

Qualco Energy Bio-Gas Project



Daryl Williams



Background

- ⌘ Land-Use Changes from Agriculture to Other Types of Development
- ⌘ Skykomish River WQ Problems
 - ☑ Bacteria
 - ☑ Nutrient Loading
- ⌘ Relationship Between Tribes and Dairies
- ⌘ Poor Economy for Dairy Operations



Project Description



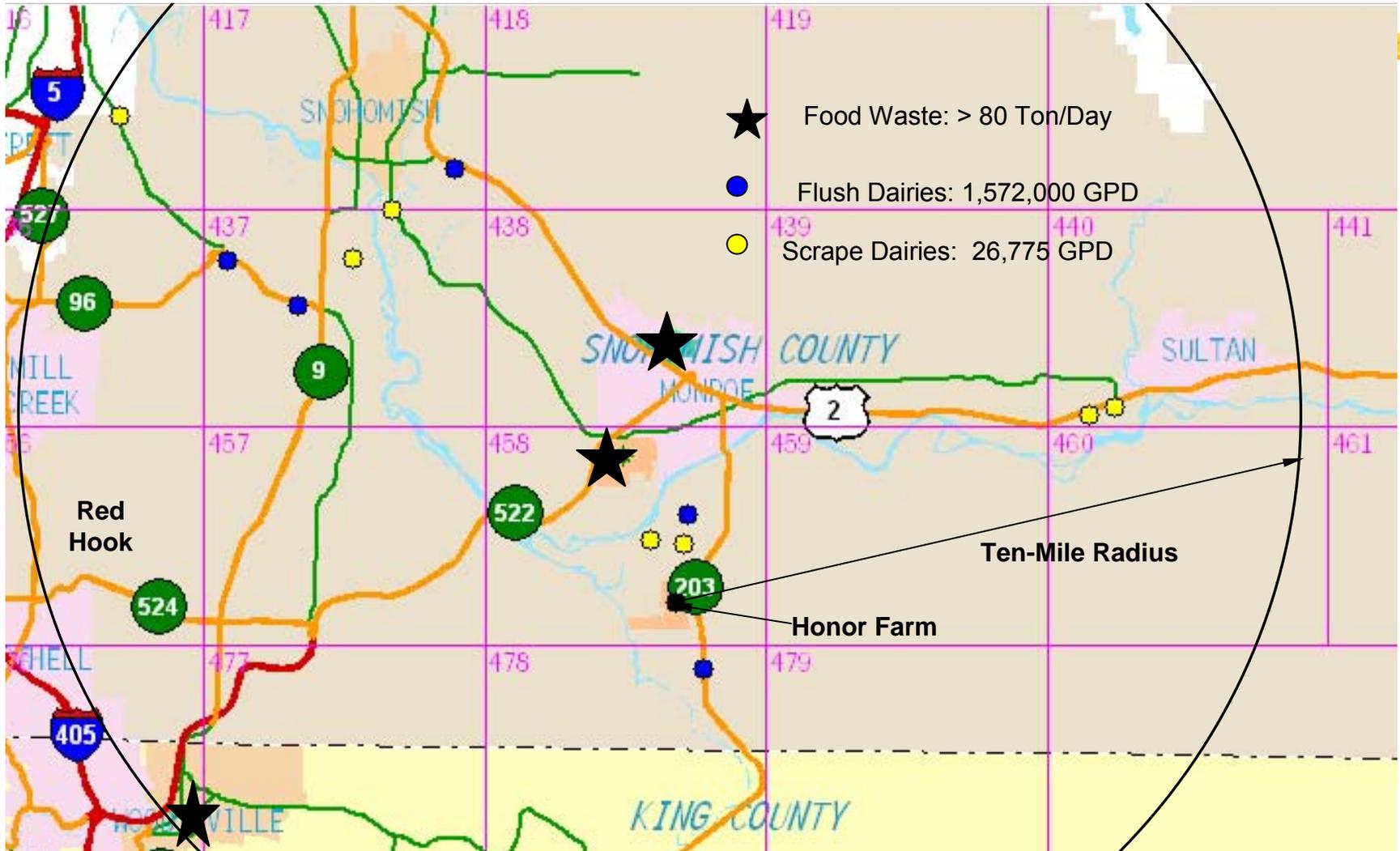
- ⌘ Sewage Treatment for Cow Manure
 - ☑ Collect Cow Manure from Dairies
 - ☑ Collect Food Waste from Nearby Sources
 - ☑ Flow into Anaerobic Digester
 - ☑ Capture Methane Gas
 - ☑ Burn Gas to Produce Electricity or
 - ☑ Compress/Liquefy Gas for Natural Gas Market

Associated Products



- ⌘ Methane and/or Electricity
- ⌘ Bio-Solids for Compost and/or Fertilizers
- ⌘ Treated Effluent Water for Farm Irrigation and Flushing Water
- ⌘ Native Plant Nursery
 - ☑ Habitat Restoration Projects
 - ☑ Landscaping

Monroe-Snohomish Area, 10-Mile Radius



Qualco Energy

⌘ Non-Profit Corporation

⌘ Board of Trustees

☑ Tulalip Tribes

☑ Sno/Sky Agricultural Alliance

☑ NW Chinook Recovery

☑ Energy Northwest ???



Funding

- ⌘ Department of Energy Grant for Feasibility Study and Business Plan
- ⌘ Department of Agriculture Grant for Construction
- ⌘ Energy Northwest Funding ???
- ⌘ Tulalip Tribal Funds
- ⌘ Energy Bill 0% Interest Bonds



Closing

- ⌘ Dairies and Tribes working together
- ⌘ Improved WQ for Fish and People
- ⌘ Salmon Habitat Restoration
- ⌘ Renewable Energy Supply



