

Ordinances, Water, Water Quality, Ogden Valley 2030

Weber County Ordinances

- Provides laws required to govern
- Enforceable -> Give teeth to General Plan

- Many Ordinances – of primary interest to GEM:
 - Zoning – 55 Chapters – Law regarding land use (see handout for list)
 - Some chapters specific to Ogden Valley
 - Subdivision – 1 Chapter, 6 sections – Law regarding standards for building subdivisions, condominiums, improvements, permits, and penalties

Water in Ogden Valley

- General – Rights to all water are spoken for; State governance key
- Culinary
 - Many independent water companies (53 – 80), largest are Wolf Creek, Eden Waterworks, Huntsville, Liberty Pipeline.
- Secondary
 - Weber Basin controls principal canal plus subsurface water
 - Liberty Pipeline, Eden Irrigation, Wolf Creek Irrigation, Huntsville, and several other canal companies
 - Pineview Reservoir – Causey Reservoir – Weber Basin, western county canal companies manage; Primary water source for Ogden City with pollution implications for water source protection (artesian wells plus reservoir)
 - Shallow wells ($\leq 25'$) are common, most not registered

Pineview water quality study – 2012

USU Water Quality
Study – Dr. Darwin
L. Sorensen, Ph.D.,
Professor

Pineview Water Study Conclusions

- Classified as impaired because of temperature, algae bloom
- The reservoir is thermally stratified during summer months.
- Phosphorus accumulates in the bottom layer of the reservoir as summer progresses.
- A significant fraction of P (Phosphorus) is removed from the reservoir as water is withdrawn for irrigation and other uses.
- Loads associated with snow-melt runoff contribute the largest fraction of the total.
- Ground water contributes less nitrogen and phosphorus than estimated in earlier studies.
- Certain shoreline sectors near Huntsville contribute more nitrogen and phosphorus than other sectors.

Pineview Water Study – Looking to the Future

- While ground water flow into Pineview Reservoir is small relative to surface water flows, the concentration of phosphorus in certain ground water locations far exceeds those anticipated. Future efforts will use ground water quality monitoring near the reservoir to determine the chemical characteristics and possible sources of soluble phosphorus entering the reservoir.

(The Water bLog, November 2012, a newsletter of the Utah Center for Water Resources Research at USU)

Ogden Valley 2030

- Louis Hurst Masters Project, Advisor Professor Richard E. Toth
- Five models of growth
 - Trend – continuation of existing growth pattern
 - Town Expansion – Continued growth in Huntsville, incorporation and more dense growth in Eden and Liberty
 - Recreation Influence – Most growth associated with the Resorts
 - New Town – Most growth in two new towns, one southeast of the Monastery and the second about a mile northeast of the Liberty 3-way intersection.
- Extensive data models for Agriculture, Biodiversity, Groundwater, Surface Water, Wildlife, View shed, and Air Quality

Ogden Valley 2030 Evaluations

Tier 1 Evaluation

Evaluations

Table 24: Evaluation matrix. This matrix is a future versus future comparison that details which future performs best among a specific evaluation. Green squares represent the future that has the least amount of impacts in each evaluation, while red indicates the highest amount of impact.

Tier 1 Models Evaluation (Future vs. Future)

	Agriculture	Biodiversity	Groundwater	Surface Water	State Selected Wildlife	Viewshed	Air Quality <i>Non-Tiered</i>
Alternative Futures	Trend	Yellow	Red	Yellow	Yellow	Yellow	Yellow
	Town Expansion	Green	Green	Green	Red	Red	Red
	Recreation Influence	Red	Yellow	Yellow	Red	Green	Yellow
	New Town	Yellow	Yellow	Red	Yellow	Yellow	Green

Ogden Valley 2030 Conclusions

- The Town Expansion alternative is the most attractive.
 - Increase density in and close to current population centers.
 - Incorporate Eden and Liberty.
 - Increase protections on water resources.
 - List and prioritize highly visible areas within Ogden Valley (like the Geertsen Creek and Elkhorn Ranch foothills)
 - Protect and preserve agricultural, historic town centers, cultural resources, rare habitats or other valuable landscape areas.
 - Update the Ogden Valley General Plan.

<http://www.cnr.usu.edu/quinney/htm/collections/theses-dissertations/publication=10516>