

Water-Conscious Development Guide



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Example of water-wise, low-maintenance landscaping in a commercial area (Fairbourne Station).

Introduction

This guide is designed to help developers understand and implement water conservation requirements in West Valley City.

As outlined in the City's General Plan, every development has a hydrologic cost, and every community has a hydrologic budget.

Water-conscious development is not only good for the community's future — it's required by city ordinance, supported by state law, and increasingly demanded by customers.

Why Water Conservation Matters in West Valley City:

- Located in the Great Salt Lake watershed, West Valley City recognizes water conservation as critical to regional sustainability.
- Supporting the Great Salt Lake's ecological health and local air quality.
- Addressing long-term drought conditions in Utah.
- Ensuring water availability for future development.
- Meeting water conservation requirements in Utah Code.



"Did You Know?"

Water Facts for West Valley City

Utah Water Usage

- Utah residents use the most water per capita in the Southwest, with some areas using nearly three times more water than nearby Las Vegas with similar climate conditions.
- The statewide per capita water use for potable and secondary water is 223 gallons per day (GPCD), but this has been declining steadily from previous years.
- In Granger Hunter Improvement District, which serves about 75% of West Valley City, per capita water use is approximately 142 gallons per day - showing the city's progress in conservation.
- According to a Utah Foundation report, nearly 50-70% of residential water consumption in Utah is used for outdoor landscaping and irrigation.

Great Salt Lake Impact

- The Great Salt Lake has shrunk by approximately 50% since pioneer settlement began, with water levels dropping 11 feet - primarily due to water diversions.
- As lake levels drop, exposed lakebed releases toxic dust containing arsenic and other heavy metals, creating serious air quality threats for the Wasatch Front.
- If the lake continues to decline, economic losses could total \$1.69-\$2.17 billion per year or \$25.4-\$32.6 billion over 20 years.
- The lake's ecosystem supports 10 million migratory birds and 80% of Utah's wetlands.
- Reducing water consumption by 35% in the Great Salt Lake watershed could stabilize and restore lake levels.

Water Conservation Impact

- Simply being smarter about how we water lawns could reduce outdoor water use by at least 25% without removing any turf grass.
- Converting landscapes to water-wise designs can reduce outdoor water use by 50-70%.
- Smart irrigation controllers and efficient fixtures can reduce water consumption by 15-30%.
- Conservation has already delayed major water development projects in Utah by several decades.
- By cutting residential water use by just 50 gallons per person per day, water development projects like the Bear River Development could be delayed by up to 45 years.

Development and Growth

- Metering secondary water systems has shown to reduce water use by 30-50%.
- Water-efficient new development can use 40-60% less water than traditional development.
- Green infrastructure like rain gardens and bioswales can capture stormwater runoff, reducing irrigation needs by 10-25%.
- Well-designed water-wise landscapes can increase property values by 5-15% compared to traditional turf-heavy designs.
- Businesses implementing water conservation measures can save thousands of dollars annually in water bills.



Water Requirements by Development Type

The following requirements apply to developments within West Valley City, based on the City's General Plan and municipal code. Each water service provider may have additional requirements.

The points marked as 'required' are based on municipal code provisions that were adopted as of August 2025. Items marked as 'recommended' or 'encouraged' represent best practices. Consult Municipal Code Chapter 7-16 and your water service provider for complete requirements.

All Applicable Developments

Documentation Requirements:

- Landscape Plan Documentation Package required for commercial, industrial, and multi-unit residential projects. *(required - Municipal Code 7-16-103(2))*
- Packages must be prepared by a certified Designer (Landscape Architect, Professional Engineer, or Architect). *(required - Municipal Code 7-16-103(5)(a))*
- Soils Report required for irrigated landscape areas exceeding 2,500 square feet. *(required - Municipal Code 7-16-103(2)(e))*

Irrigation System Requirements:

- WaterSense labeled smart irrigation controllers required (with automatic rain delay/shut-off). *(required - Municipal Code 7-16-103(4)(c))*
- Secondary or reuse water must be used when available from a local water provider. *(required - Municipal Code 7-16-103(4)(l))*
- Separate landscape water meter required when mandated by water purveyor for secondary water systems. *(required - Municipal Code 7-16-103(4)(b))*
- Irrigation scheduled between 9:00 p.m. and 8:00 a.m. for spray/stream sprinklers. *(required - Municipal Code 7-16-103(4)(j))*
- Drip irrigation lines must be underground (except emitters). *(required - Municipal Code 7-16-103(4)(i))*

