

# **MERA**

## **Radio Consulting Services**



**DELTAWRX**  
management consultants

**Motorola Coverage  
Improvement Proposal**  
**November, 2008**

# Agenda

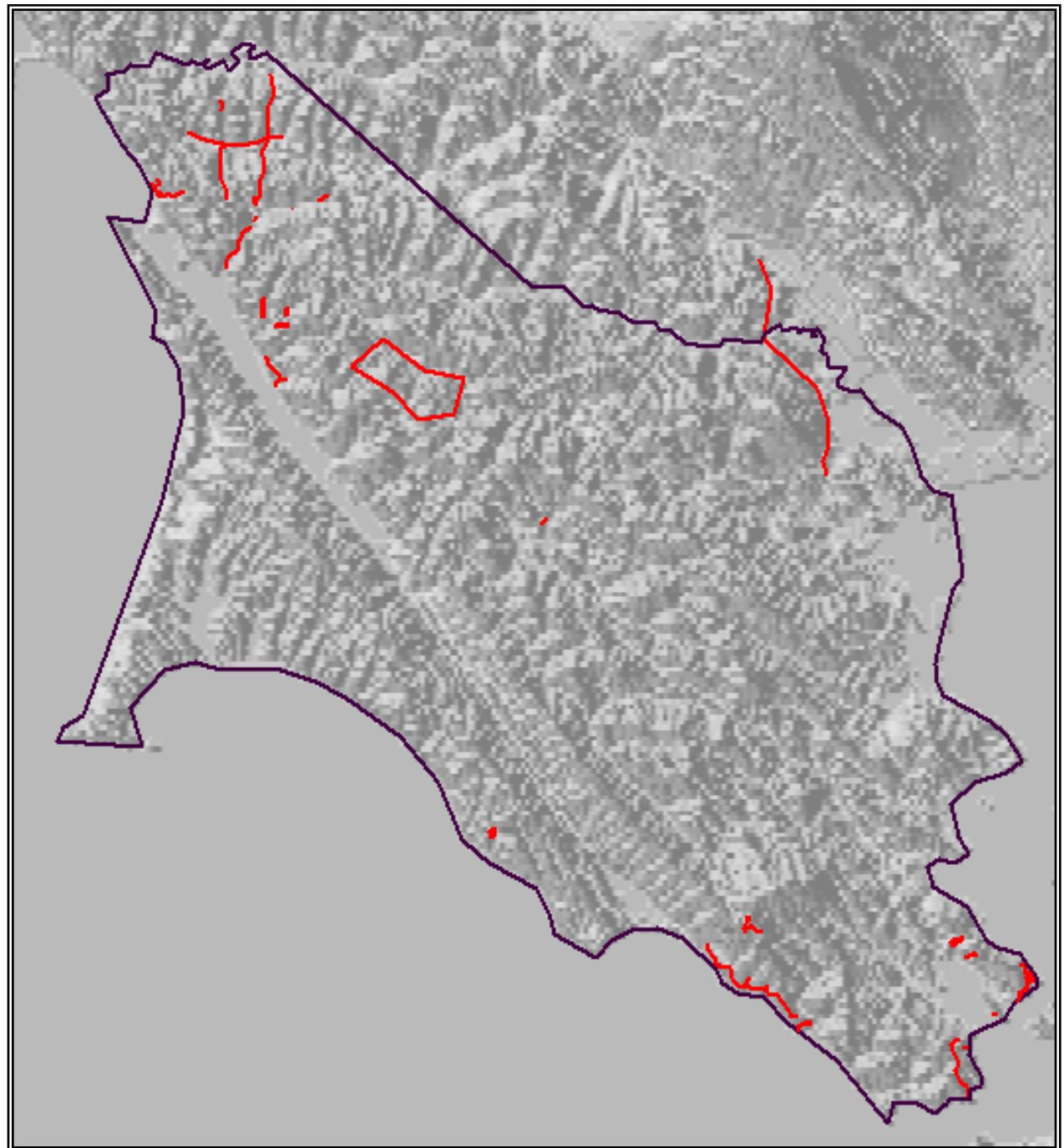
- Review Project Background
- Review Motorola Proposal
- Discuss Next Steps

# Project Background

- ❑ MERA member agencies are dissatisfied with coverage in several specific areas within the County. The MERA board asked DELTAWRX to identify alternatives available for improving coverage and the costs associated with each.
- ❑ In addition to analyzing coverage, DELTAWRX is facilitating negotiations with Motorola to reach a settlement on the inability to meet the Fire Station Printing requirement.

# MERA Issues

Reported User  
Problem Areas



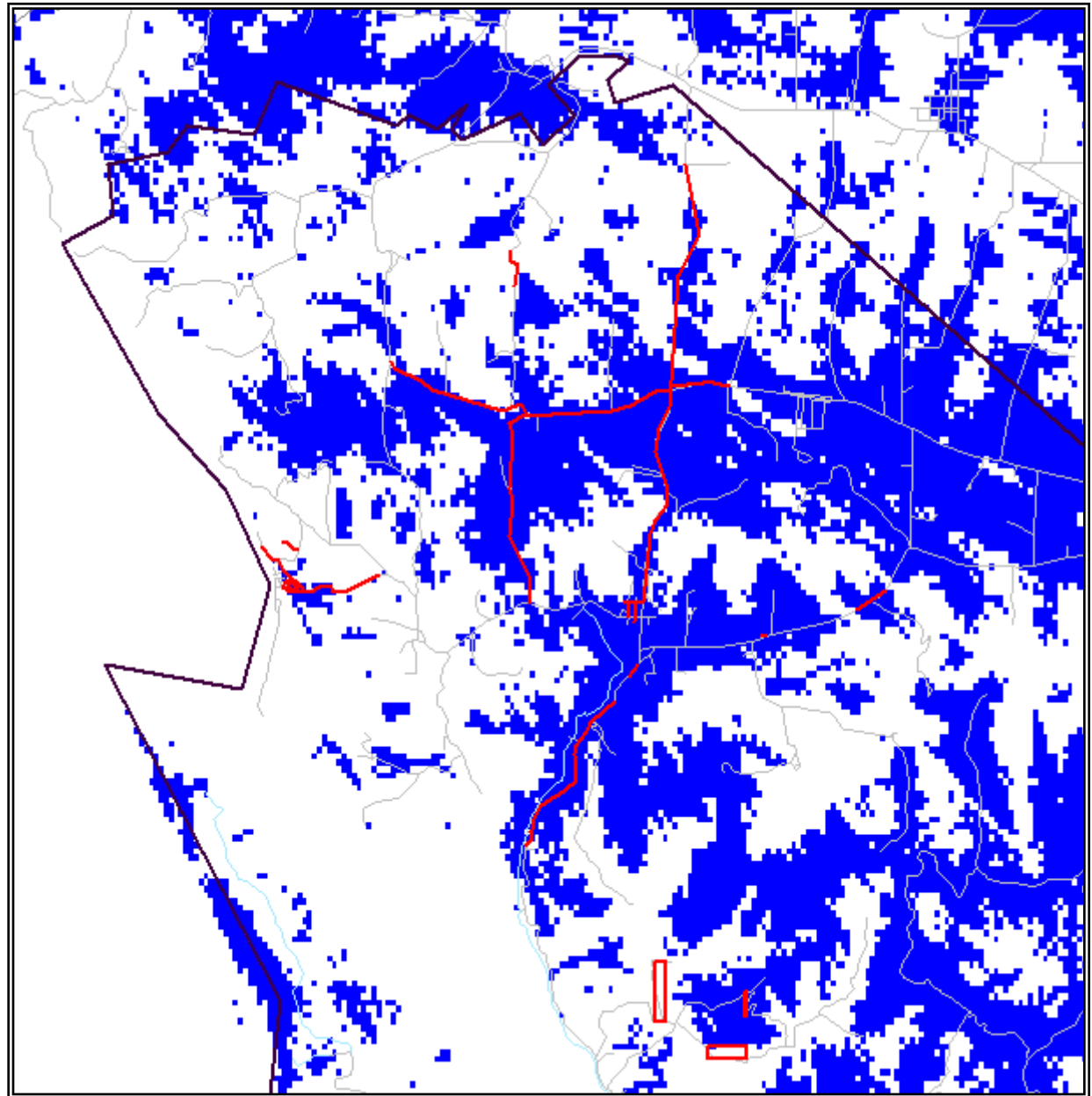
# Motorola Proposal

## Three new sites

- ❑ Tomales
  - Develop site foundation
  - Construct 12' x 24' standard Motorola shelter
  - Erect 80' monopole tower structure
  - Transfer Bay Hills Site equipment
  - Install new antennas and microwave backhaul equipment
- ❑ Twin Peaks
  - Install five-channel IntelliSite Repeater equipment
- ❑ Angel Island
  - Install fixed DVRS at water treatment plan
- ❑ Proposal is inclusive of project management and installation services

