Tucson Xeriscape Analysis

Methodology & Project Log

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Project Premise:

This analysis addresses the growing need for water-conservative landscaping solutions in Tucson, Arizona, where residential landscape irrigation represents approximately 50% of household water usage and rising utility costs create financial pressure on homeowners. Traditional grass lawns consume thousands of gallons annually while xeriscaping offers a sustainable alternative, yet homeowners lack comprehensive, data-driven guidance for plant selection across their property's diverse microclimate zones. The goal was to create an evidence-based plant recommendation system that balances maximum water conservation with aesthetic appeal, budget considerations, and family safety requirements.

The analysis sought to answer critical business questions for both municipal water departments and individual homeowners: Which drought-resistant plants provide the greatest water savings while maintaining property values? What is the realistic cost-benefit analysis for xeriscaping conversion, including ROI timelines? How can every yard area, from blazing south-facing walls to cool, shaded patios, be successfully landscaped with water-wise plants? By analyzing 215+ drought-resistant plants across 30+ attributes including water requirements, heat tolerance, bloom seasons, pricing, and safety profiles, this project demonstrates that beautiful, cost-effective xeriscaping is achievable in every Tucson microclimate zone, with 25% of recommended plants requiring zero irrigation beyond natural rainfall.

Complete Project Log:

7/15/25: Scrapped data from Lady Bird Johnson Wildflower Center. Their Arizona Recommended list and their Southwestern Desert Wildflower list using Webscraper.io. I was considering the Arizona Department of Water Resources plant list & Tucson AMA Low Water Use/Drought Tolerant Plant List from the University of Arizona website, but they are PDFs, not webpages. Had to play around with the webscraping sitemap because of inconsistencies in the individual plant pages.

251 plants scrapped

Compiling & cleaning: Using Google Sheets to combine all scraped .csv files. Has to just make several sections named AllData (number of sections) for most website sections. Need to expand & clean these.

Have missing diameter data for most plants. Only have height consistently. Decided to create size categories:

Small: Under 3 feet

- Perfect for borders, groundcover, small gardens
- Examples: Most succulents, small shrubs, herbs

Medium: 3-8 feet

- Good for foundation plantings, medium shrubs
- Examples: Most desert shrubs, small ornamental trees

Large: 8-15 feet

- Shade trees, privacy screens, major landscape features
- Examples: Larger desert trees, big shrubs

Extra Large: Over 15 feet

- Major shade trees, property boundaries, focal points
- Examples: Mature palo verde, mesquite, large native trees

Business Application for this:

- **Small:** "Perfect for container gardens and borders"
- **Medium:** "Ideal for foundation plantings"
- **Large:** "Great for privacy and shade"
- **Extra Large:** "Statement trees and major shade"

7/17/25: I am expanding the data more. Tried to use Claude Opus 4 (AI) for data cleaning assistance. Works a little, but not as intelligent as preferred (to translate high volumes of data into tags vs copy & paste), and the usage limits are extremely low for the lowest paid subscription.

Lots of data is missing and I am very frustrated. I may have too much data on some plants and basically nothing on others.

Used Perplexity.ai to interpret non-Arizona or Sonoran Desert (the desert Tucson is in) inclusive Native Distribution lists. This worked surprisingly well due to its research abilities. Saved the top sources to MyBib.com for the Bibliography.

Learned that Calcium Carbonate tolerance is important in Tucson, AZ as the soil has high amounts of it. Will keep this data. Will also keep Cold Tolerance due to Tucson's periodic frosts.

7/19/25: Diving back into expanding the data trying to use AI to speed things along. Ran into a lot of issues. Perplexity.ai can't handle a lot of pasted data and Claude Opus 4 was trying to add to an old table (or finish it?) and didn't do any thinking at all… again.

Claude Sonnet 4 gave me a good table and a summary of the data, which is nice. May need to specify a new table or have a new chat for every table. Use "comprehensive table" and ensure it is only using the data provided, and keeping all plants and data.

Perplexity is good at filling in missing data & gives sources. Saves a lot of time by not needing to websearch myself.

Made a new sheet for soil information for Tucson & Surrounding areas.

Peared the recommended down to 216 plants based on water use, drought tolerance,Calcium Carbonate Tolerance, and more.

Made a new sheet for Non-Recommended Plants. This may be useful for local homeowners and landscapers because these plants are widely recommended but have special needs or requirements that make them unsuitable, which may be overlooked without in-depth research.