Landscape Requirements:

- Minimum 4-inch depth of mulch required in all irrigated non-turf areas. *(required - Municipal Code 7-16-103(3)(c))*
- Areas with slopes greater than 33% must use water-conserving plants for erosion control. *(required - Municipal Code 7-16-103(3)(b))*
- Parking strips and areas less than 8 feet wide must use water-conserving plants with drip irrigation or bubblers. *(required - Municipal Code 7-16-103(4)(f))*

Enforcement and Inspections:

- "The City reserves the right to perform site inspections at any time before, during or after the irrigation system and landscape installation, and to require corrective measures if requirements of this Chapter are not satisfied." *(Municipal Code 7-16-103(5)(e))*



Commercial and Mixed-Use Developments Indoor Requirements: • All fixtures must meet state building code efficiency standards. <i>(required)</i> • Water reuse systems encouraged for larger developments. <i>(encouraged)</i> Outdoor Requirements: • Maximum 20% turf grass in landscaped areas. <i>(encouraged)</i> • Smart irrigation controllers required. <i>(required)</i> • Water-wise plant materials for at least 50% of planted areas. <i>(encouraged)</i> • Minimum 4" depth of mulch in planting beds. <i>(encouraged)</i>	Multi-Family Residential Indoor Requirements: • All fixtures must meet state building code efficiency standards. <i>(required)</i> • Individual unit submetering recommended. <i>(recommended)</i> Outdoor Requirements: • Maximum 30% turf grass in landscaped areas. <i>(encouraged)</i> • Smart irrigation controllers required. <i>(required)</i> • Common area landscaping must emphasize water conservation. <i>(encouraged)</i> • Minimum 4" depth of mulch in planting beds. <i>(encouraged)</i>
New Single-Family Residential Developments Indoor Requirements: • All fixtures must meet state building code efficiency standards. <i>(required)</i> Outdoor Requirements: • Maximum 35% turf grass in front and side yard landscaped areas. <i>(required - Municipal Code 7-16-104(2))</i> • Lawn prohibited in areas less than 8 feet wide. <i>(required - Municipal Code 7-16-104(1))</i> • Drip irrigation required for non-turf areas. <i>(encouraged)</i> • Minimum 4" depth of mulch in planting beds. <i>(encouraged)</i>	Industrial Developments Indoor Requirements: • All fixtures must meet state building code efficiency standards. <i>(required)</i> • Water use and conservation plans recommended for water-intensive uses. <i>(recommended)</i> • Water recycling systems are encouraged for manufacturing processes with high water usage. <i>(encouraged)</i> Outdoor Requirements: • Maximum 15% turf grass in landscaped areas. <i>(encouraged)</i> • Drought-tolerant plant species encouraged. <i>(encouraged)</i> • Smart irrigation controllers required. <i>(required)</i> • Minimum 4" depth of mulch in all planting beds. <i>(encouraged)</i>



Example of drought-tolerant commercial landscaping.



Example of xeriscaped commercial frontage.



Efficient landscaping for a shared residential open area.



Example of poorly planned irrigation and landscaping.



Low-water parkstrip example.



Landscaping with low benefit and high-water and maintenance requirements.



Landscaping Design Standards

General Standards for Development

All new developments (except for single family residential) in West Valley City must adhere to these landscaping standards for water conservation:

- **Hydrozoning:** Group plants with similar water needs.
- **Soil Preparation:** Minimum 6" of topsoil or appropriate soil amendments.
- **Mulch Requirements:** Minimum 4" depth of mulch in all planting beds.
- **Irrigation Efficiency:** Drip irrigation required for trees, shrubs, and perennials.
- **Turf Limitations:** Turf is prohibited in parking strips and landscaped areas less than eight feet wide, which must use water-conserving plants with drip irrigation or bubblers.
- **Smart Controllers:** WaterSense labeled smart irrigation controllers are required.

Parkstrip Recommendations

- Water-wise plants with drip irrigation.
- Permeable or impermeable hardscape.
- Organic mulch with water-wise plants.
- Rock mulch with water-wise plants.

