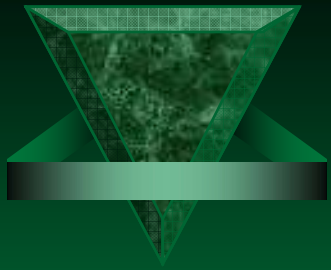




Illicit *Cannabis* production on Forest
and Wildland Resources

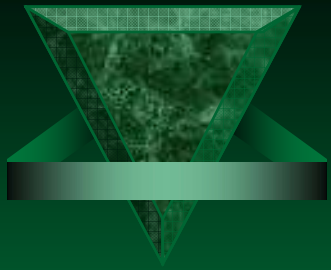
Gregory A. Giusti
University of California
April 13, 2010



Overview of an illegal grow

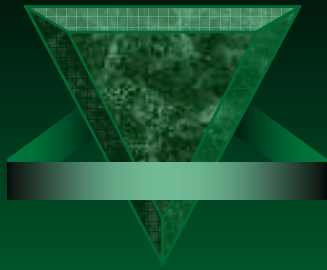






Commodity Production



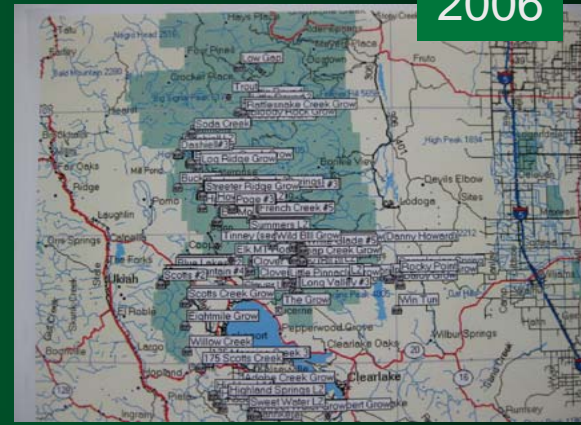


2005 – 2008 Garden sites (BLM)

