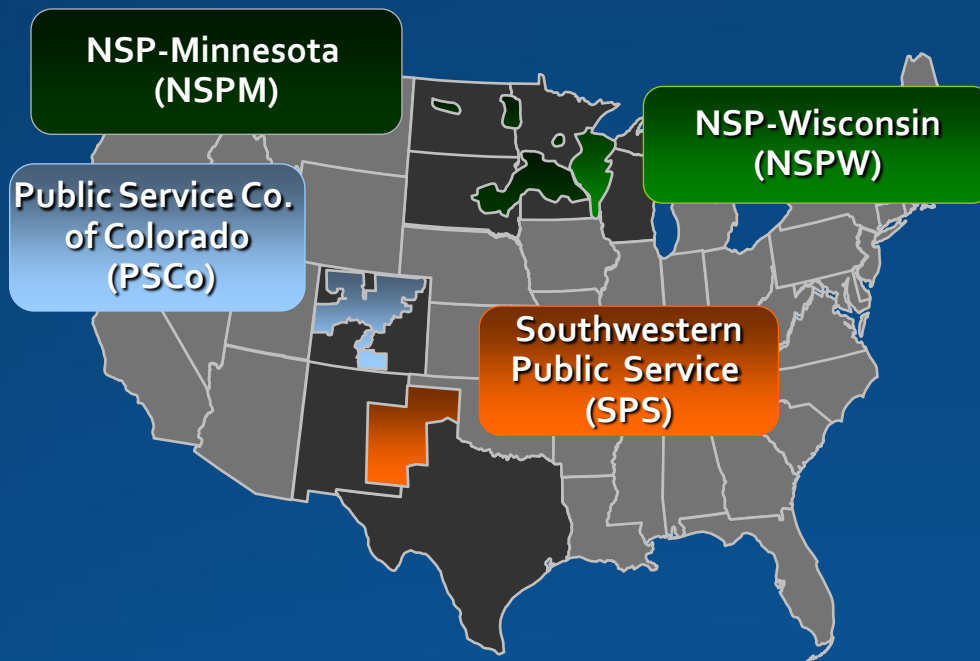


Successful ATM projects: Xcel Energy view

**Colorado Ag Water Alliance
November 29, 2016**

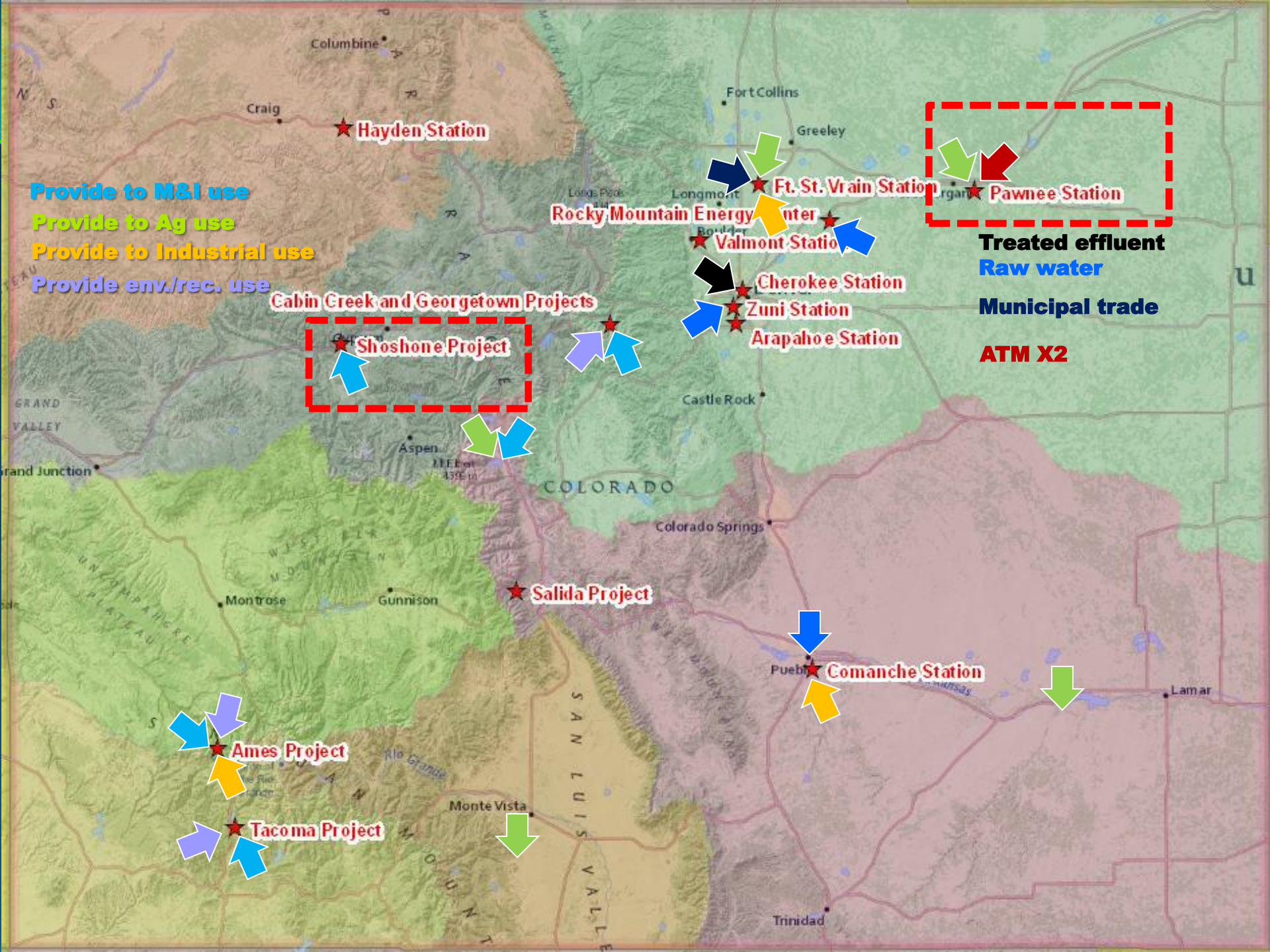
**Richard Belt, P.E., P.H.
Xcel Energy**