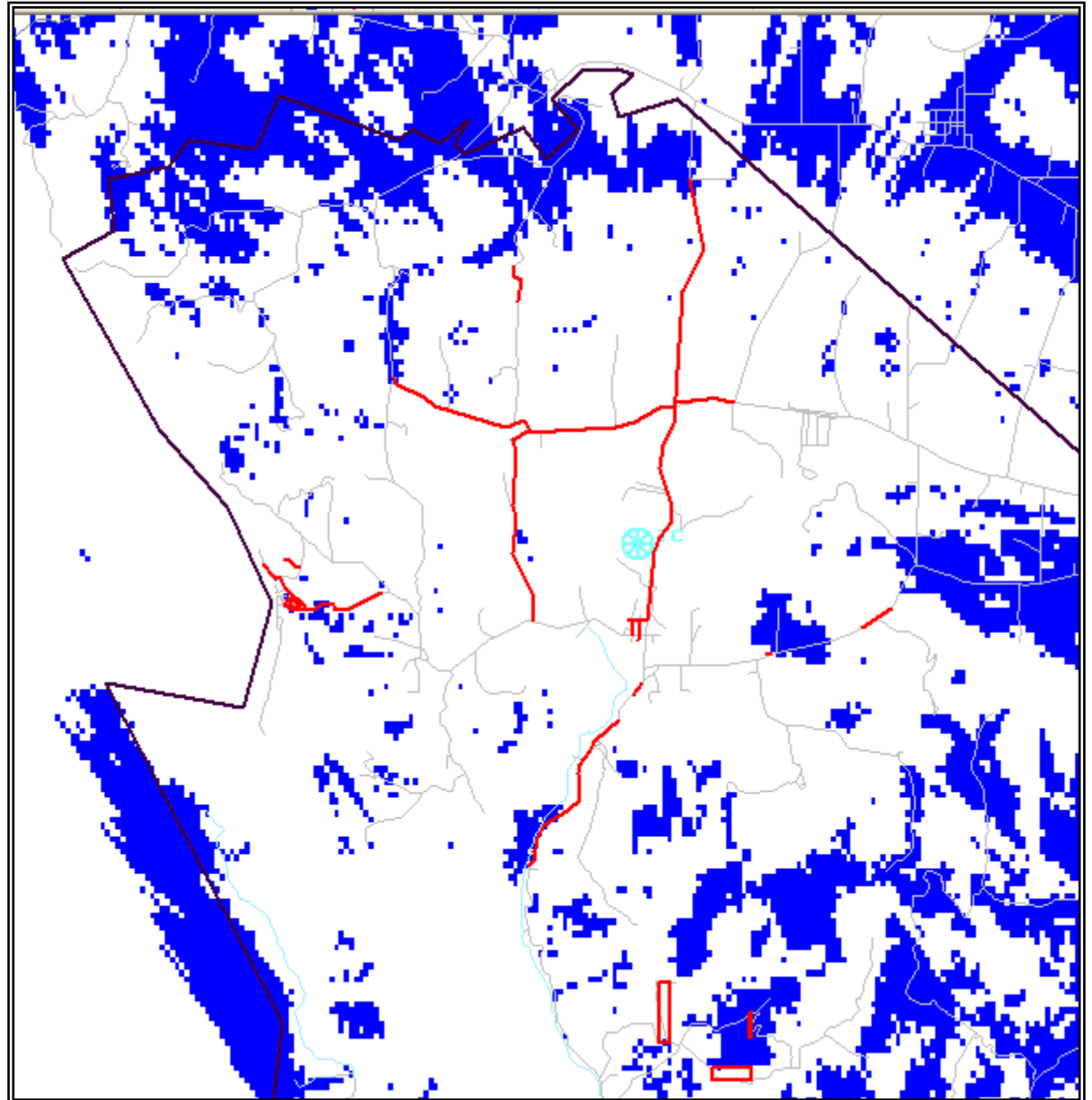
# Northwest Before

Portable Talk-in  
Configuration



# Northwest After

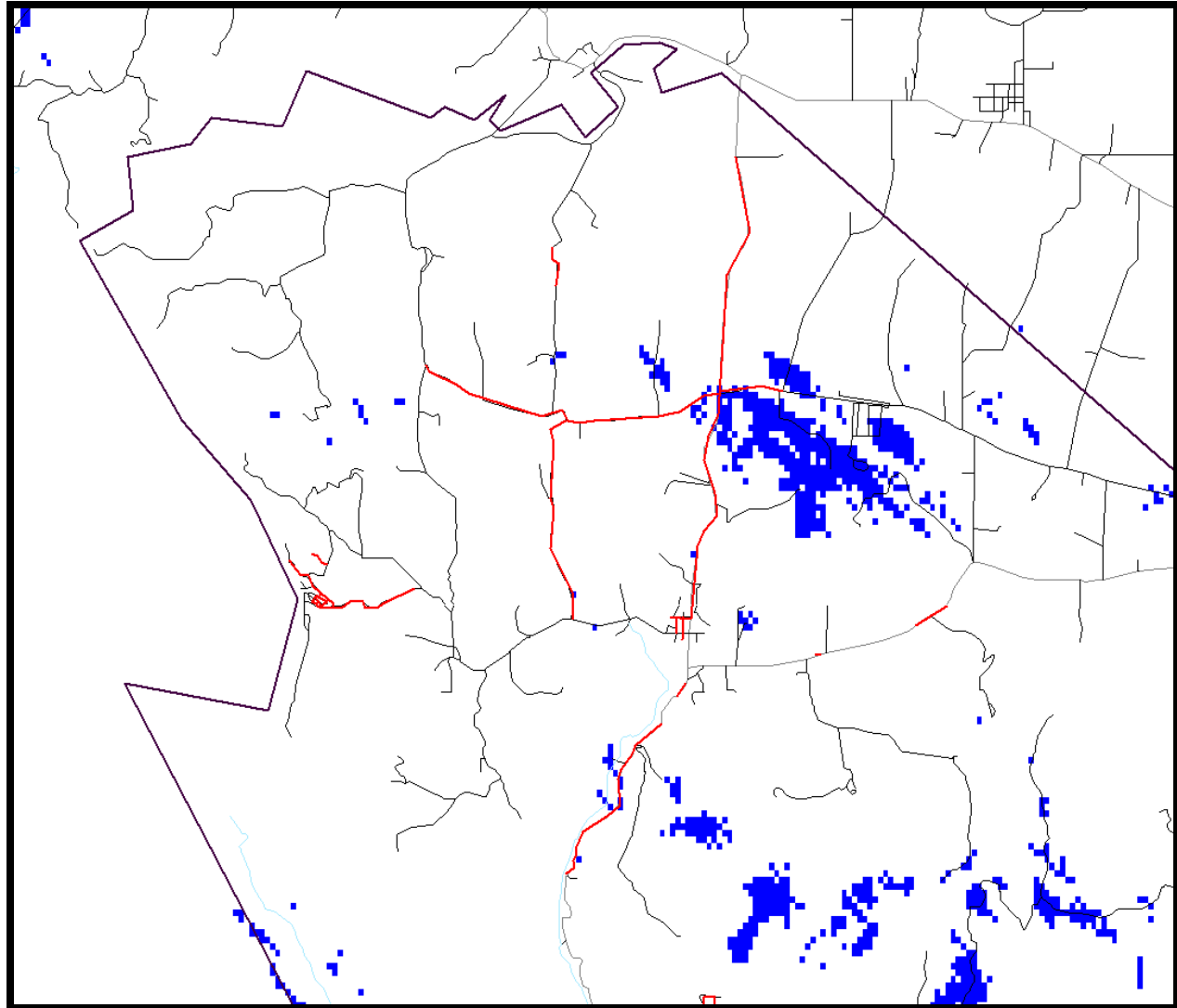
Portable Talk-in  