Categorizing by watering needs:

Rainfall Only Criteria:

- Very High drought tolerance (regardless of other factors)
- Desert habitat + High drought tolerance
- "Driest" locations + High drought tolerance

Deep Watering Every 2-3 Weeks Criteria:

- Low water use + High drought tolerance
- Grassland/prairie habitat + High drought tolerance
- Mountain/elevation habitat + High drought tolerance

Weekly Watering Criteria:

- Medium water use (regardless of drought tolerance)
- Medium or Low drought tolerance
- Moist/riparian habitat mentions (streams, moist areas, etc.)
- Special cases requiring consistent moisture

Noting that:
First Year: Most plants need weekly watering during establishment regardless of category
Second Year: Transition to category-appropriate watering
Third Year+: Fully established, follow category guidelines

Plants need seasonal adjustments to their watering schedules:
Summer (June-August): May need one level higher frequency
Winter (December-February): Reduce frequency, many plants dormant

Spring/Fall: Follow standard category guidelines

Climate Considerations for watering plants:
Elevation: Higher elevation = potentially more water needed
Exposure: South/west exposure = potentially more water needed
Soil: Clay soils = less frequent but deeper watering

Found that:

- RAINFALL ONLY (52 plants)
- DEEP WATERING EVERY 2-3 WEEKS (94 plants)
- WEEKLY WATERING (70 plants)

Noting that the above amount will change with further pruning of the recommended list.

Desert/arid habitat plants dominate the rainfall-only category

Mountain/forest species tend to need more consistent watering

Grassland species are generally well-suited to deep, infrequent watering

Decided to keep the weekly watering for specific areas of the yard, like shaded flowerbeds and flowerpots, which are “in-between zones”.

Completed **categorizing by microclimate placement :**

"Heat Lovers" - thrive in brutal conditions

"Heat Tolerant" - handle heat but appreciate some relief

"Heat Sensitive" - need protection from intense heat

Added a plant Habitat Type column to clarify data.

Made a new sheet for **Home Microclimate Zones**, which is a quick reference guide for plant placement by property location. Noting that container plants face unique challenges regardless of location.

Made **Yard Usage Categories** column

Decided to continuously make a Bibliography using MyBib. This is convenient if they are websites. If not then must enter info manually, which is time consuming.

7/22/25: Made a new sheet for Rainfall data in Tucson & surrounding areas. Added the sources to MyBib. Now I will progress to SQL learning.

Downloaded and installed PostgreSQL & DBeaver CE.

Had issues with getting the csv file into DBraveer, but finally got it.

Queries Showed:

Water use breakdown:

- Low water: 182 plants (84%) - Perfect for xeriscaping!
- Medium-low: 14 plants (6%)
- Medium: 19 plants (9%)

How many are Arizona natives?

- 197 natives (92%) vs 18 non-natives (8%) - This shows you've done excellent research focusing on locally-adapted plants! This is a huge selling point for your project.

What's the most common plant family?

Plant Family Diversity:

- Asteraceae (Aster/Sunflower Family): 26 plants - desert wildflowers and shrubs
- Poaceae (Grass Family): 25 plants - grass alternatives
- Fabaceae (Pea Family): 19 plants - many nitrogen-fixing desert trees like mesquites and palo verdes
- Cactaceae (Cactus Family): 12 plants - Classic desert landscaping

This shows:

- Excellent biodiversity (10+ different plant families)

- Strong focus on true desert-adapted species
- Good variety for different landscaping needs (trees, grasses, cacti, flowers)

Perfect for the project narrative:

- "92% of recommended plants are Arizona natives"
- "Over 25 drought-resistant grass alternatives"
- "Represents 10+ plant families for diverse landscaping"

Copied from DBeaver:

az_native|water_use |count|

---------+----------+-----+

N |Low | 14|

N |Medium | 1|

N |Medium-low| 3|

Y |Low | 168|

Y |Medium | 18|

Y |Medium-low| 11|

Shows that native plants are more water-efficient.

Natives: 168 low-water + 11 medium-low = 179 out of 197 (91%) are low to medium-low water

Non-natives: 14 low-water + 3 medium-low = 17 out of 18 (94%) are also efficient

Key Insights:

- 85% of ALL the low-water plants are Arizona natives (168 out of 182)
- Both natives and non-natives in my dataset are highly water-efficient
- I've curated for water efficiency regardless of plant origin

Business Framing:

"Arizona native plants dominate our low-water recommendations"

"Over 85% of the most water-efficient plants are locally adapted species"

"Native plants offer the best combination of water savings and local adaptation"

This data answers the core question: "Are native plants better for water conservation?" Answer: Absolutely - they make up the vast majority of your most efficient options.

