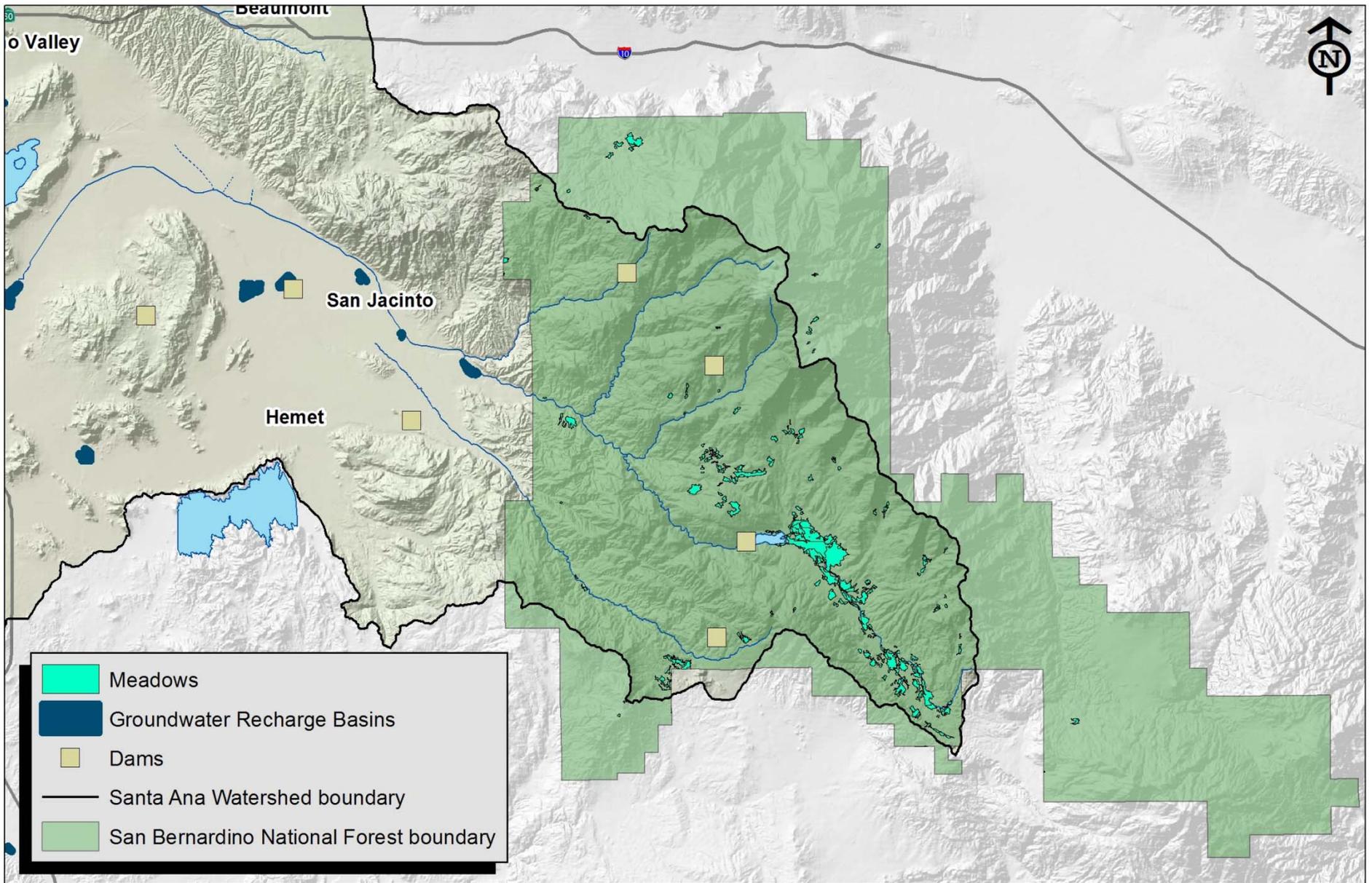
Dissipate stream energy from high flows by:

- filtering sediment
- improving water quality
- reducing erosion
- modifying destructive runoff patterns