Configuration



# Northwest Before

Mobile Talk-in  
Configuration

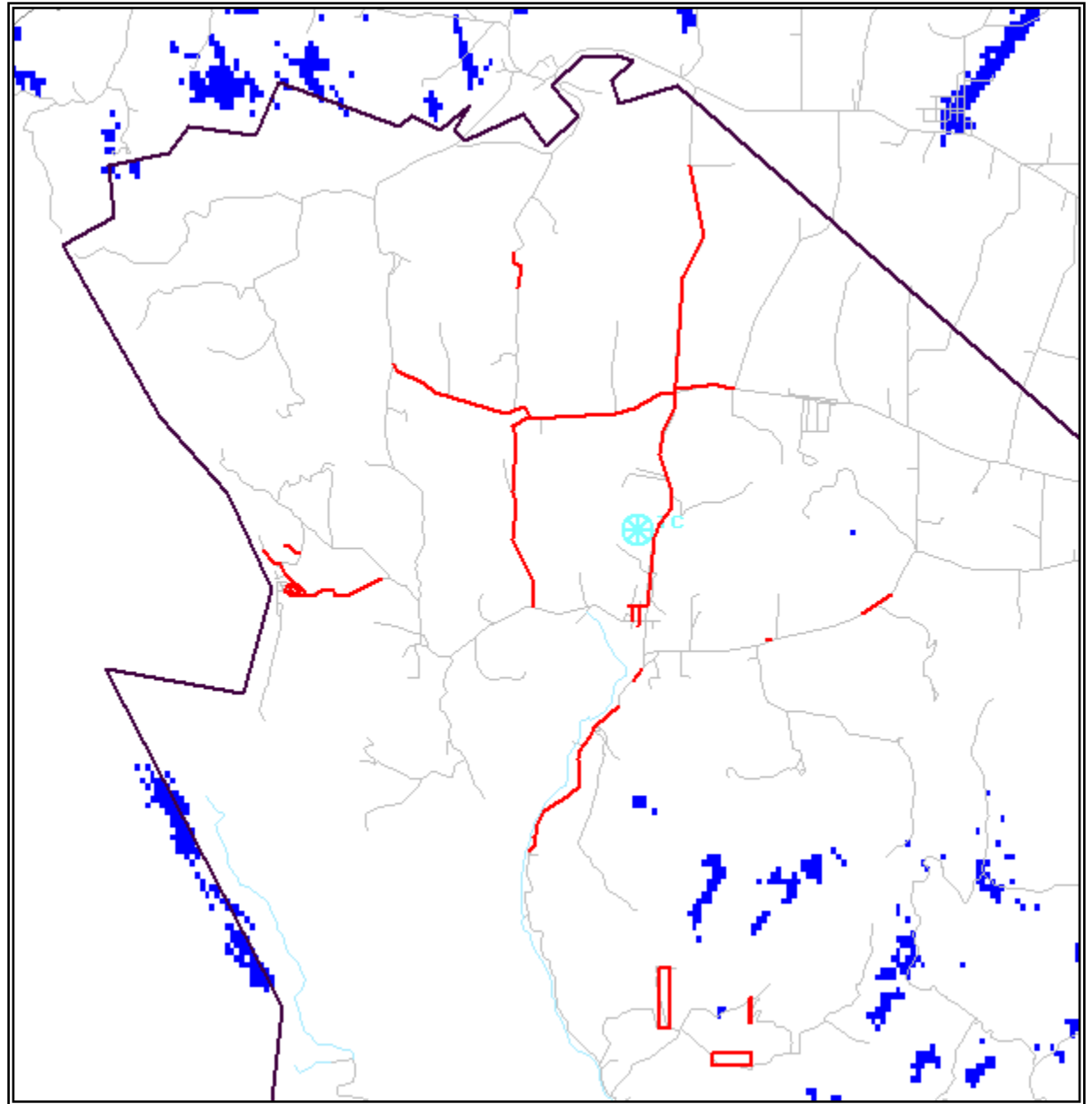
Note: This slide was  
not previously shown





