

# BROADBAND STATUS UPDATE

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January 31, 2012



# County-Wide Broadband Study

- Long-standing need in the County for better telecommunications services
  - Coverage, speed, reliability
- OPALCO is uniquely positioned to help
  - Existing redundant fiber infrastructure connecting our County to the mainland
  - Currently building out Smart Grid capabilities
  - Co-op model – bringing high value at low cost to our Membership
- Concept has been developed of a joint-use communication infrastructure that can be used to improve public safety and provide broadband service
- OPALCO's Board authorized a high-level analysis and a member survey
- Results are encouraging and the process of developing a joint-use communication infrastructure is becoming clear

# High-Level Analysis: Results

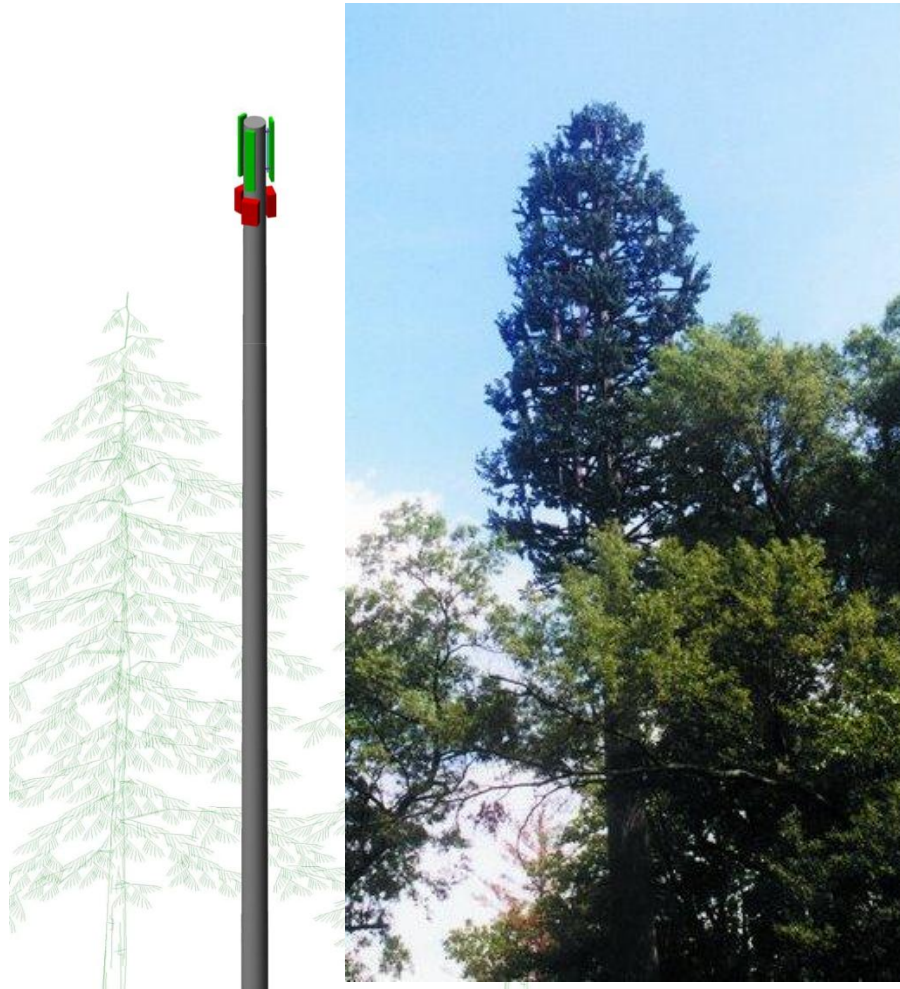
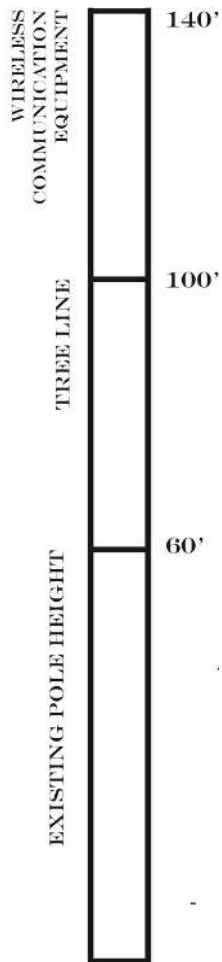
- Hybrid network: Combination of fiber to wireless endpoints (poles)
  - FCC licensed frequency
- Goal:
  - Coverage: 90% of the County (geographic)
  - Minimum 10 Megabits per second (Mbps)
- Capital cost approximately \$18M
- Construction start in 2013
- Launch services in 2014

# Vision: Joint Use Network

Provide a multi-use, joint-access telecommunications infrastructure for the use by the entire community:

- Aids the Public Safety / First Responders Network
  - Facilities improved two-way radio communications
  - Supports data communications, including Internet connections to mainland
- Supports OPALCO's Long-Term Commitments
  - Reliable electrical transmission and distribution systems
    - Meter interface, load monitoring, remote operation and re-routing of power
  - Smart Grid Applications including:
    - Outage Management, Home Energy Monitoring, Energy Conservation
- Provides Reliable Broadband Access to 90% of San Juan County
- Builds Platform for Potential Expansion of Cellular Coverage
  - Access and physical space on poles for cellular provider equipment
  - Power and backhaul services