Design Note: Parkstrips must include trees where specified by street tree requirements. Ensure adequate soil volume and irrigation for tree health.



Example of permeable hardscaping and water-wise plantings in an industrial development.

Commercial Frontage Standards

Commercial developments must create water-efficient yet attractive frontages:

- All street-adjacent setbacks must be permanently landscaped with 50% live plant material coverage.
- Required trees must be 1.5-inch caliper (deciduous) or 6-foot height (evergreen), with four shrubs per tree.
- Properties on designated arterial roadways require 20-foot landscaped buffers with one tree per 600 square feet.



Stormwater capture with local plants.

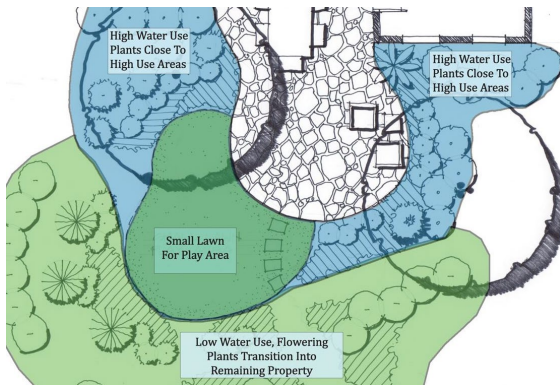


Diagram of hydrozoning (planning landscaping according to plants that have similar water needs).



Example of xeriscaping where hydrozoning is applied.



Cross-section diagram of bioretention design in a parking area.



Example of bioretention in a parkstrip.



Landscape plan for terracing for different areas of the yard of a detached single-family home.



Example of small-scale terracing.



Site Planning for Water Efficiency

Integrated Water Management Approach

Effective water conservation begins at the site planning phase. Consider these approaches:

- **Passive Water Harvesting:** Grading to direct stormwater to landscaped areas.
- **Soil Management:** Preserve existing topsoil and minimize compaction.
- **Reduced Hardscape:** Minimize impervious surfaces.
- **Functional Turf Areas:** Limit turf to areas with specific recreational needs.

Key Ideas for Commercial Development:

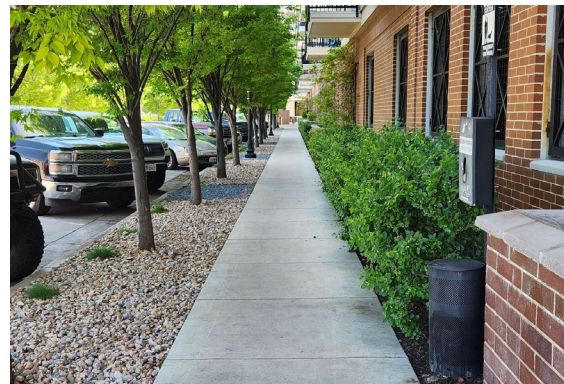
1. Water-efficient entry landscape.
2. Bioswale in the parking area.
3. Permeable paving for low-traffic areas.
4. Hydrozoned planting areas.
5. Gathering area with functional turf.
6. Rainwater harvesting system.



Industrial development with low-water landscaping adjacent to parking and entry.

Key Ideas for Multi-Family Development:

1. Stormwater detention landscape feature.
2. Limited turf recreation area.
3. Water-wise perimeter planting.
4. Tree preservation area.
5. Common gathering area with permeable surfacing.
6. Water-efficient entry landscape.



An attractive walkway designed for low water demand in a high-density residential area.



Parkstrip with artificial turf instead of sod in a residential area.



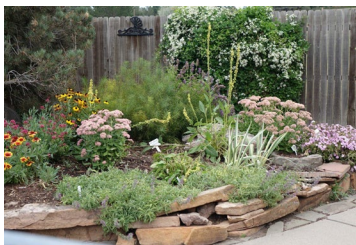
Example of permeable pavers.



Secondary water meter that can be read digitally.



Drip irrigation system in low-water planting areas.



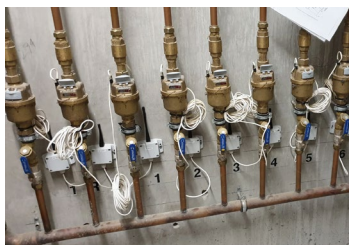
Example of xeriscaping.