2005



2006

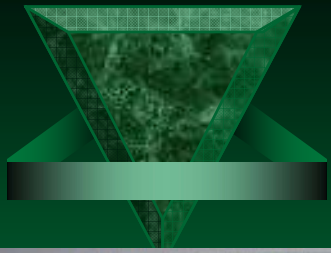


2007

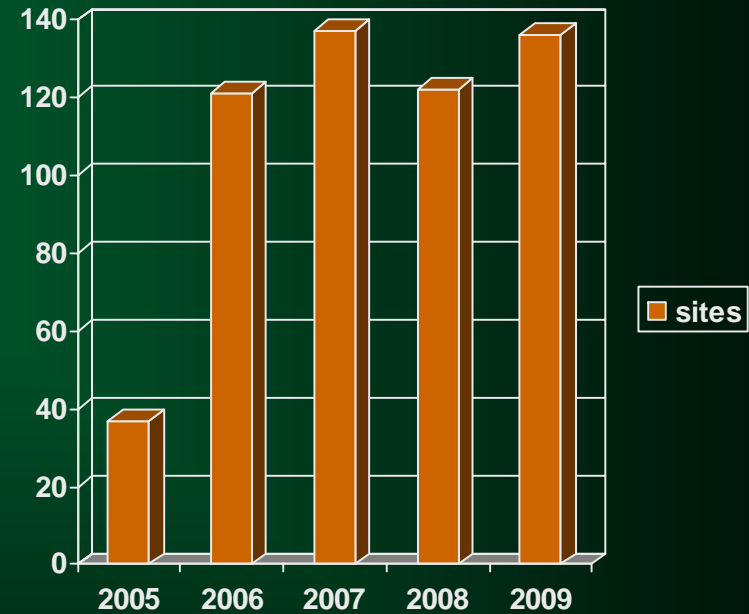
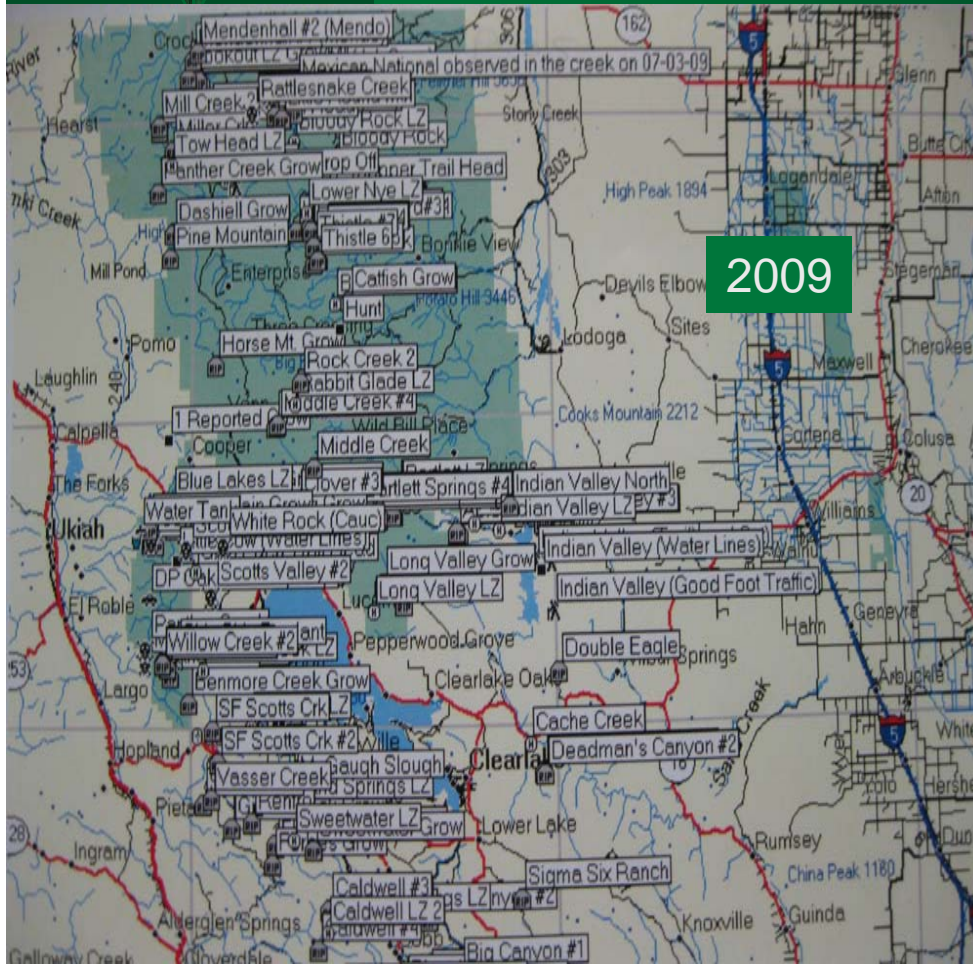


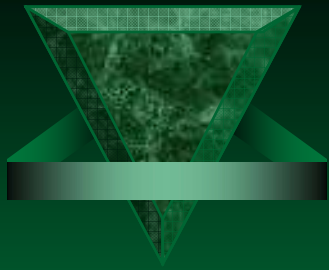
2008





2005-2009 garden sites (BLM)





Some facts and figures for marijuana gardens on the Upper Lake RD

2009 - 61 marijuana gardens on the MNF
Upper Lake RD.

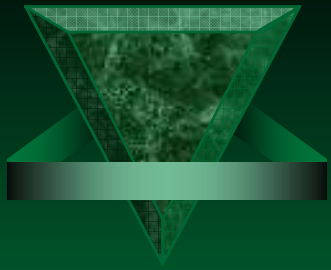
384,000 plants

The average garden size is about 6300 plants.