# Northwest After

Mobile Talk-in  
Configuration

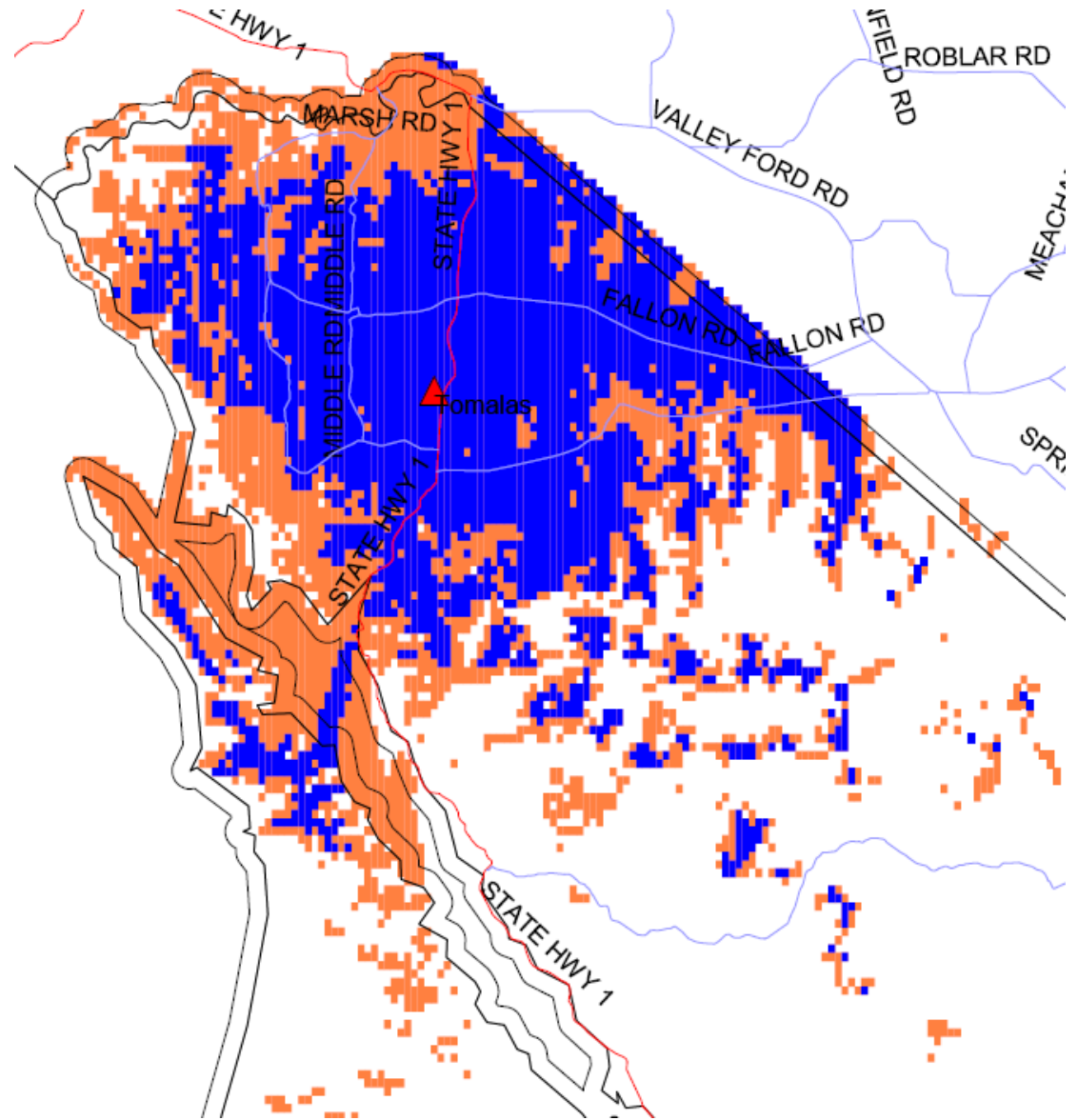


# Tomales Coverage

Portable Radio

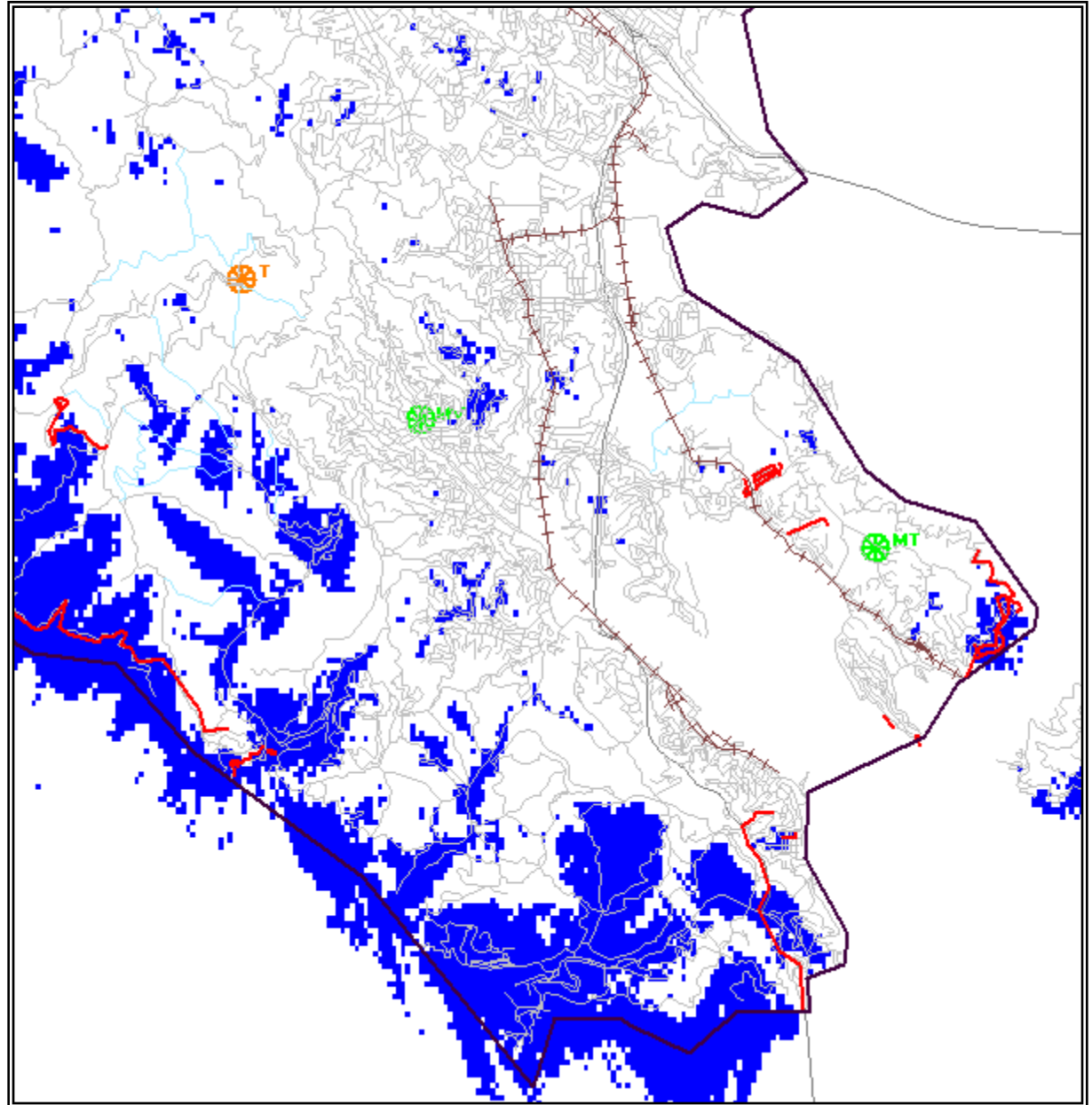
Blue – Talk-in

Orange – Talk-out



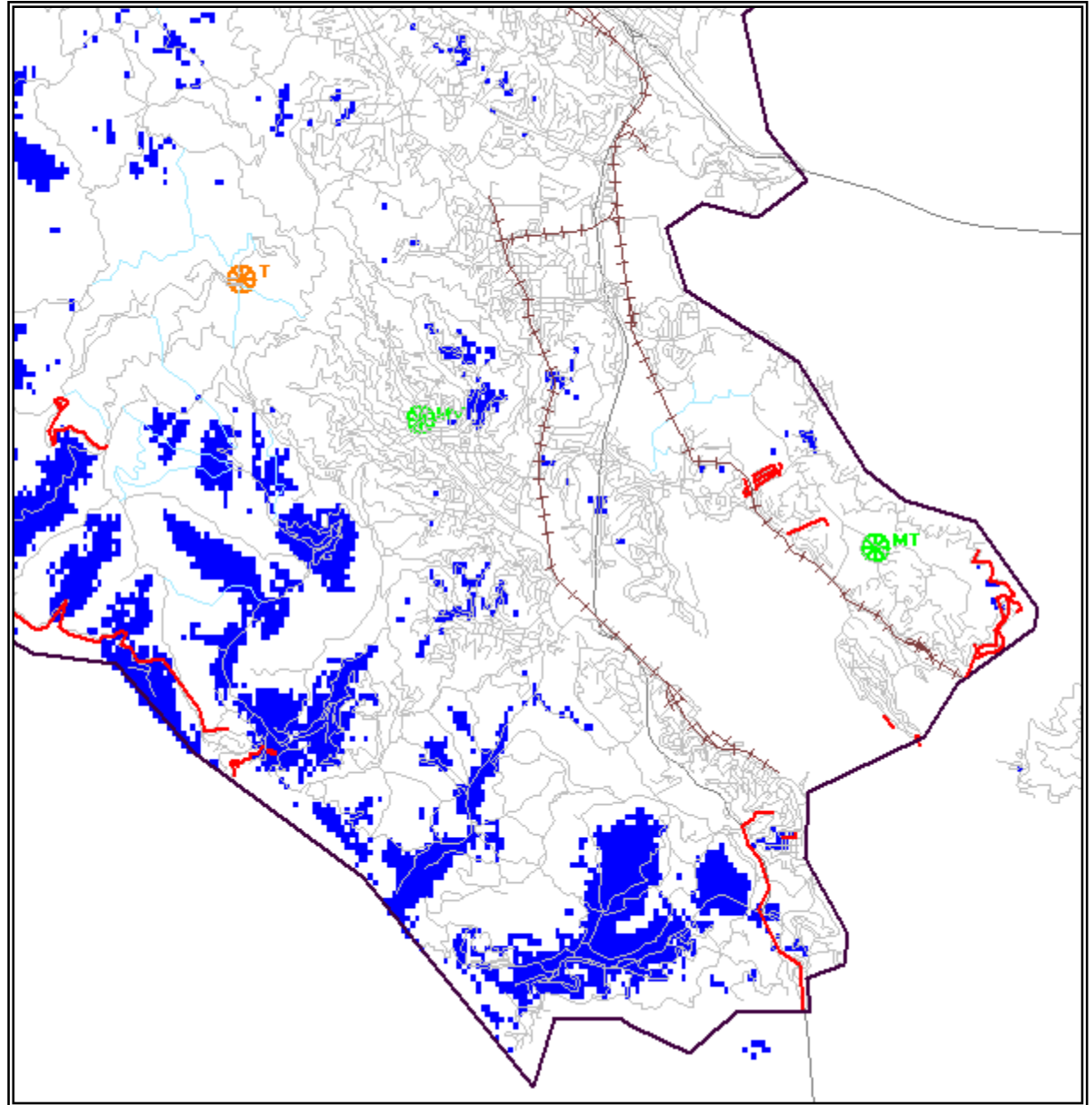
# Southern Before

Portable Talk-in  
Configuration



# Southern After

Portable Talk-in  
Configuration

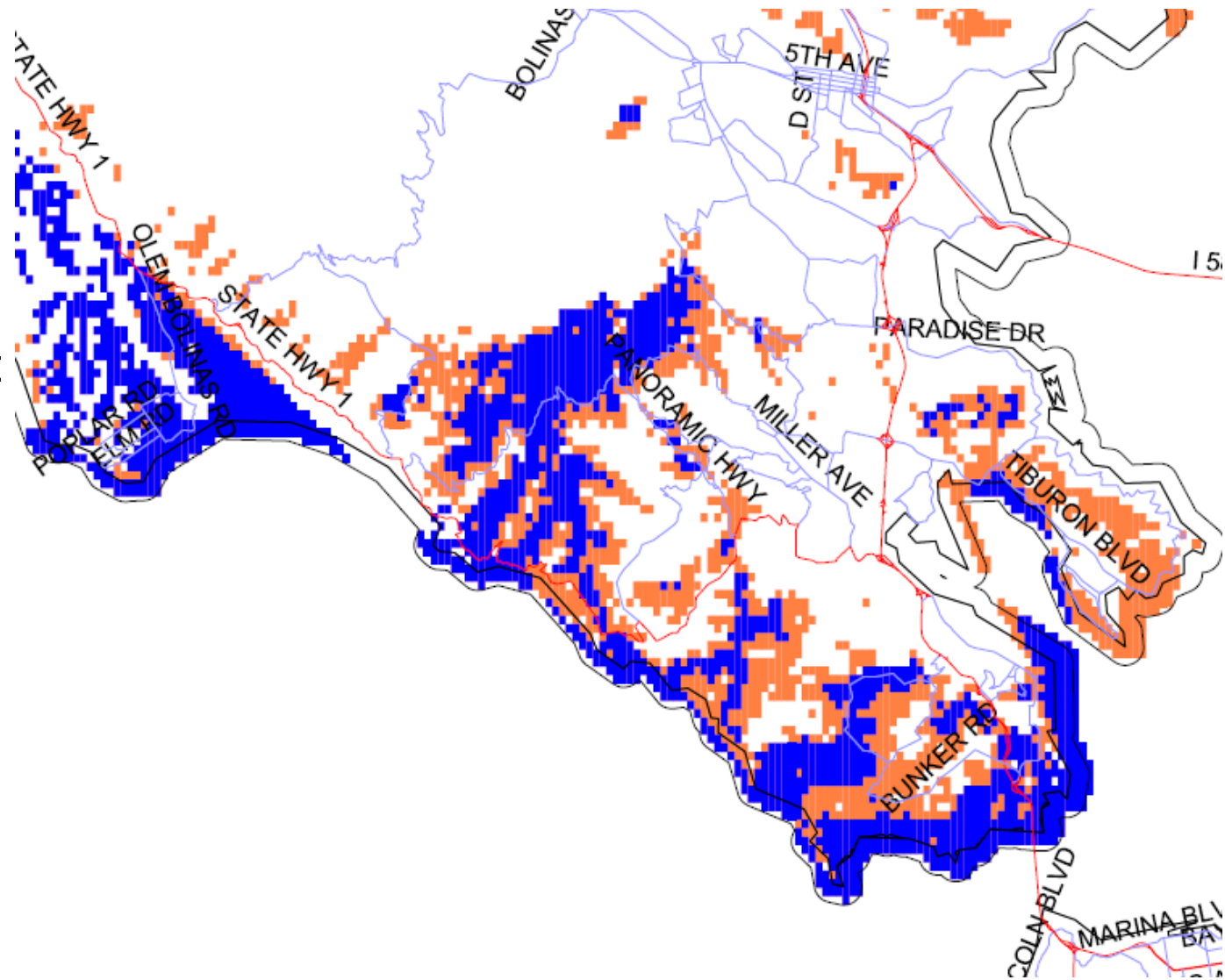


# Southern Coverage

Portable Radio

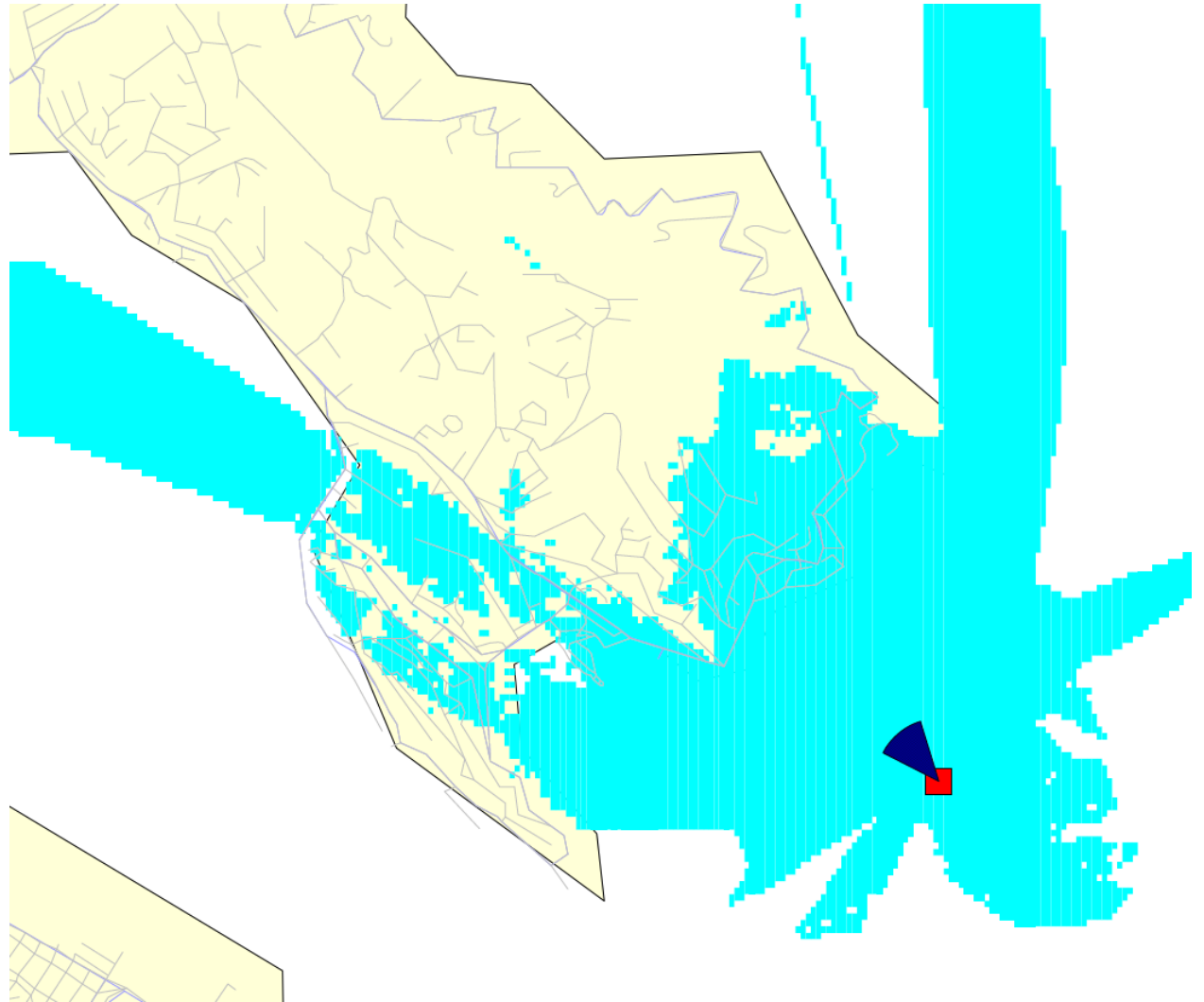
Blue – Talk-in

Orange – Talk-out



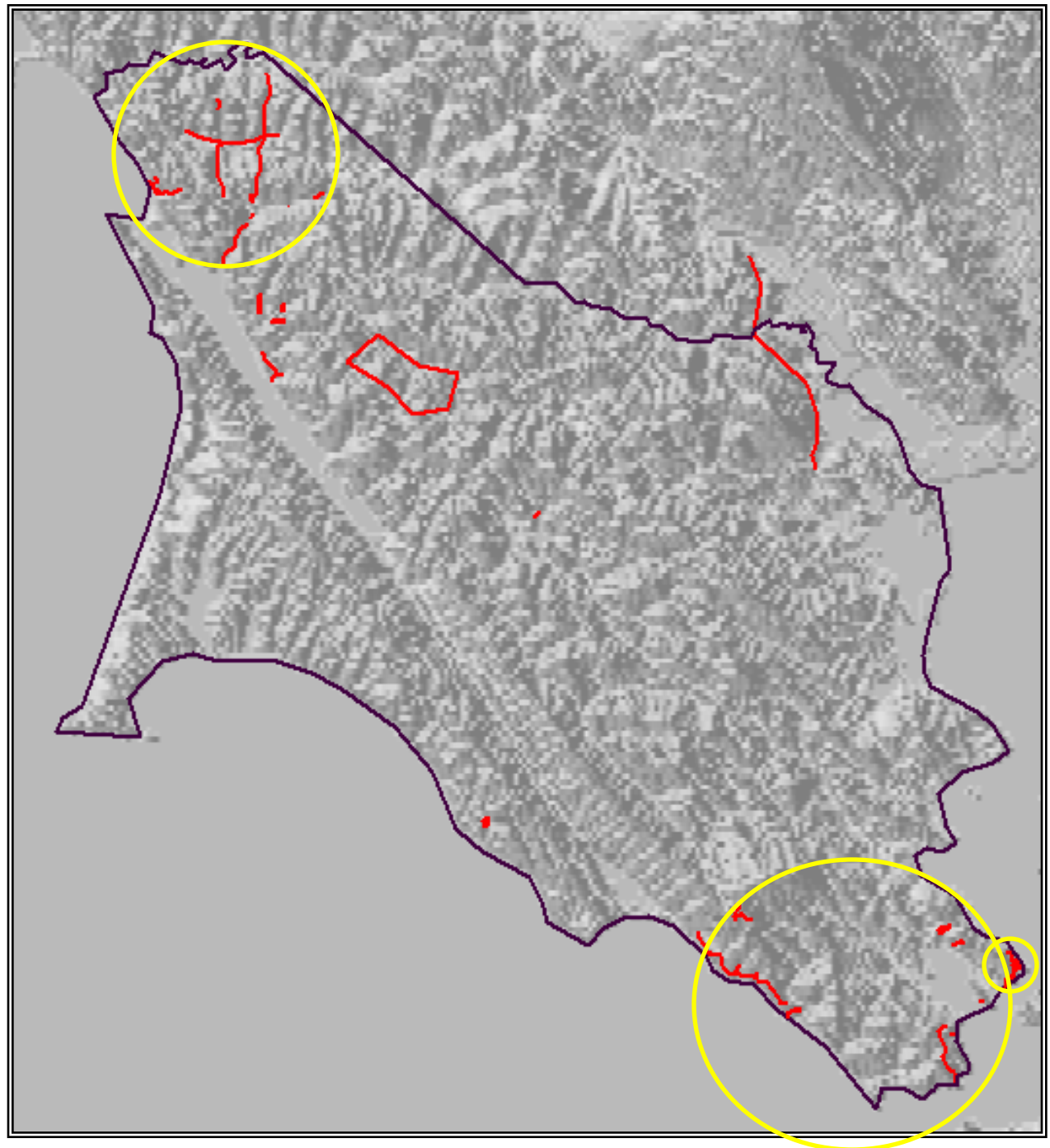