Hardscaping a backyard in a residential development.



Installation of bioretention in a highly trafficked pedestrian area.



Water submetering equipment for multi-unit structures.



Terracing and landscaping a yard with low-water plantings.



Underground drip irrigation.

Techniques for Common Challenges

- Sloped Sites -

- Terracing and contouring to slow water flow.
- Check dams in swales.
- Drought-tolerant erosion control plantings.

- Parking Lots -

- Bioretention areas to capture runoff.
- Tree islands designed to receive runoff.
- Permeable paving for overflow parking.

- Moderate-Income Housing -

- Balance initial installation costs with long-term water savings.
- Select durable, low-maintenance plants that require minimal irrigation.
- Implement water-efficient fixtures that reduce utility costs for residents.
- Design irrigation systems with separate zones for ease of maintenance.
- Incorporate educational components about water conservation for residents.

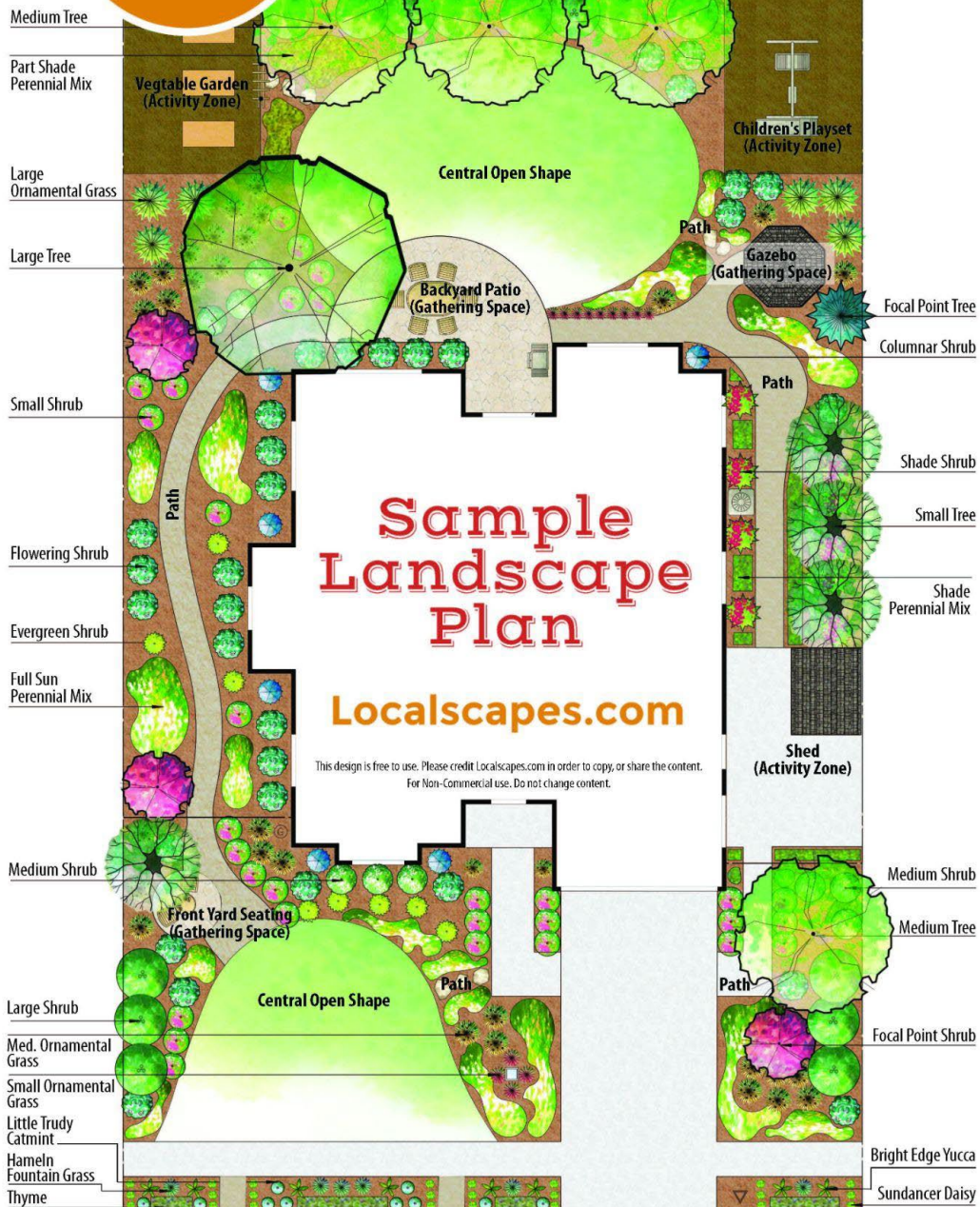
- Phased Development -

- Establish permanent water-wise landscaping in completed phases.
- Design water systems with future phases in mind.



Utah
Localscapes

to an innovative,
practical landscape
designed for Utah.



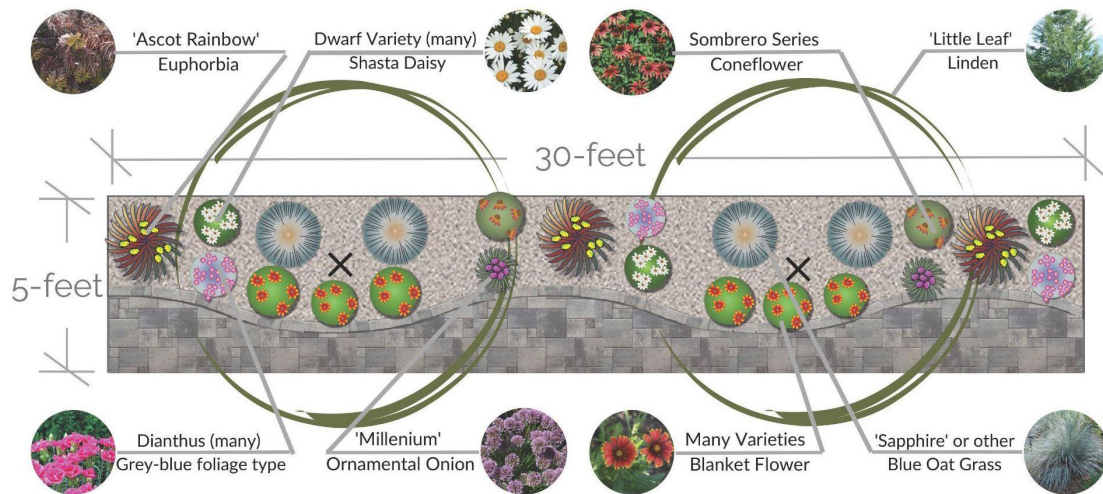
Example of a landscape plan that incorporates principles of hardscaping, hydrozoning, and is designed to be low-maintenance and is productive for both the short and long term.