# Conceptual Pole Design






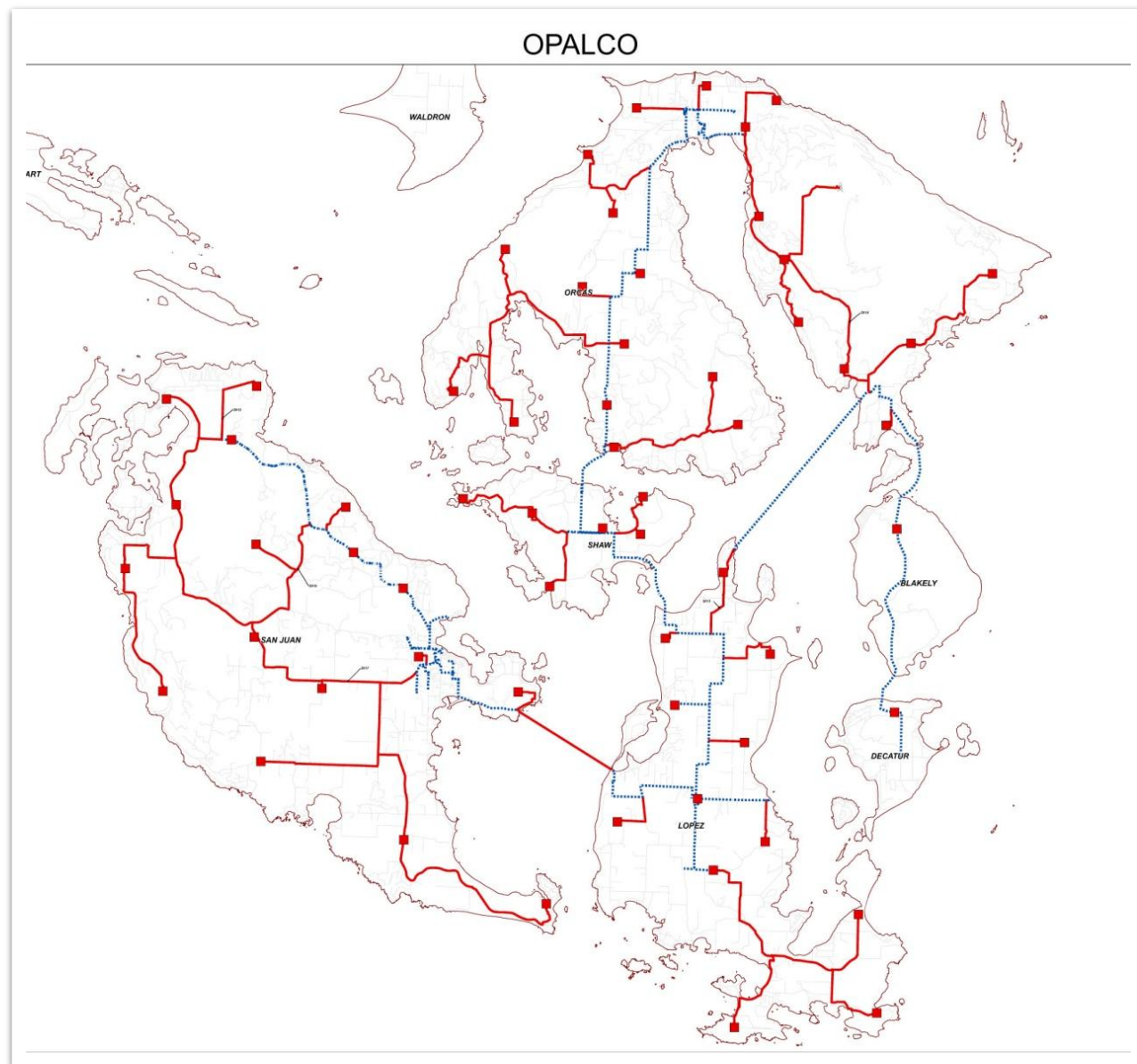
- Low-impact approach
- Utilize existing structures, where possible
- Respect island aesthetics
- Maximum pole height of 140'

*Photo on left ("mono-pine") is example of pole camouflaging technology available now.*

# Conceptual Infrastructure Map

Estimating 60 sites.  
Actual system design is  
dependent upon  
frequency selected.

-  Proposed New Fiber Routes
-  Existing Fiber Routes
-  Proposed Pole or Extension Sites



# Critical issues

- Frequency Selection and Acquisition
  - Radio Frequency studies underway to confirm pole site locations and infrastructure layout
- Due Diligence
  - Confirm business, operational and financial assumptions
  - Transition from high-level to detailed analysis
- Permitting Predictability
  - No OPALCO investment without 100% confidence that we can permit and build the infrastructure
  - Continue to work with the County on Wireless Ordinance and land use access through existing utility franchise agreements

# Next Steps

In order to commit to acquiring the frequency spectrum and moving forward, OPALCO's Board needs:

- Complete Due Diligence efforts (OPALCO)
- A finalized and adopted County Wireless Service Facilities Ordinance that allows OPALCO to permit and build (County)

*Note: Ordinance passage is a pre-requisite to OPALCO's willingness to go forward with spectrum purchase. The project timeline is dependent on these next steps; if these contingences are addressed, frequency acquisition could occur as soon as April, 2012.*

# The Cooperative Approach

For 75 years, OPALCO has served our member-owners “with safe, reliable, cost effective and environmentally sensitive electric utility services.”

OPALCO has a long track record of balancing our members’ interests and capital with efficient utility development and services. We hope this project – through Broadband delivery and expansion of our Smart Grid capabilities – will be the next chapter in a 75-year-old story of our co-op making a difference in the quality of life for San Juan Islanders.

We hope to see you on the ferry for our 75<sup>th</sup> Annual Meeting on the ferry on Saturday, May 5<sup>th</sup>. You can bet we’re going to be taking about Broadband!