# DVRS Coverage

Portable Talk-in  
Configuration



# MERA Issues

Reported User  
Problem Areas



# MERA Responsibilities

## Tomales Site

- ❑ \$1,357,863 including:
  - \$152,324 Equipment
  - \$178,224 Microwave
  - \$222,763 Shelter
  - \$224,902 Implementation
  - \$265,684 Project Management
  - \$262,204 Civil
  - \$51,762 Tax & Freight
- ❑ Site acquisition and zoning/permitting
- ❑ Access to utilities (electricity)
- ❑ Frequency coordination



# MERA Responsibilities

## Twin Peaks Site

- ❑ \$499,728 including:
  - \$169,799 Equipment
  - \$180,078 Implementation
  - \$135,000 Project Management
  - \$14,851 Tax & Freight
- ❑ Site lease agreement
- ❑ Access to utilities (electricity and T-1)
- ❑ Frequency acquisition (five UHF-T pairs)
- ❑ Frequency coordination

# MERA Responsibilities

## Angel Island Site

- ❑ \$118,542 including:
  - \$28,501 Equipment
  - \$72,969 Implementation
  - \$14,864 Project Management
  - \$2,268 Tax & Freight
- ❑ Site lease agreement
- ❑ Access to utilities (electricity)
- ❑ Frequency acquisition (one UHF pair)
- ❑ Frequency coordination