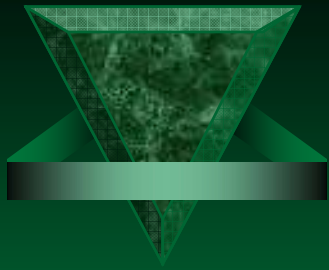


Water Diversion as a result of
production



Damming of a creek



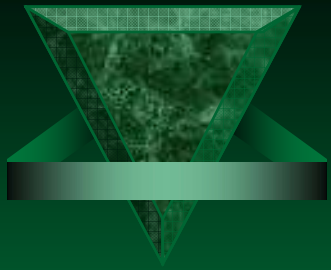


Water storage structure



Direct extraction from surface water



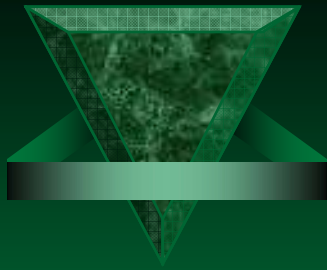


Water Distribution Systems



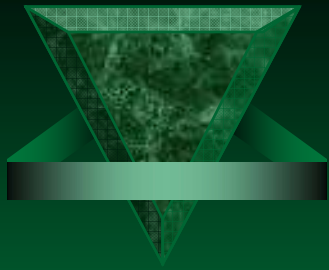
Water Distribution Systems





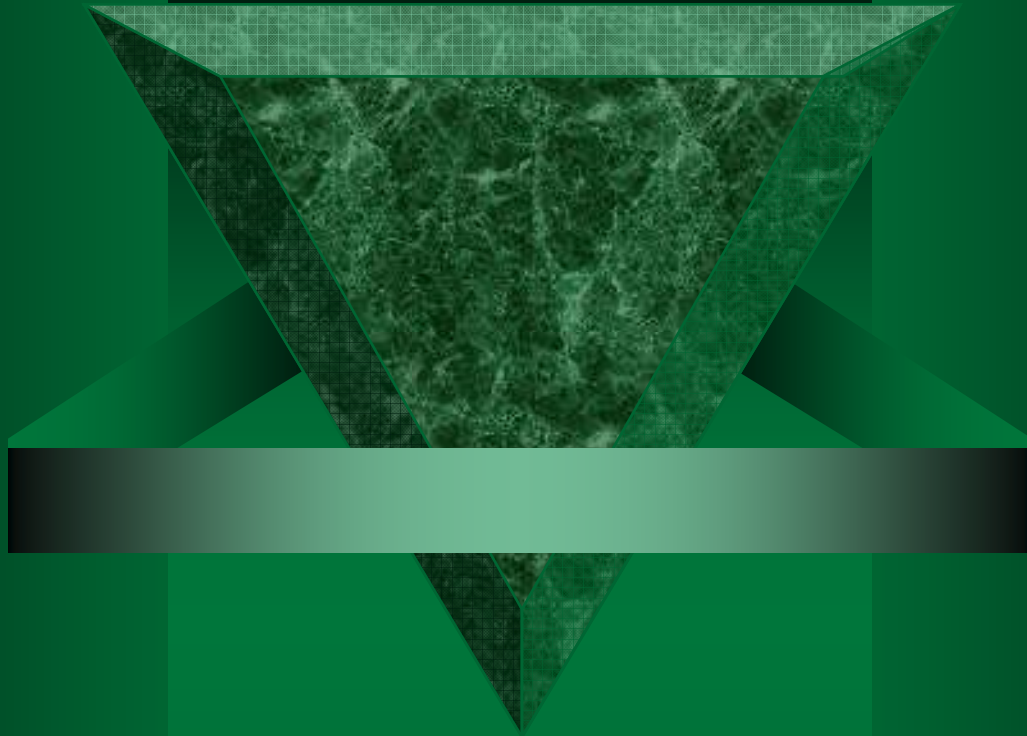
Illegal damming of a creek





50,000 gallon bladder tank.

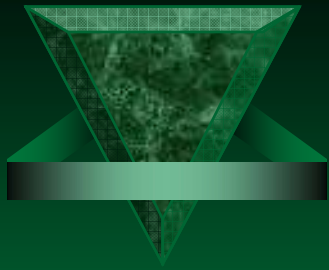




Water Pollution as an artifact of production

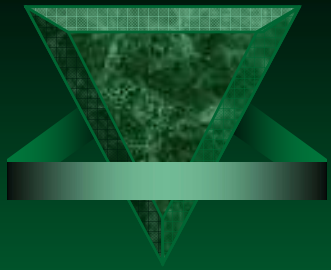
Gasoline and other petroleum products





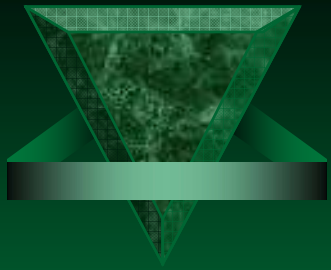
Instream fertilization and pesticide applications





Down Stream Eutrophication and Early De-watering

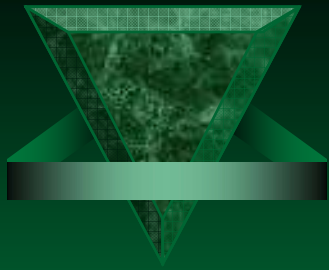




Unregulated pesticide and fertilizer applications

- Impacts to water quality
- Impacts to aquatic habitats
- Potential hazard to end user both water and commodity



