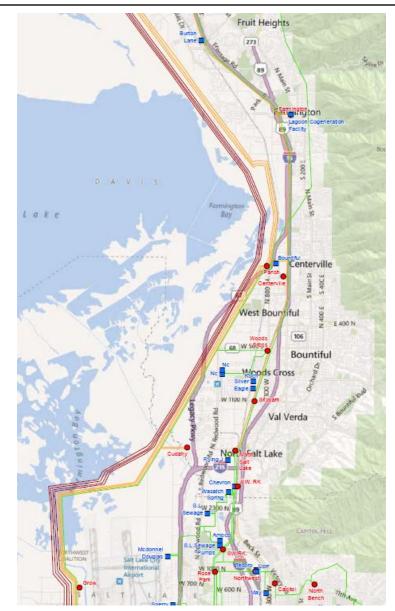
Talmage Daley/Scott Murdock

# **NORTH SALT LAKE UTAH STUDY**



## North Salt Lake Utah Study



- Kaysville (Municipality)
- Farmington
- Centerville
- Bountiful (Municipality)
- West Bountiful
- Woods Cross
- North Salt Lake
- Rose Park (SLC)

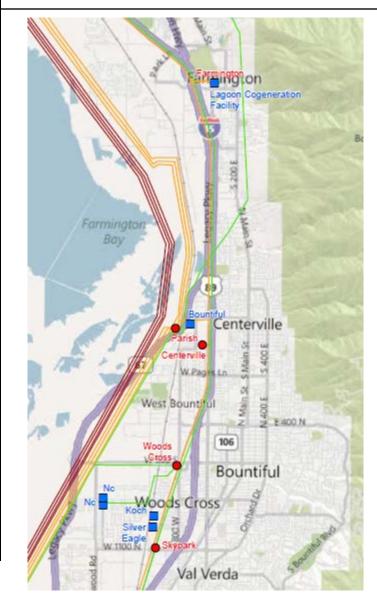


#### North Salt Lake Utah Study

- Covers ~ 70 square miles of area in Salt Lake and Davis Counties.
- 4 Source Substations Terminal, Gadsby, Parrish,
   Syracuse
- 1 Alt. (46 kV) Source at Jordan (Rose Park)
- 2 Alt (46 kV) Sources at Syracuse & Riverdale (North)
- 1 Alt. (138 kV) Source at Syracuse
- There are 24 substations out of which 12 are customer substations.
- Sub-Transmission voltages include 46 kV and 138 kV.



#### **Parrish Sub**



- Serves Farmington, Centerville,
   West Bountiful, Bountiful City,
   Woods Cross and the
   surrounding area.
- Woods Cross serves northern portion of refinery customers.
  - Served by 138 kV from
    Terminal to the south and
    Walnut Grove (Syracuse) to the
    north or alternately Shick and
    provides for area subs at 46 kV
    & 138 kV.



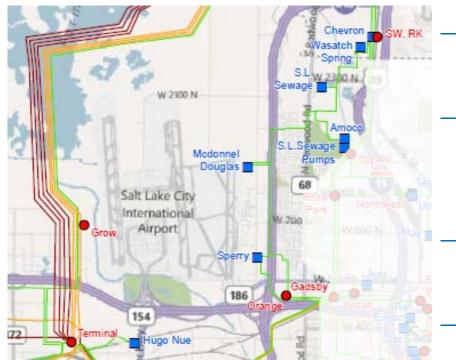
#### **Rose Park & North Salt Lake Substations**



- Served by Gadsby, local source for the area, serving northern edge of Salt Lake and southern edge of Davis Counties (46 kV).
- Provides for Wasatch Springs a notable load center serving refineries in the area.
- Alternate source for Rose Park from Jordan (46 kV).
- Also served by Gadsby Generators (seasonal).



# **Grow, Orange and Wasatch Springs Substations**



- Grow served by Terminal 46 & 138 kV lines to Parrish.
- Grow serves SLC
   International Airport and area commercial loads.
- Gadsby 46 kV line serves customer subs in the area.
- Completes 46 kV loop to
   Wasatch Springs, adding
   reliability for refinery
   customers.