# Motorola Proposal

## Fire Station Printing Reconciliation

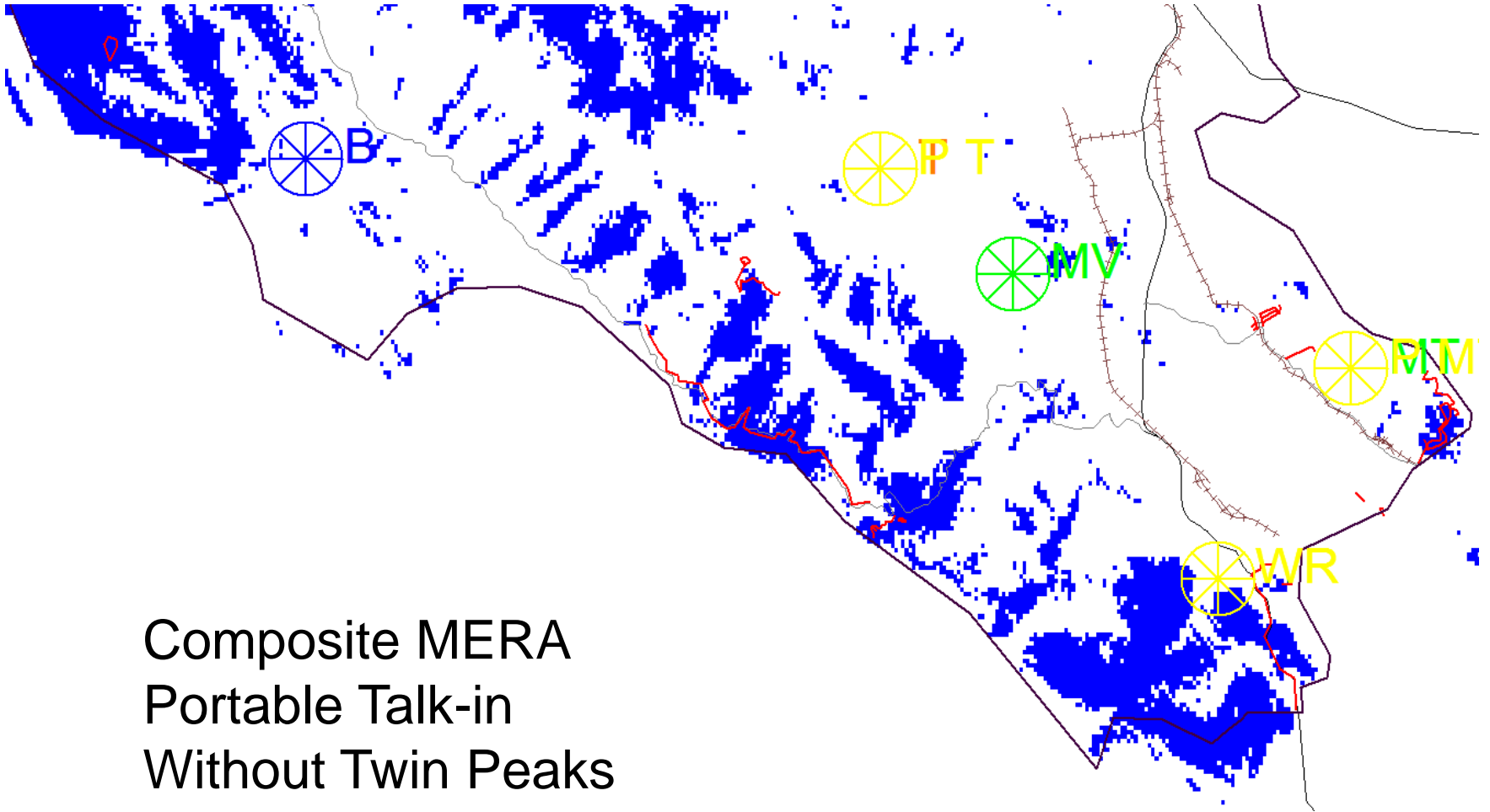
- ❑ If the Tomales site is accepted, Motorola will perform the Angel Island scope for free
  - Tomales \$1,357,863
  - Angel Island \$118,542
  - Total \$1,476,405
  - Discount (\$118,542)
  - Discounted Total \$1,357,863
- ❑ Represents an 8% discount to MERA's regular pricing
- ❑ Discount is not related to the Twin Peaks scope

# Next Steps

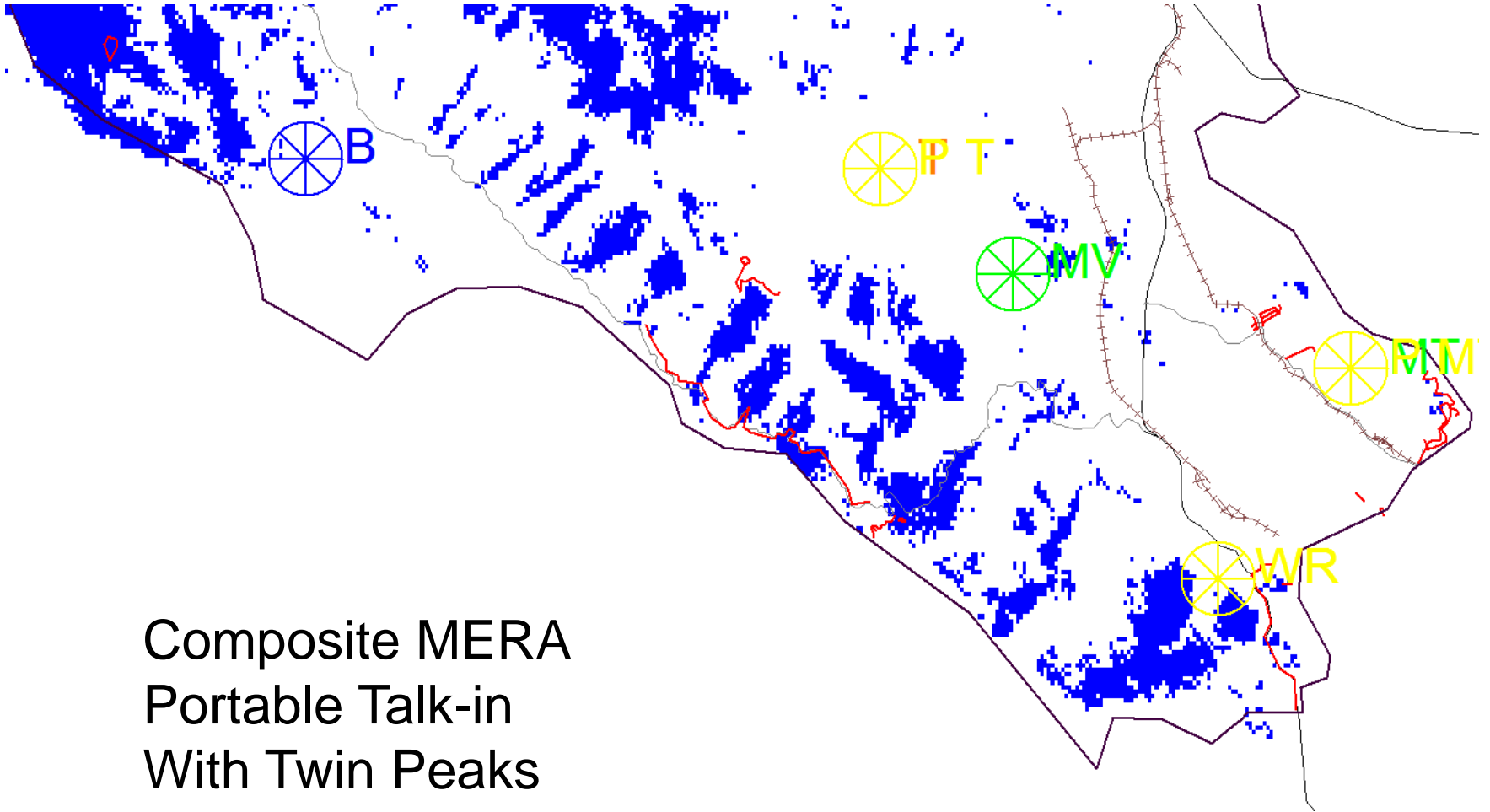
- Discuss proposal
- Discuss options
  - Present proposal to board as-is (legal and purchasing review is also required before signing a contract)
  - Reject proposal and do not improve coverage
  - Continue to negotiate proposal
  - Accept part of the proposal and reject or negotiate other parts
- Develop course of action