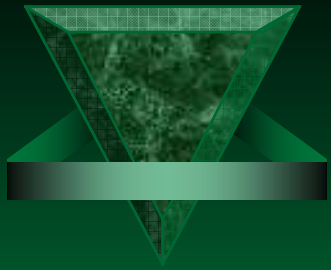


Abandoned chemicals

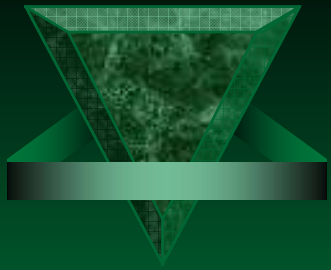
✔ Post harvest legacy impacts

- Leaching into water ways
- Exposure to wildlife
- Exposure to humans





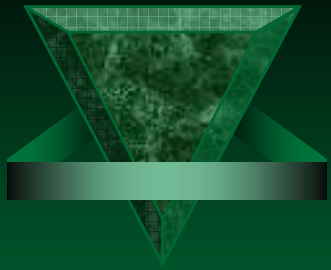
Indiscriminate Impacts to Forest and Wildlands



Water quality and quantity impacts

- ✔ Summer steelhead in the MNF
- ✔ Aquatic macro and micro invertebrates
- ✔ Human contact and consumption



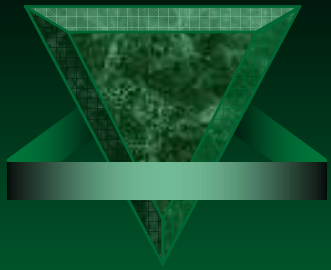


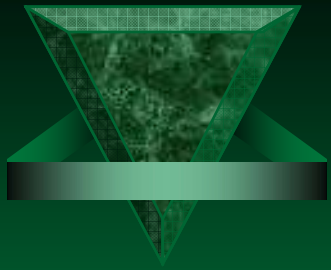
Indiscriminate methods



- ✔ Illegal traps
- ✔ Poaching
- ✔ Conflicts with recreational users of wildlands

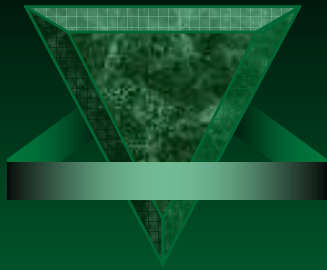
“Ambush” set to protect food cache from bears





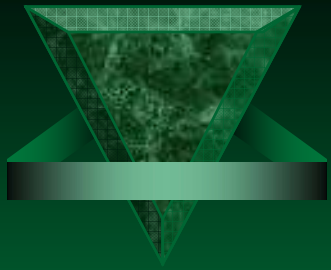
Black-tailed Deer





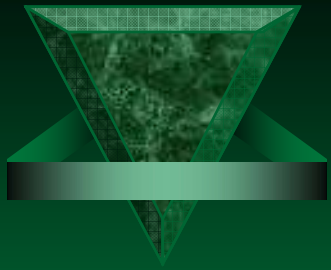
“Bush –meat”