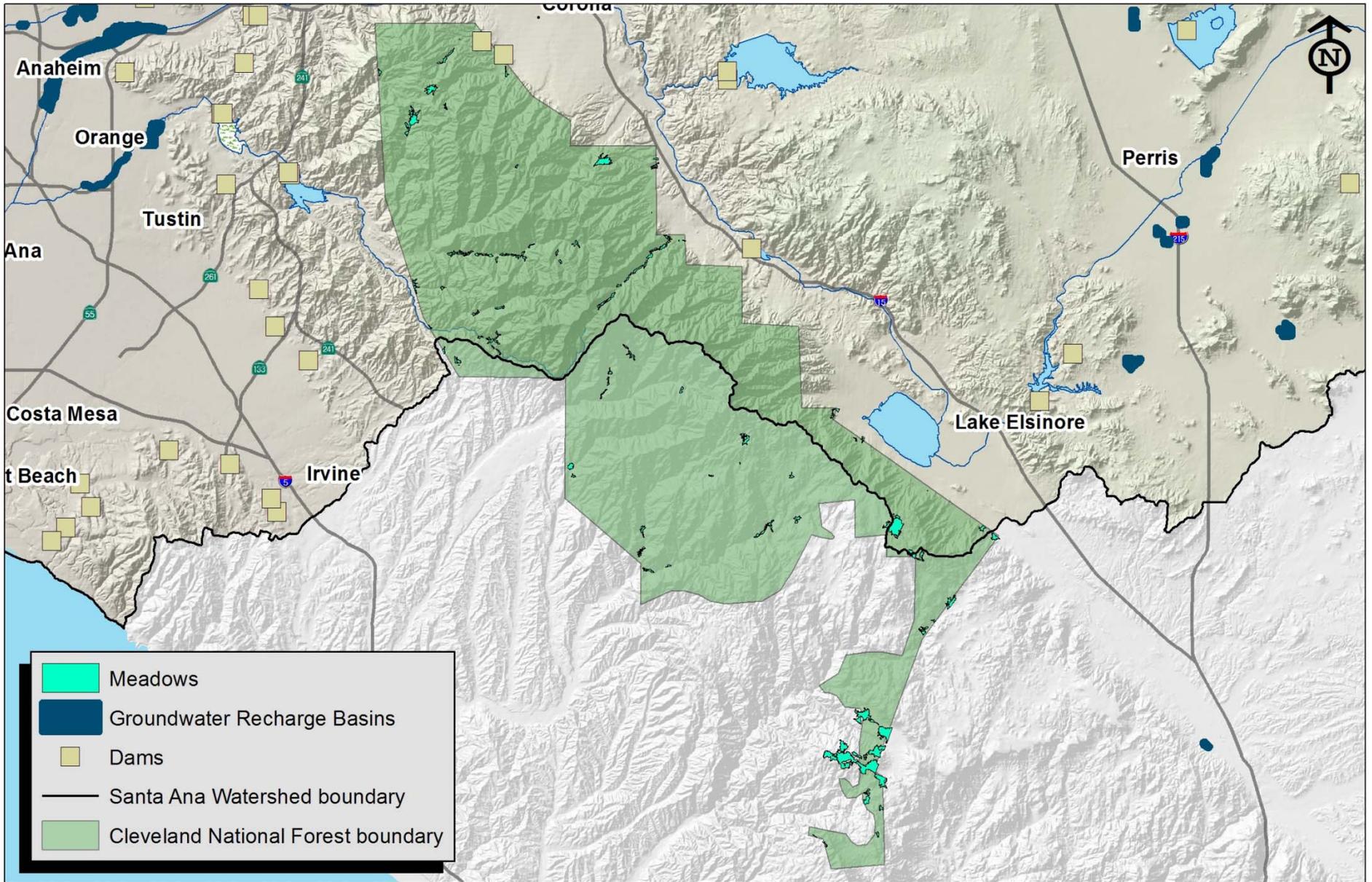




Meadows located in the San Bernardino National Forest – Northern area
 (We only know the status of 244 of the 1027 meadows located in the SBNF)



Meadows located in the San Bernardino National Forest – Eastern area



Meadows located in the Cleveland National Forest

2. CHAPARRAL TYPE CONVERSION

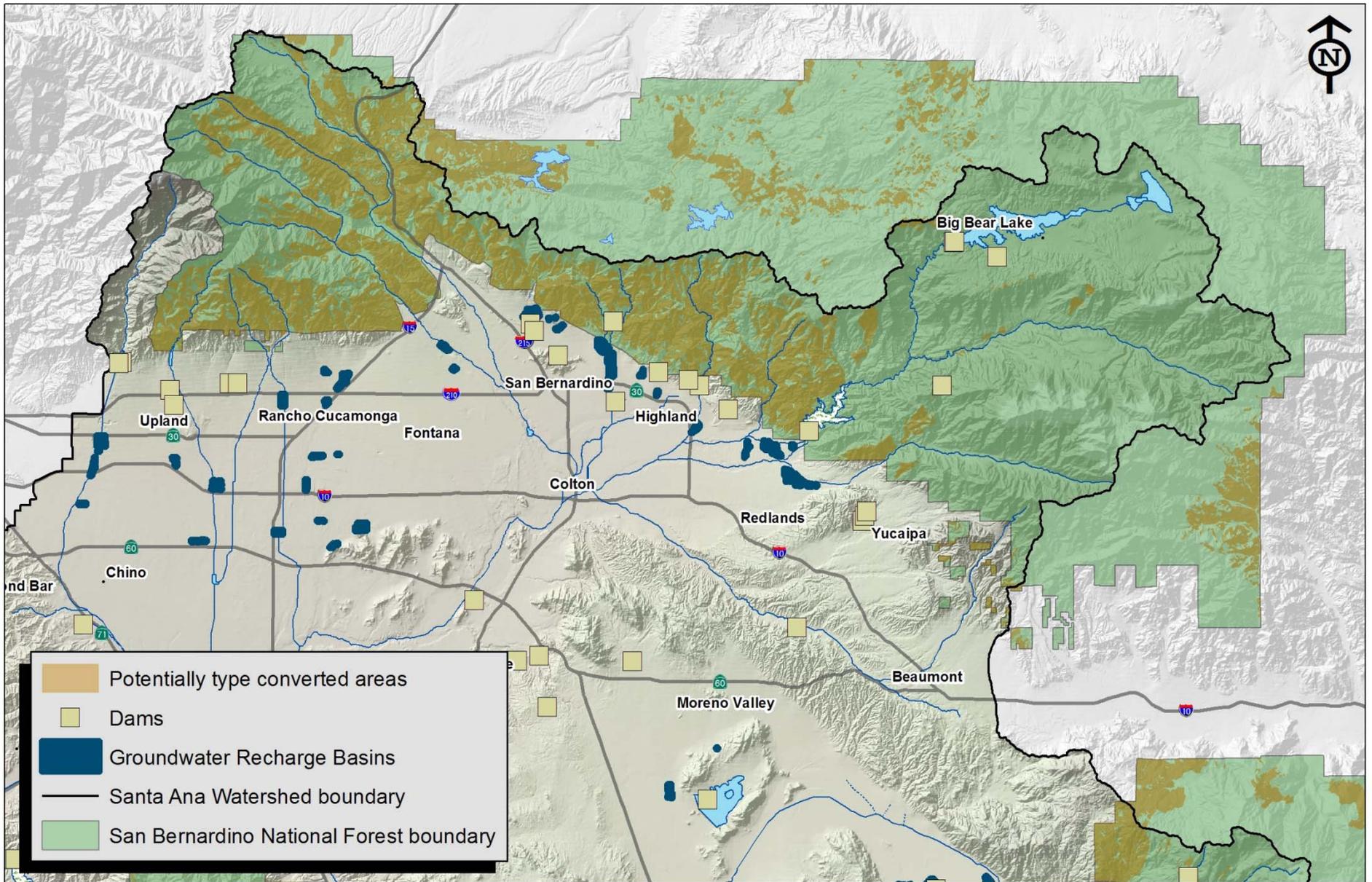
One effect of frequent, severe-burn fires has been the type conversion of chaparral to exotic grasses which are water-guzzling annuals.