# Twin Peaks Coverage Add-on

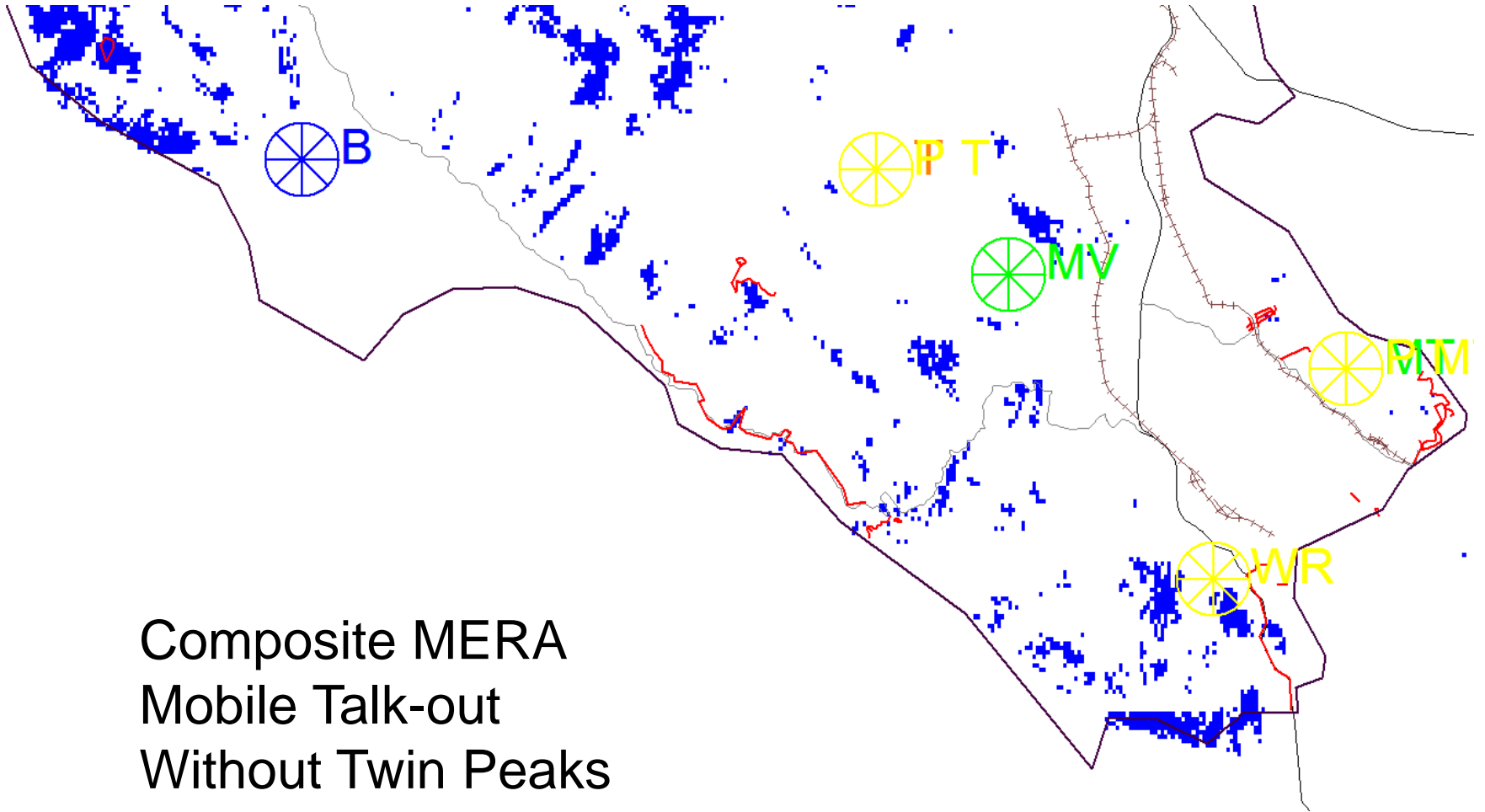
- ❑ The following slides illustrate the coverage improvement provided by the Twin Peaks site
- ❑ The slides show coverage from all sites in the East and West simulcast cells, as well as the multi-cast sites, with and without Twin Peaks
- ❑ Areas shaded blue represent less reliable coverage
- ❑ Configurations for portable, talk-in (which has the least coverage) and mobile, talk-out (which provides the most coverage) are provided



Composite MERA  
Portable Talk-in  
Without Twin Peaks

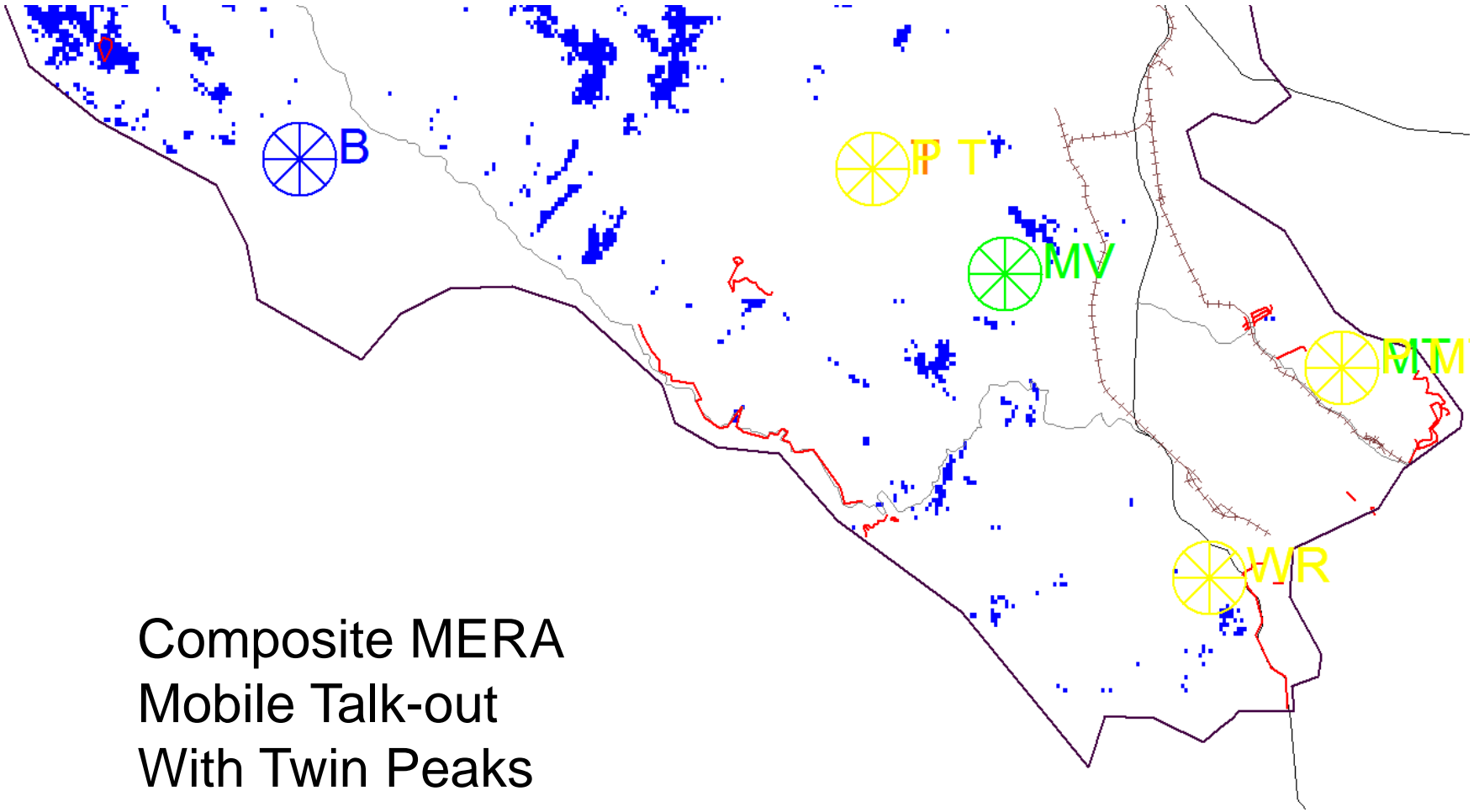


Composite MERA  
Portable Talk-in  
With Twin Peaks



Composite MERA  
Mobile Talk-out  
Without Twin Peaks





Composite MERA  
Mobile Talk-out  
With Twin Peaks