# Load Growth

#### Base System Loads

- Summer 2012: 356.5 MW
- Winter 2012-2013: 274.7 MW

#### – Growth

- Summer: 1.9%
- Winter: 1.7%

#### - Projected System Loads

- Summer 2016: 373.3 MW
- Winter 2016-17: 279.1 MW



#### **North Salt Lake Utah Study**

#### Area Distribution Capacity

- Summer: 360.5 MVA
- Winter: 432.4 MVA

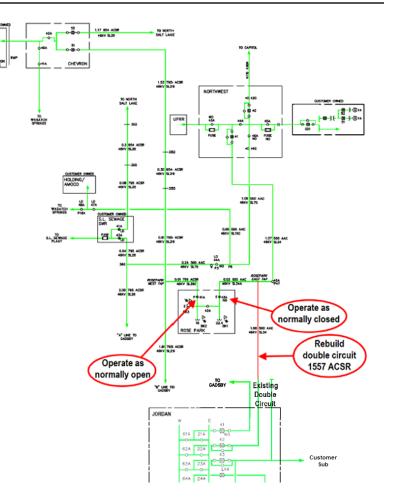
#### Area Utilization

- Summer 2011: 72.9%
- Summer 2012: 62.7%
- Winter 2011-2012: 38.02%
- Winter 2012-2013: 37.44%



# **N-1 System Improvements**

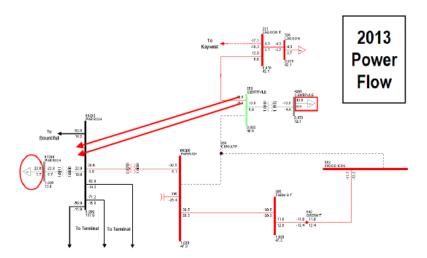
- Jordan to Rose Park 46 kV
   Line Rebuild and Transfer
  - Line currently overloads on N-1 during peak.
  - Constructed doublecircuit 1557 ACSR.
  - Relieves various outage concerns.
  - Estimated cost: \$2,000,000





# **N-1 System Improvements**

- Centerville to Parrish Sub Distribution Load Transfer
  - Centerville low-voltage issue during outage on 46 kV line from Parrish in 2013.
  - Solution allows for Centerville to be served via Kaywest 46 kV during outage until 2017.
  - Distribution system already equipped to permanently transfer load prior to Summer 2013.

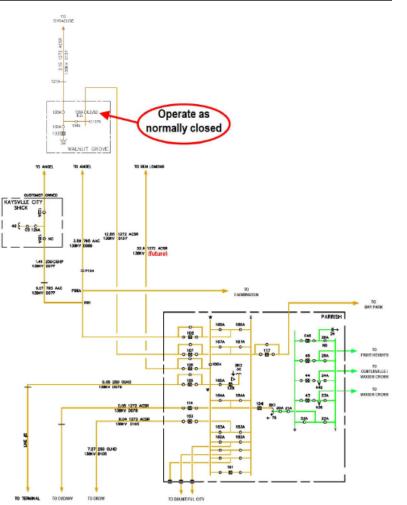




# **N-1 System Improvements**

#### Walnut Grove – Parrish Normally Closed:

- Switch 136A at Walnut
   Grove closed prior to
   Summer 2012.
- Alleviates overload issues upon outage of any of three 138 kV lines serving Parrish from Terminal.
- In service by May 1, 2012





# **Construction Schedule Summary**

#### **Construction Schedule Summary**

		Cost **
2012 CONSTRUCTION No Scheduled Work		\$0
	2012 Total	\$0
<u>2013 CONSTRUCTION – In service before May 1, 2013</u> Distribution Transfer (1.9 MW), Centerville to Parrish		\$0
	2013 Total	\$0
2014 CONSTRUCTION No Scheduled Work		\$0
	2014 Total	\$0
2015 CONSTRUCTION – In service before May 1, 2015 Rebuild line 138 kV double circuit, Jordan to Rose Park ET, and Rose Park transfer.		\$2,000,000
	2015 Total	\$2,000,000
2016 CONSTRUCTION No Scheduled Work		\$0
	2016 Total	\$0
Study Period Total Costs Grand	d Total	\$2,000,000

\*\* All costs estimated to ± 50%



#### **North Salt Lake Utah Area Study**

– Any Questions or Comments?