Type conversion is most likely to occur in areas that have burned multiple times within the past 15 years

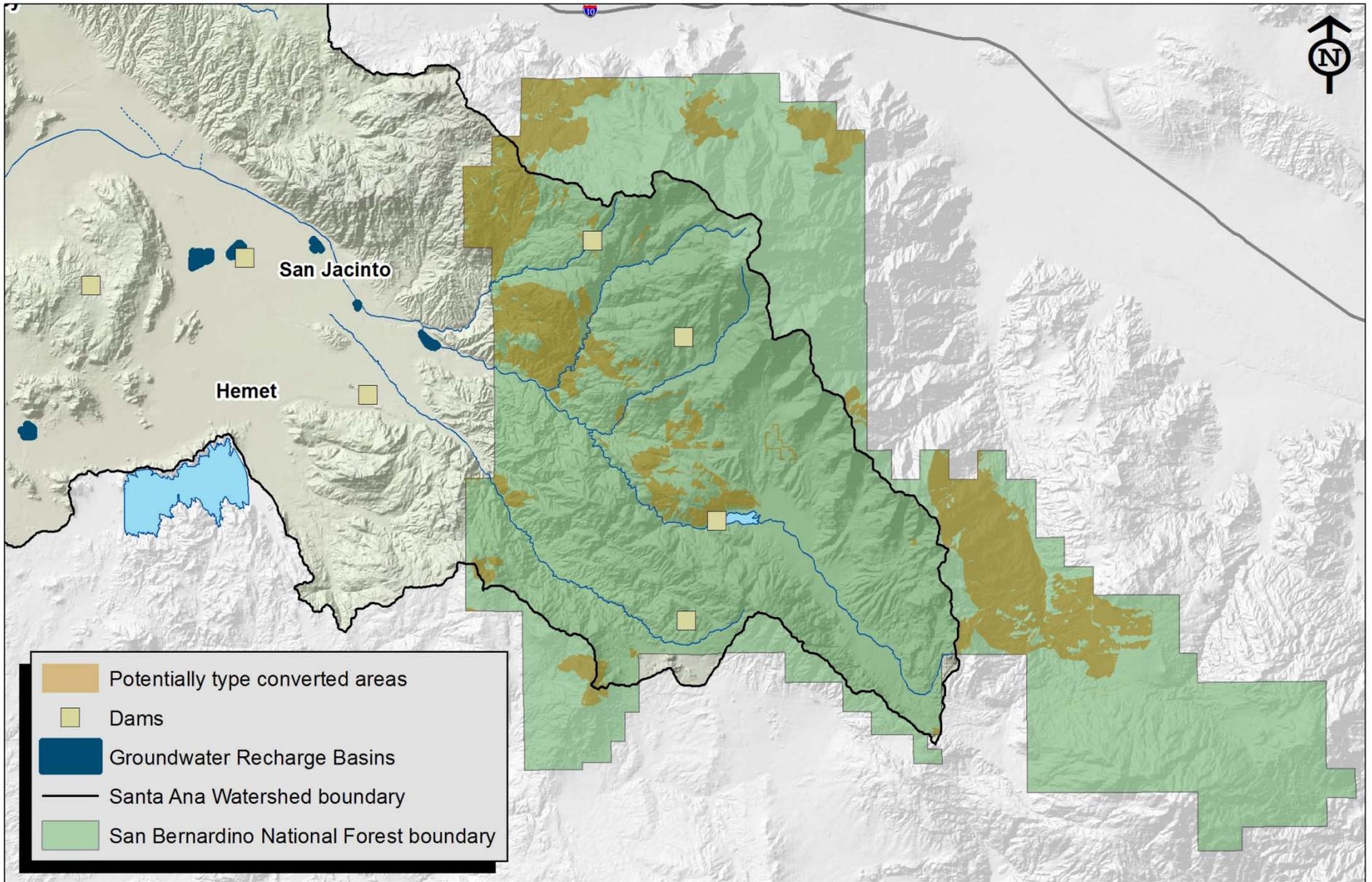
Type conversion:

- Decreases water yields to consumers below the forest
- Increases erosion, b/c grasses lack the tap roots necessary to prevent soil slippage
- Increase in erosion = increase in the amount of sediment trapped in sediment basins

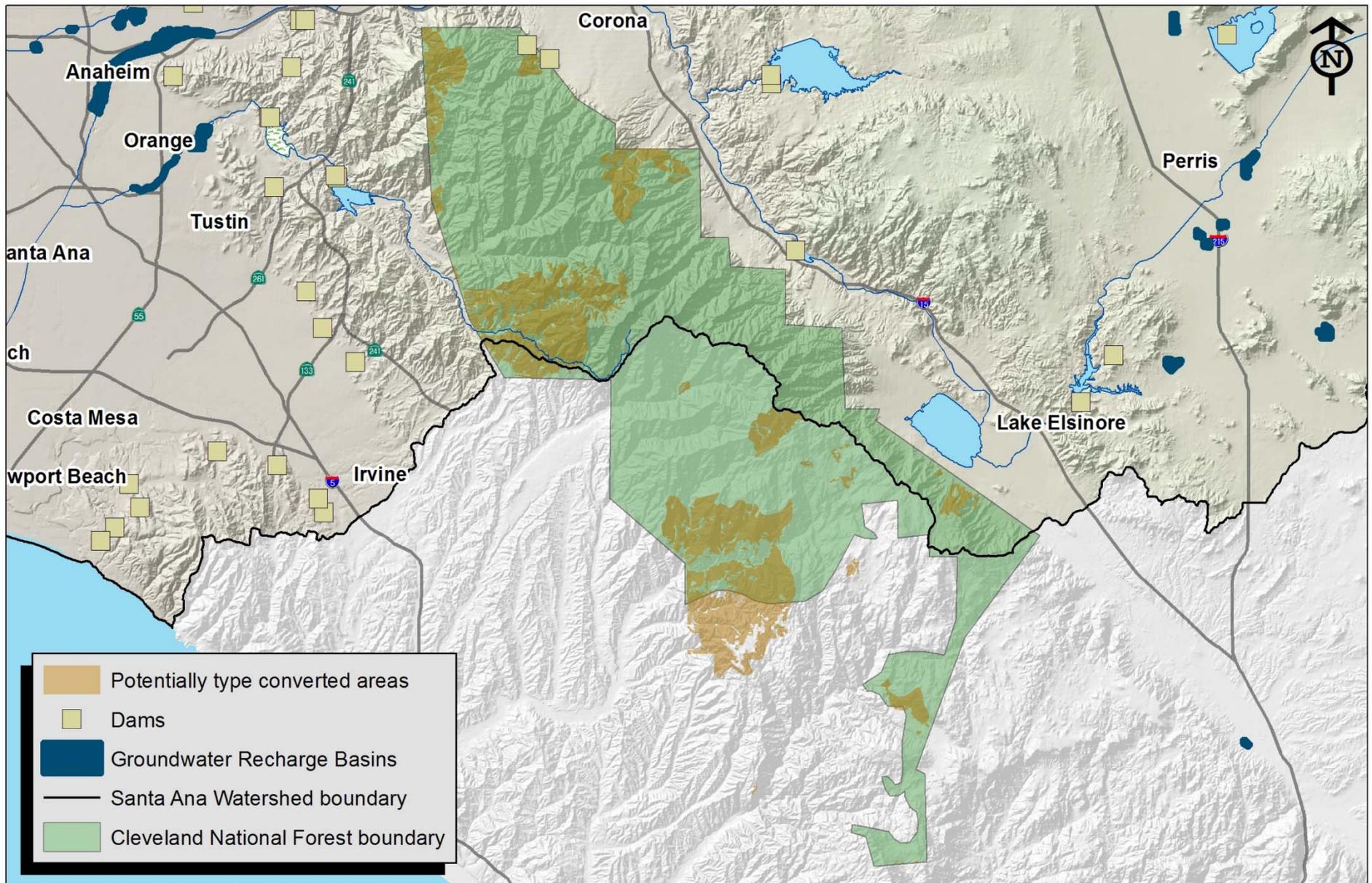




Currently there is no conclusive data as to where type conversion is actually occurring; however, based on the data available and understanding the factors that lead to type conversion – we can determine areas as being susceptible to type conversion (if not already effected).



Potentially type-converted areas located in the San Bernardino National Forest – Eastern area



Potentially type-converted areas located in the Cleveland National Forest

3. FOREST FUEL MANAGEMENT

A history of managed fire suppression in American forests' has led to the overall poor quality of our local forest ecosystem.