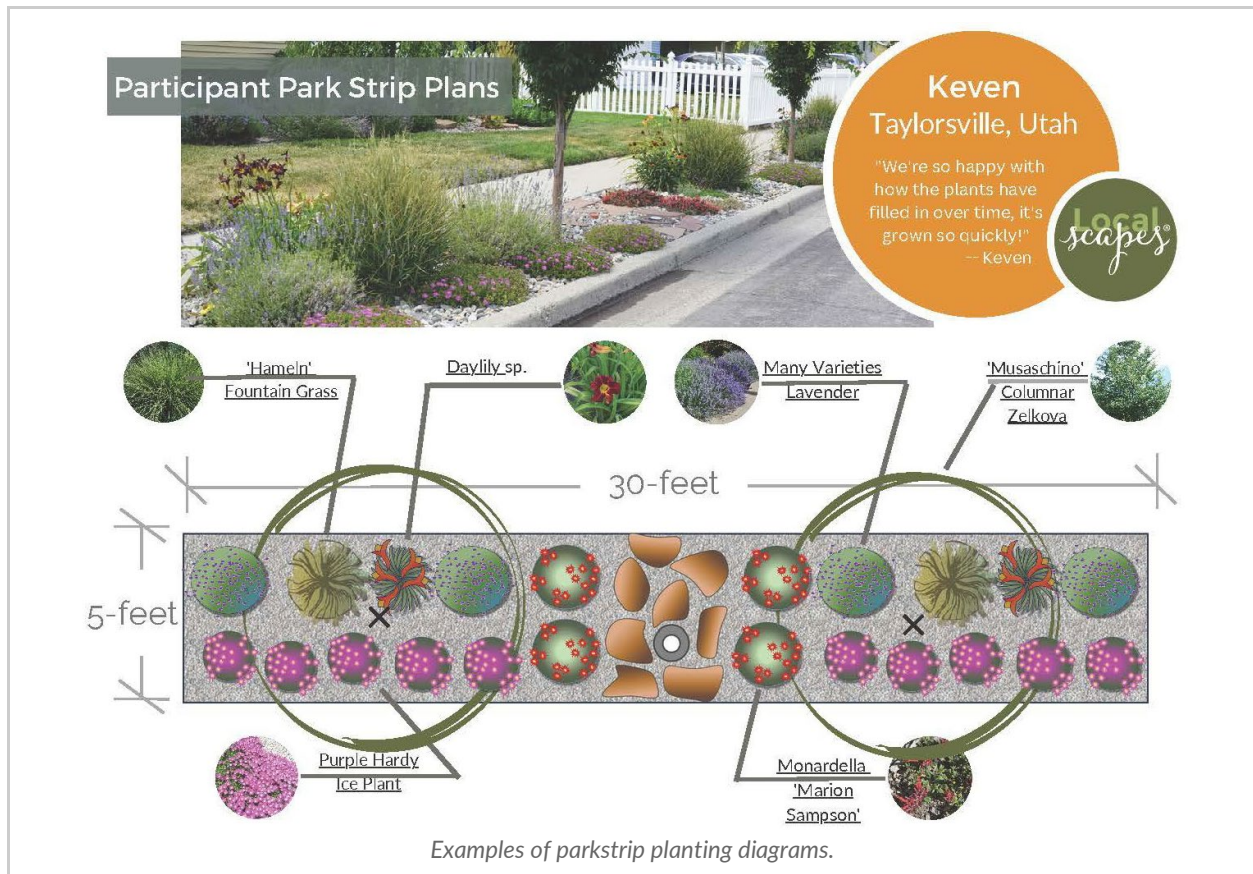


Participant Park Strip Plans

Jeff & Stacie
Herriman, Utah

"Installing the pavers on
the street side was a
challenge, but the
outcome made it
totally worth it!"
-- Stacie





Case Studies: Successful Water-Efficient Developments

Fairbourne Station

Project Type: Mixed-Use Transit-Oriented Development

- 70% reduction in outdoor water use compared to traditional landscaping
- Integrated stormwater management with landscape features
- Smart irrigation technology with weather sensors
- Native and adapted plant palette
- Limited turf only in functional gathering spaces

Developer Quote: "The water-efficient landscape at Fairbourne Station has reduced our maintenance costs while creating an attractive, resilient public space."



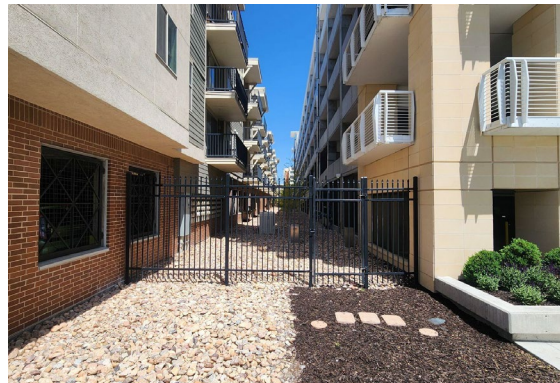
Commercial frontage landscaping with native plants.



Parking lot planter islands with very low water and maintenance requirements.



Landscaping along pedestrian areas near the transit stop in Fairbourne Station.



Example of hardscaping with permeable rock between buildings (in areas not intended for pedestrian use).

Liberty Commons

Project Type: Tax Credit Affordable Housing Apartments

- Efficient irrigation system reduces outdoor water use by approximately 30%.
- Native and adapted plant palette requiring minimal supplemental irrigation.
- Limited turf areas for specific recreational uses.
- Indoor WaterSense fixtures reduce water consumption and utility costs for residents.
- Landscape design that minimizes maintenance requirements.



The common area landscaping in Liberty Commons complex provides for low-water and year-round interest.