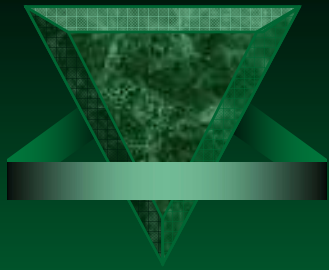
Jerky and sleeping cabin





Drying jerky meat

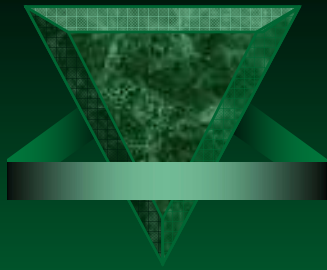




Squirrel Tails





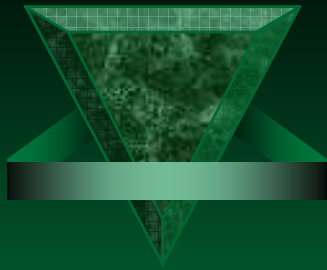


California Thrasher



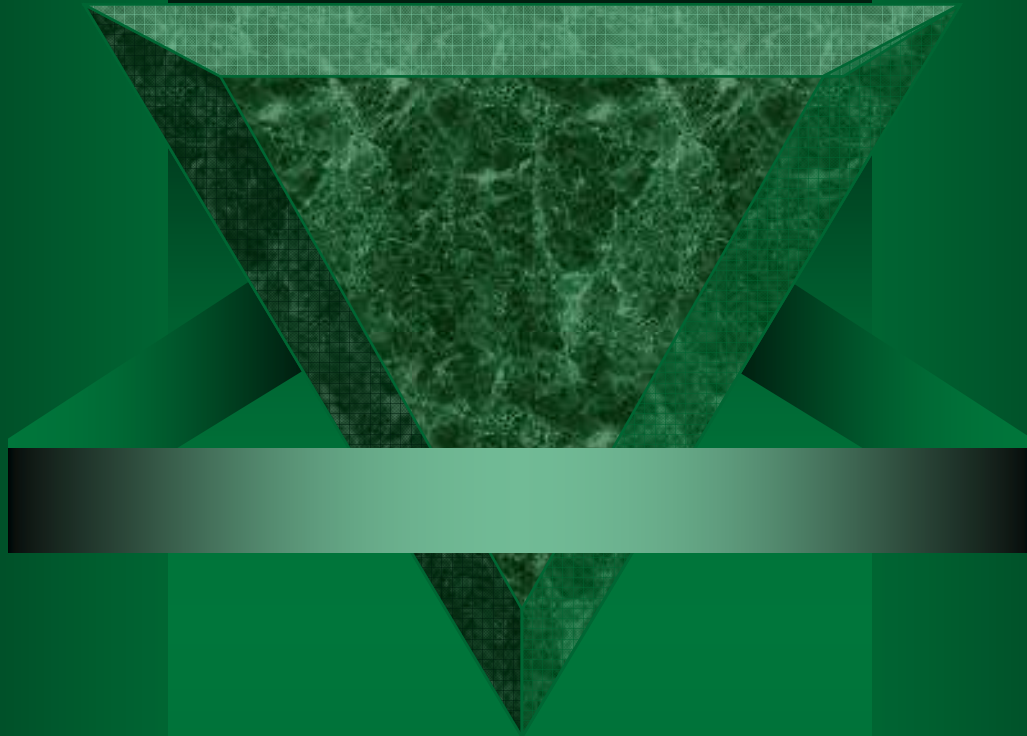
Rufus Sided Towhee





Discarded rodenticides

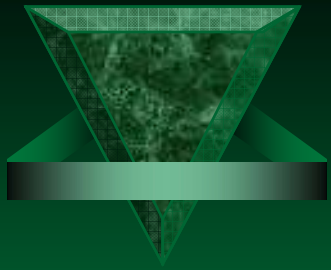




Human Habitation of Wildlands

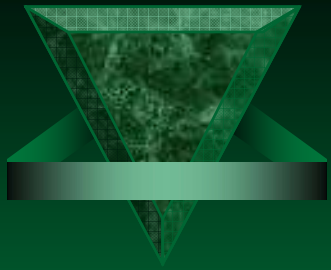
Production Legacies





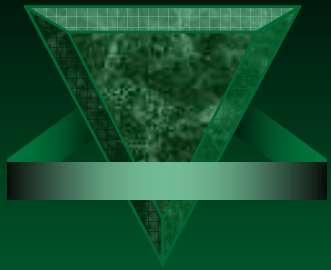
Camp Infrastructures





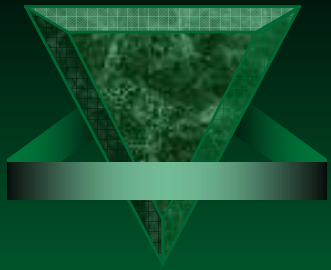
Camp Infrastructures





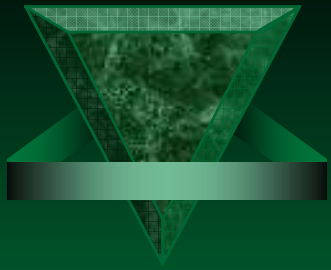
Camp Infrastructures





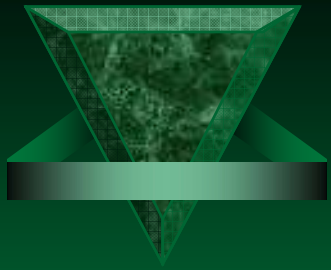
Camp Infrastructures





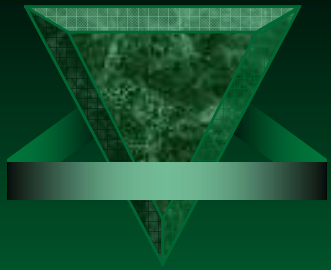
The Aftermath





Forest and Wildland Impacts

- ✔ Water diversion – early de-watering of seasonal streams
- ✔ Water pollution – toxics and increase eutrophication of streams
- ✔ Indiscriminate killing of invertebrate and vertebrate wildlife species
- ✔ Habitat degradation
- ✔ Negative Impacts to recreational opportunities



Forest and Wildland Impacts

Unregulated land-use practices are negatively affecting:

- fish, wildlife, their habitats and,
- the communities ability to safely enjoy local outdoor resources

Eradication of illicit gardens should be considered “sooner rather than later” to protect environmental values.