Dense, overgrown stands with smaller trees have led to an accumulation of hazardous fuels which has led to:

- uncontrollable massive burn wildfires
- accelerated post fire erosion
- increased risk to human life, property and water quality

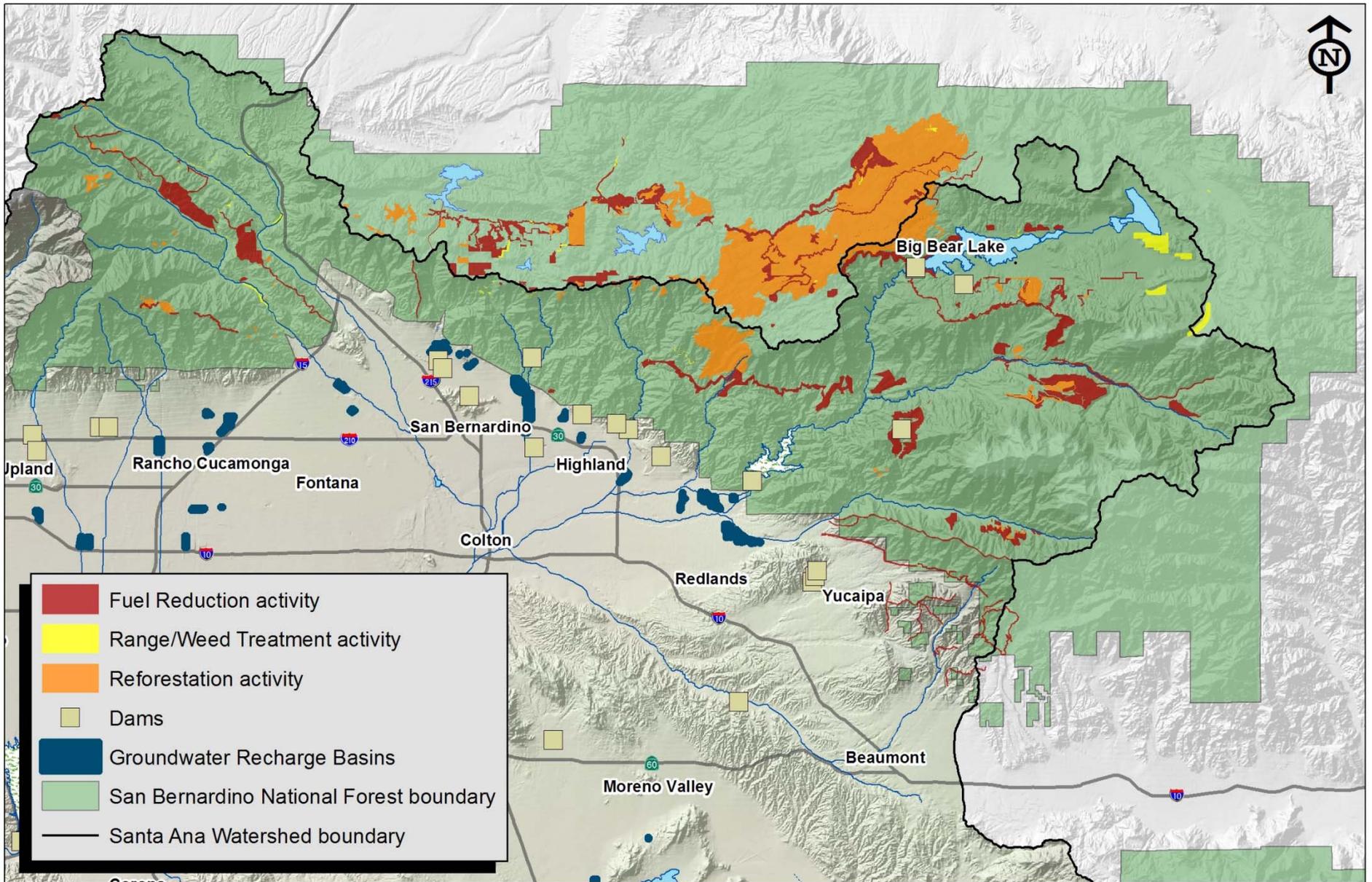
METHODS OF PRECISION RESTORATION

We now understand that fire is part of a healthy forest ecosystem. To mitigate negative effects of fire suppression, modern fire and fuels management suggests:

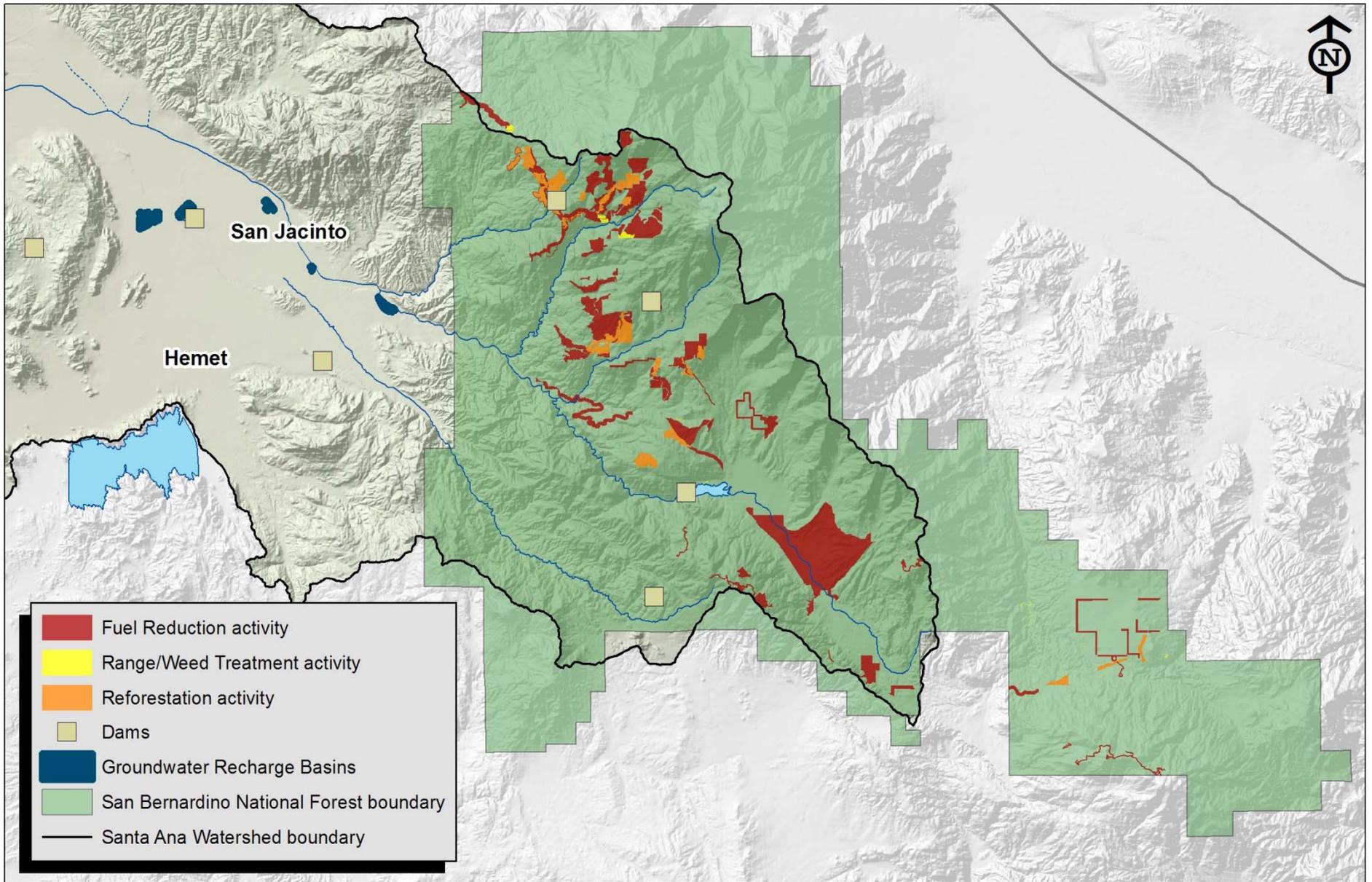
- Tree thinning (mechanical thinning)
- Prescribed burns (managed burns)



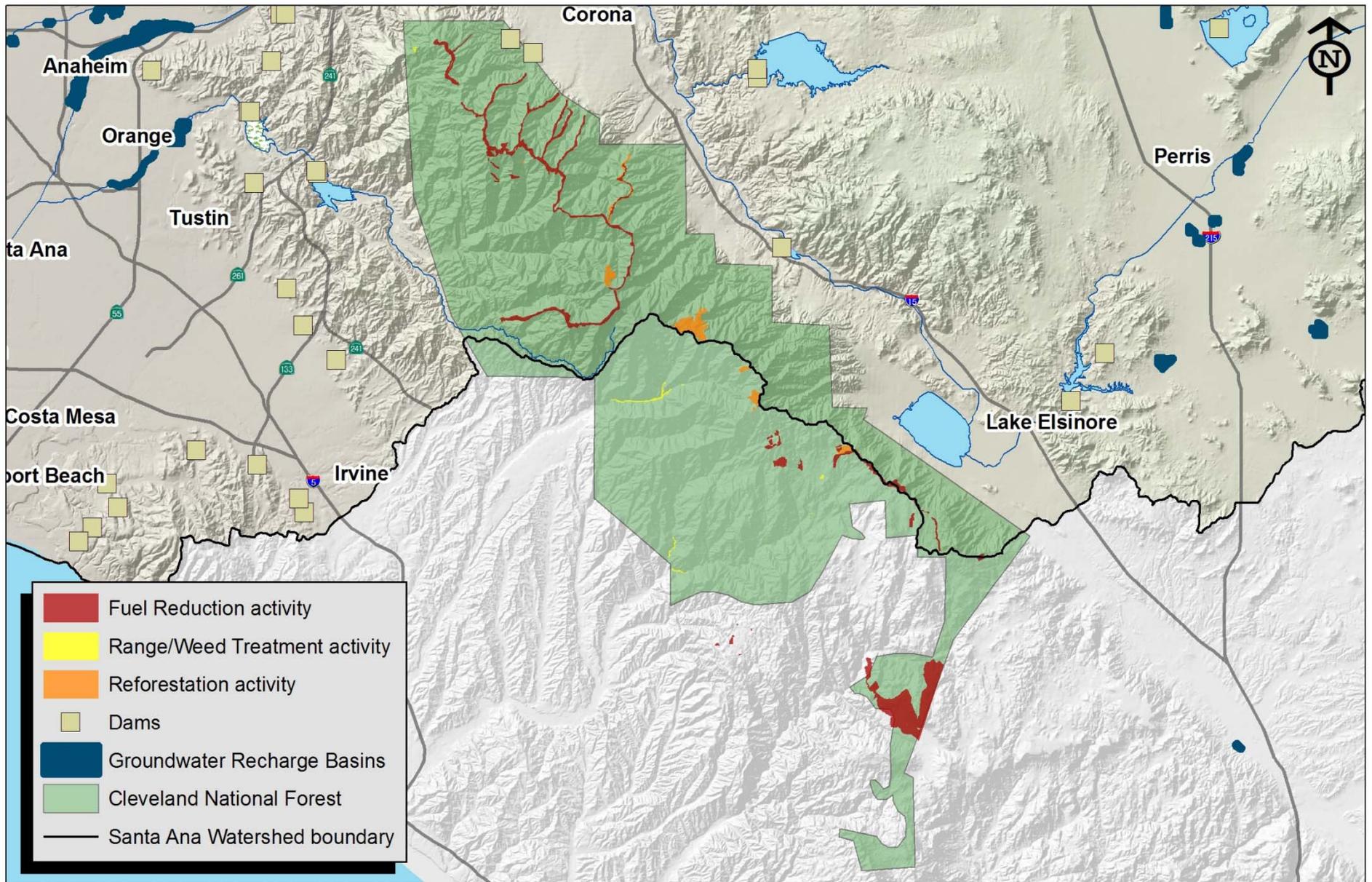
Bottom line: The USFS has “shovel-ready” projects already in place and is interested in developing partners to expand and accelerate restoration efforts.