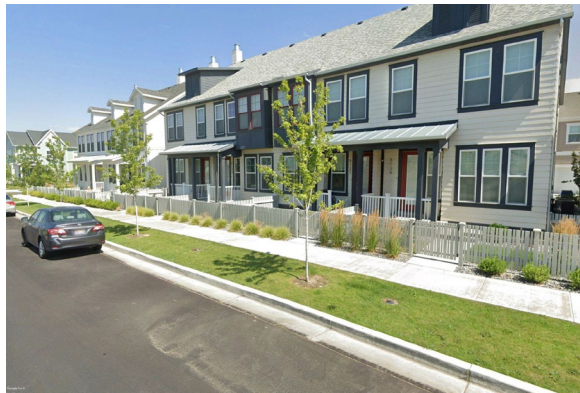


Landscaping berms against the buildings, wide sidewalks, and tree plantings minimize the need for grass.

Daybreak

Project Type: Mixed-Use Transit-Oriented Development

- Incorporates an innovative stormwater management system with retention ponds, rain gardens, and bioswales while creating aesthetic community amenities.
- Utilizes secondary water systems for all outdoor irrigation.



Typical streetscape of attached housing with shade tree and low-water landscaping for yards.



The development posts design guidelines that provide clear direction for things such as water-wise landscaping.

Resources and Incentives

Water Conservation Rebates

UtahWaterSavers.com

- “Switch to Drip” program
- Turf replacement

Water District Contacts

Granger Hunter Improvement District

- Website: <https://ghid.org>
- Development Contact: Todd Marti, Assistant General Manager/District Engineer



- “Treebate” program

Granger Hunter Improvement District Programs:

- Smart Controller Rebate: Up to \$150
- Toilet Replacement Rebate: Up to \$100
- Water-Efficient Washer Rebate: Up to \$100

Contact your specific water provider for current rebate information.

State and Regional Resources

Utah Division of Water Resources:

- Provides water-wise plant lists
- Free landscape design templates
- Water conservation guides
- <https://water.utah.gov/water-general-plan/>

Jordan Valley Water Conservancy District:

- Conservation Garden Park demonstration gardens
- Plant database
- Educational resources
- <https://jvwcd.org/>

Local Demonstration Gardens:

- Conservation Garden Park (West Jordan)
- Utah State University Botanical Center (Kaysville)
- Red Butte Garden (Salt Lake City)

Technical Assistance

- Water checks from local water providers
- Landscape architect referrals from Utah ASLA
- GHID commercial water audit program
- West Valley City Housing Rehabilitation Program: assistance for qualified homeowners that can include water-efficient fixture upgrades and irrigation system improvements.

- Phone: 801.955.2234
- Email: t.marti@ghid.gov

Kearns Improvement District

- Phone: 801-968-1011
- Website: <https://www.kearnsid.org>
- Development Contact: James "Woody" Woodruff, Public Works Director
- Email: jwoodruff@kidwater4ut.gov

Magna Improvement District

- Phone: 801-250-2118
- Website: <https://www.magnawaterut.gov>
- Development Contact: Trevor Andra, P.E., District Engineer
- Phone: 801-231-4249
- Email: Trevor@magnawaterut.gov

Taylorsville-Bennion Improvement District

- Phone: 801-968-9081
- Website: <https://www.tbid.org>
- Development Contact: Jordan Riley, Engineering Manager
- Email: jriley@tbid.org

City Contacts

West Valley City Planning Department

- Phone: 801-963-3282
- <https://www.wvc-ut.gov/271/Planning-Zoning>
- Contact: Brock Anderson

West Valley City Building Department

- Phone: 801-963-3283
- <https://www.wvc-ut.gov/155/Building-Safety>
- Contact: Jerry Thompson, Building Official

Additional Resources

For additional information on water-conscious development in West Valley City, please refer to:

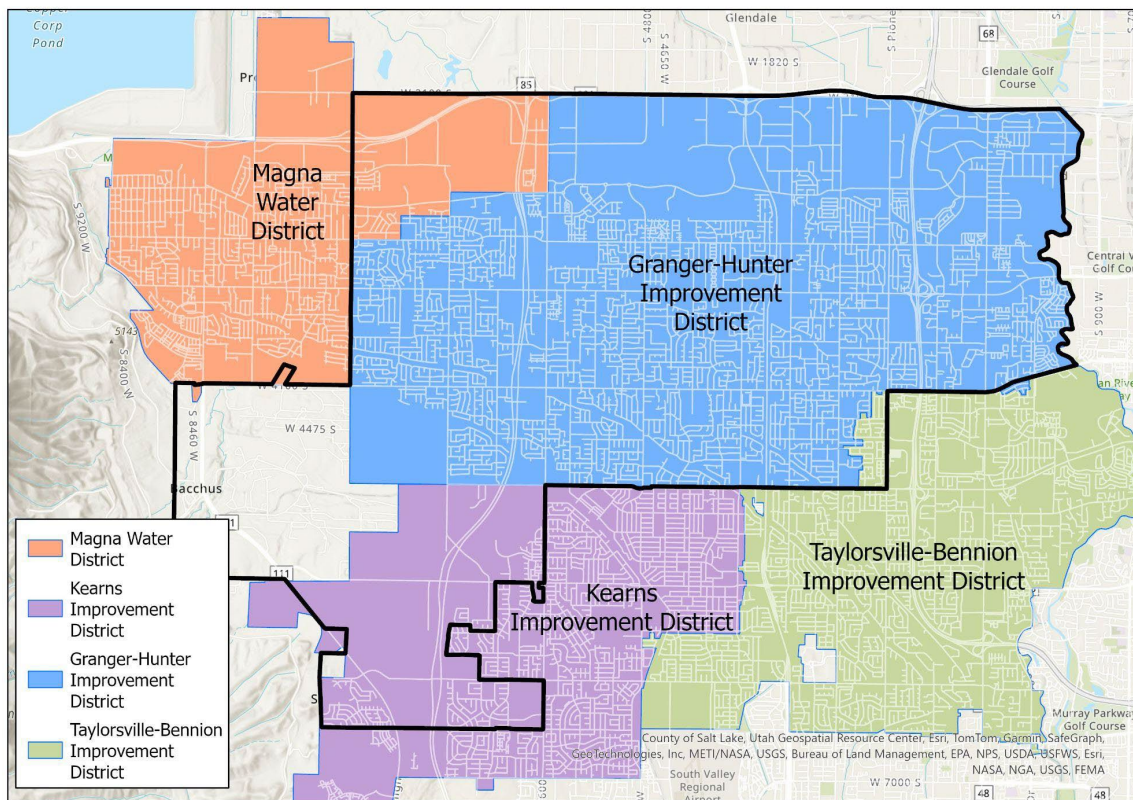
- West Valley City Municipal Code - <https://westvalleycity.municipal.codes/Code/7>



- Utah Division of Water Resources Water-Related Land Use data and mapping tools provide critical information for understanding current water use patterns and conservation opportunities. Available at: <https://dwre-utahdnr.opendata.arcgis.com/>
- Jordan Valley Water Conservancy District serves as the regional water provider supplying many of West Valley City's water districts and offers extensive conservation resources, demonstration gardens, and educational programs. Available at: <https://jvwcd.org/>
- Utah State University's Center for Water-Efficient Landscaping provides research-based resources on water conservation in landscaping specific to Utah's climate conditions. Available at: <https://cwel.usu.edu/>
- The Great Salt Lake Collaborative provides comprehensive research and policy recommendations for addressing the declining water levels of the Great Salt Lake. Available at: <https://www.greatsaltlakenews.org/>
- Locascapes offers Utah-specific landscape design templates and resources that emphasize water conservation while maintaining attractive and functional outdoor spaces. Available at: <https://locascapes.com/>



Culinary Water Service Provider Boundaries



*Map showing the service areas of culinary water providers.
[Click here for a printable copy of the map.](#)*

A photograph of a landscaped garden bed. In the foreground, there is a large, light-colored rock on the left and a cluster of tall, thin, yellowish-green grasses. The ground is covered in dark brown mulch. In the middle ground, there is a large, rounded green shrub and several tall, thin purple flower spikes. In the background, there is a house with light blue siding and a dark brown door. A young tree with a thin trunk and green leaves is also visible in the background.

This guide was developed based on the West Valley City General Plan Water Use and Conservation Element and relevant city ordinances. Water conservation requirements may be updated over time—please verify current requirements with city staff and your water service provider before finalizing development plans.