Xcel Energy in Colorado



Public Service Co. of Colorado

- 1.4 million electric customers
- 1.3 million natural gas customers
- 3,800 CO employees
- Generation types:
 - coal
 - gas
 - hydro-electric
 - wind
 - solar
- Water is (mostly) self-supplied
- Dow Jones Sustainability Index – 100% in water-related risk management
- ATMs = reliable/cost-effective risk management



Provide to M&I use
Provide to Ag use
Provide to Industrial use
Provide env./rec. use

Cabin Creek and Georgetown Projects



Treated effluent
Raw water
Municipal trade
ATM X2



Current ATMs

Ft. Morgan Water Co. (Ft. Morgan Reservoir & Irrigation Co.)

- **Apr-Oct supply - 2,500 acre-feet**
- **Recharge credits backed by storage**
- **Payment ~ 5X the “going rate” (inflation adjusted)**
- **Nov-Mar supply – PSCo supply in Jackson Res (separate payment)**
- **Water for 500 MW base-load plant since 1990s – operates annually**

Point of Rocks, LLC (North Sterling Irrigation District)

- **Interruptible water supply agreement**
- **Up to 3,000 acre-feet annually (delivered Nov-Mar)**
- **Annual base payment + delivered water payment (inflation adj.)**
- **Significant drought supply (or other “upset”)**
 - **Leverages PSCo’s highly flexible South Platte water supply**
- **In-place since ~ 2005, has not been operated to-date**

Shoshone “relaxation” agreement

Agreement between Denver Water and PSCo

- Drought triggers (hydrologic conditions and Denver Water storage)
- PSCo agrees to “relax” its 1,250 cfs senior call (+/- 600 cfs)
- Denver Water (and others) store water in upstream reservoirs
- PSCo benefit:
 - 15% of net storage delivered to Front Range facilities
 - Power interference payment
- West Slope benefit:
 - 10% of net storage delivered to West Slope entities
- Concept in-place since 2003...has operated in 2003 & 2013

Why do these agreements work so well?

- **Willing participants**
 - Something for everyone?
 - Compatible entities & expectations?
- **Good agreements and communication**
 - ATM purpose understood?
- **Straight-forward operations & administrative burden**
- **Flexibility enabled by STORAGE on both sides**
 - Improves timing compatibility
- **Compatible location**
 - Infrastructure minimized
 - Water benefit remains in same general area
- **Compatible “scale”**
 - “Big supply” with “small demand” – “normal” operations
 - “High(er) value” use with “low(er) value” use

Future:

- Will consider ATMs for drought mitigation
- Further opportunities enabled by renewable energy?

The top of the slide features several overlapping, wavy lines in shades of blue and green, creating a dynamic, flowing effect against the dark blue background.

Thanks!