“Shovel-ready” projects in San Bernardino National Forest – northern area



“Shovel-ready” projects in San Bernardino National Forest – eastern area



“Shovel-ready” projects in Cleveland National Forest

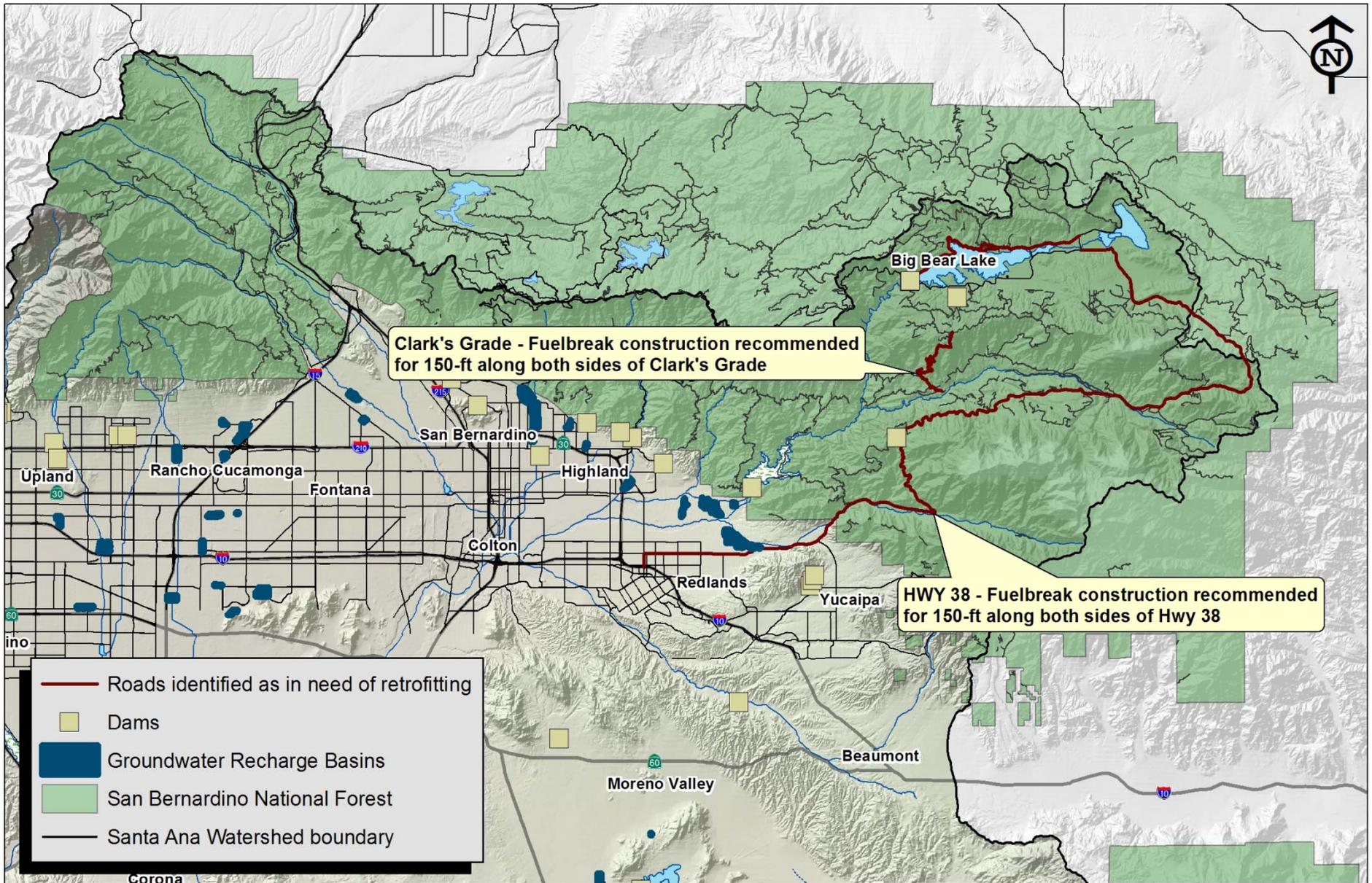
4. ROAD RETROFITTING (FUELBREAK CONSTRUCTION)

