

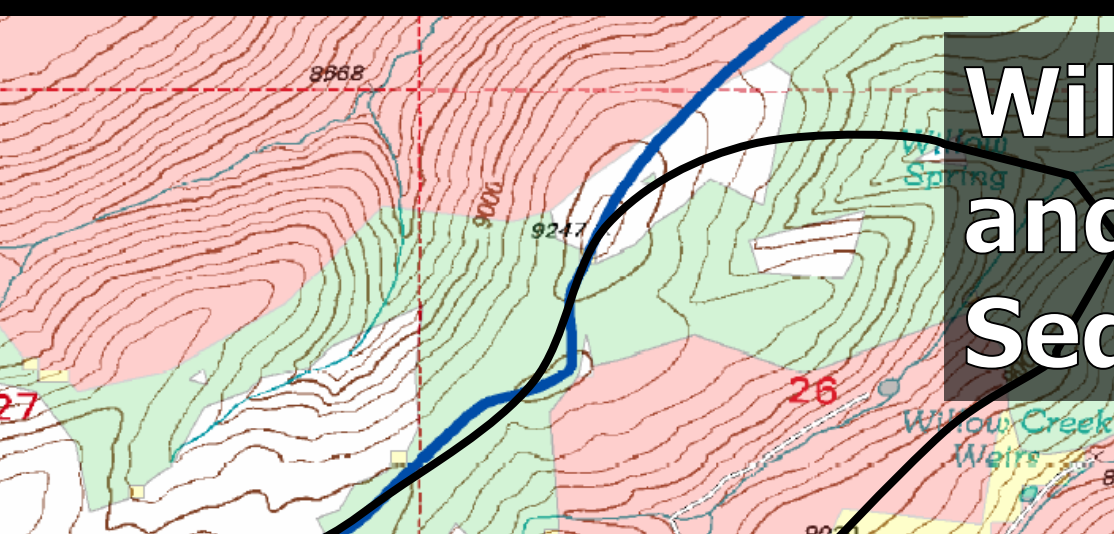
# **Monitoring of Willow and Thomas creek watersheds following the Wallow Fire, 2011**

**Apache-Sitgreaves National Forests**

# Objectives:

- ④ Determine the *effectiveness* of *aerial seeding*
- ④ Evaluate changes in *peak flows, runoffs* and *sediment yields*
- ④ Determine the sediment contribution from hillslopes *compared* to contribution from channel
  - How does it effect the overall budget for these watersheds?

# Willow Creek Wier and Hillslope Sediment fences



# Willow Creek

- 300 acres
- 60% is high soil burn severity
- Objective:
  - > High Soil Burn Severity
    - Evaluate peak flow, sediment yield, aerial seeding treatment
    - Twelve hillslope sediment fences on E and W aspects of the watershed each
    - Six will be treated via aerial seeding
    - Six are control
    - The seeding treatment will be monitored for at least 3 years
  - > Low and Moderate Severity
    - Not treated

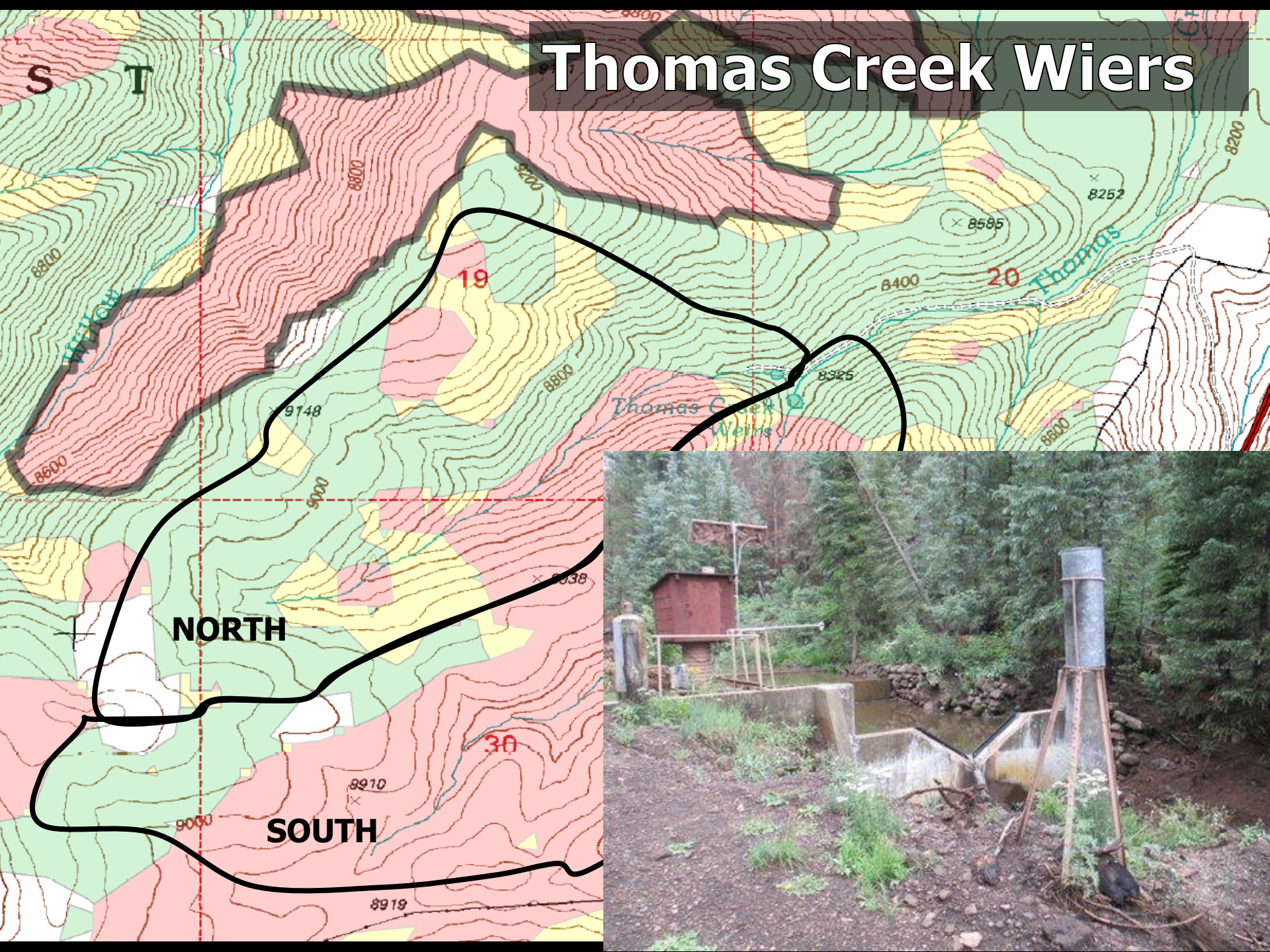


# Willow Creek. 10 Aug 2011 Storm





# Thomas Creek Wiers



# Thomas Wiers

- ◉ South:
  - > 540 acres
  - > Majority high soil burn severity
- ◉ North:
  - > 450 acres
  - > 40% high soil burn severity; 60% low and moderate soil burn severity
- ◉ Objective is to evaluate:
  - > Peak flow
  - > Runoff
  - > Sediment yield



# Cleaning Out Thomas Creek





# Overall

- Twenty hillslope sediment fences
  - > to compare sediment production rates of seeded and control areas
- Sites are telemetered sending flow and precipitation data
- Annual measurements of
  - > ground cover
  - > vegetation recovery
- Sediment : storage areas will be surveyed or cleaned after each major storm