Road retrofitting
(or fuelbreak construction)

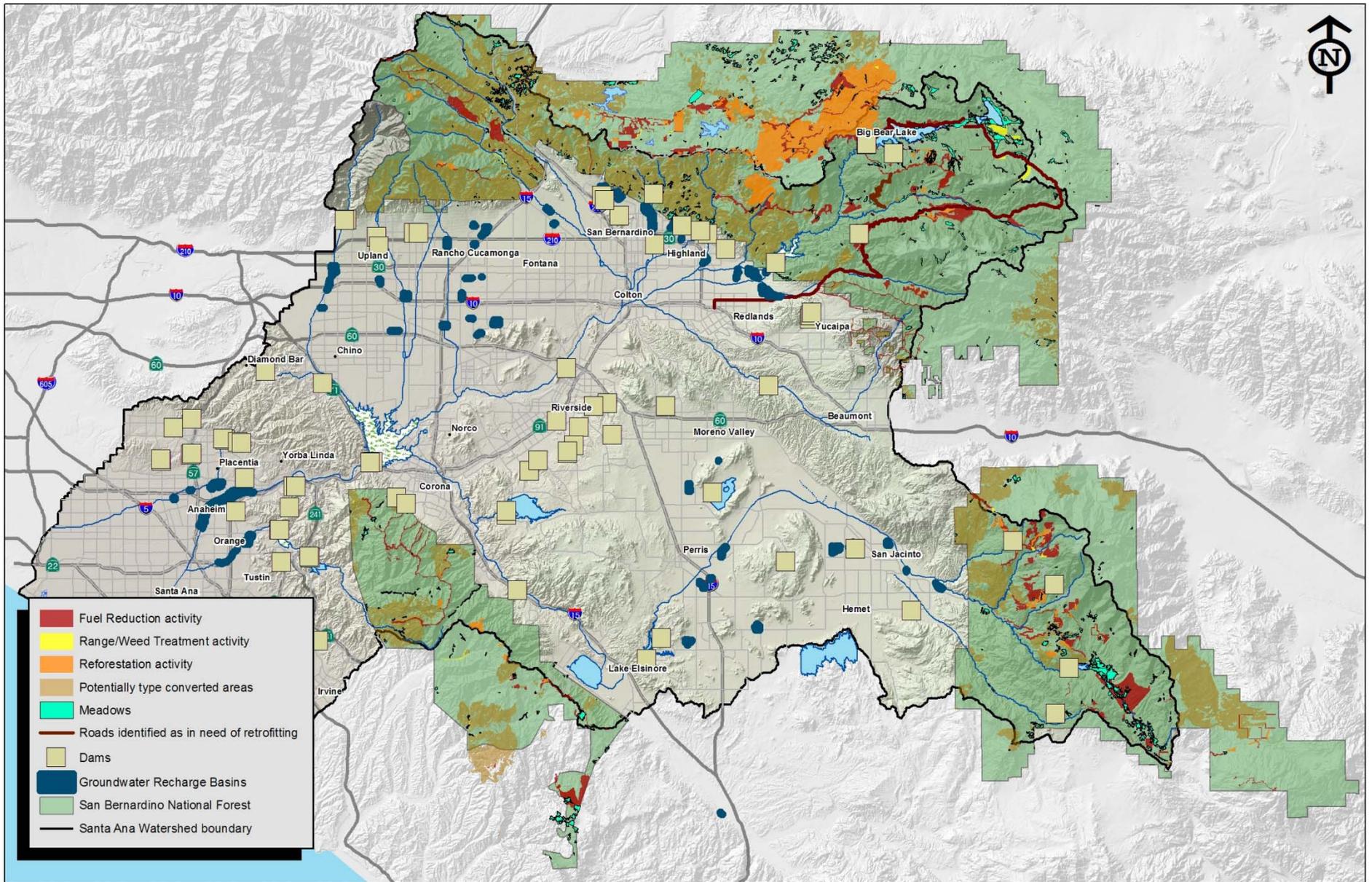
is done to:

- limit wildfire size & severity by strategically removing fuels to limit fire spread in key areas
- keep fire from spreading onto private lands
- provide firefighters with a defensible space from which to carry out firefighting operations
- aid in reducing erosion





The Santa Ana River Watershed Hazardous Fuels Reduction and Forest Health Project proposed by the USFS (in which these roads and many others were identified) is currently in the NEPA planning stage. The draft environmental impact statement is expected January 2013. Only roads in the northern portion of the SBNF have been identified.



Overview of all restoration methods