Copied from DBeaver:

price_status |count|

--------------+-----+

No price data | 14|

Has price data| 201|

Copied from DBeaver:

water_use |price_category |count|

----------+-----------------+-----+

Low |Budget ($6-19) | 71|

Low |Moderate ($20-29)| 24|

Low |No price | 15|

Low |Other | 16|

Low |Premium ($30+) | 56|

Medium |Budget ($6-19) | 6|

Medium |Moderate ($20-29)| 3|

Medium |No price | 2|

Medium |Premium ($30+) | 8|

Medium-low|Budget ($6-19) | 6|

Medium-low|Moderate ($20-29)| 3|

Medium-low|No price | 1|

Medium-low|Premium ($30+) | 4|

Insights for Tucson Homeowners:

Budget-Friendly Options Dominate:

- 83 plants under $20 (71 + 6 + 6) = 39% of your total recommendations
- Low-water plants: 71 out of 182 (39%) are budget-friendly
- Even medium-water plants have affordable options

Full Price Spectrum Available:

- Budget ($6-19): 83 plants - Great starter options
- Moderate ($20-29): 30 plants - Mid-range choices
- Premium ($30+): 68 plants - Investment pieces
- Only 18 plants missing price data

Project messaging to use on website:

- "Nearly 40% of low-water plants cost under $20"
- "Budget-conscious homeowners have 83+ affordable drought-resistant options"
- "Water savings start at just $6-7 per plant"

Found value proposition: Xeriscaping isn't expensive! You can start water-wise gardening on any budget.

Copied from DBeaver:

scientific_name |common_names
|water_use|price_range|

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Campanula rotundifolia |Bluebell Bellflower, Bluebell Of Scotland, Bluebell, Harebell, Witches' Thimble
|Low |$6–$10 |

Artemisia ludoviciana |Louisiana Artemisia, Louisiana Sage, White Sage, Prairie Sage, Silver Sage, White Sagebrush, Louisiana Wormwood, Silver Wormwood, Louisiana Sagewort, Gray Sagewort, Cudweed Sagewort, Mugwort Wormwood|Low |$6–$14
|

Gaillardia pulchella |Indian Blanket, Firewheel, Girasol Rojo
|Low |$6–10 |

Glandularia bipinnatifida|Prairie Verbena, Purple Prairie Verbena, Dakota Mock Vervain, Dakota Vervain
|Low |$6–11 |

Glandularia gooddingii |Southwestern Mock Vervain, Pink Verbena, Southwestern Vervain, Goodding's Verbena, Mojave Verbena
|Low |$6–11 |

Purshia tridentata |Antelope Bitterbrush, Bitterbrush, Antelope Brush
|Low |$6–11 |

Hilaria belangeri |Curly-mesquite
|Low |$6–13 |

Koeleria macrantha |Prairie Junegrass, Junegrass, Prairie Koeler's Grass
|Low |$7–11 |

Ipomopsis aggregata |Scarlet Gilia, Scarlet Standing-cypress, Skyrocket, Skunkflower
|Low |$7–12 |

native and non-native plants are almost equally budget-friendly:

- Natives: 21.4% have budget pricing ($6-7 range)
- Non-natives: 20% have budget pricing

This shows:

- No significant price difference between natives and non-natives in the ultra-budget category
- Both groups offer affordable entry points for homeowners
- Plant selection is price-balanced - you didn't favor expensive natives or cheap imports

Business application:

- "Arizona natives are just as affordable as other drought-resistant options"
- "Budget-conscious homeowners can choose based on water savings and local adaptation, not price"
- "About 1 in 5 plants in both categories offer ultra-budget pricing"

The real value of natives isn't necessarily cost savings, but:

- Better adaptation to local soil and climate
- Support for local wildlife and pollinators
- Lower long-term maintenance needs
- Natural fit with Tucson's desert aesthetic

The data shows that cost isn't a barrier to choosing native plants - that's a powerful message for promoting sustainable landscaping!

Copied from DBeaver:

month |plants_blooming|

--------+---------------+

April | 53|

March | 49|

May | 38|

June | 32|

February| 14|

| 12|

July | 10|

January | 4|

August | 3|

Copied from DBeaver:

scientific_name	common_names	bloom_months	water_use
Abronia villosa	Desert Sand Verbena, Desert Sand-verbena, Desert Sandverbena	Feb , Mar , Apr , May , Jun , Jul	Low
Acaciella angustissima	Prairie Acacia, Fern Acacia, Whiteball Acacia, Prairie Wattle, White-ball Acacia	Jun , Jul , Aug , Sep	Low
Achnatherum hymenoides	Indian Ricegrass, Indian Millet, Sandgrass	Jun , Jul , Aug , Sep	Low
Agave americana	American Century Plant, Century Plant	Jun , Jul	Low
Agave palmeri	Palmer's Century Plant, Palmer Agave, Blue Century Plant	Jun , Jul , Aug	Low
Agave parryi	Parry's Agave, Century Plant, Parry Agave	Jun , Jul , Aug	Low
Allium cernuum	Nodding Onion	Jun , Jul , Aug	Low
Arbutus arizonica	Arizona Madrone	May , Jun , Jul , Aug	Low
Aristida purpurea	Purple Threeawn, Purple 3-awn, Purple Three-awn, Red Threeawn	Apr , May , Jun , Jul , Aug , Sep , Oct	Low
Artemisia frigida	Prairie Sagewort, Prairie Sagebrush, Fringed Sage, Pasture Sage	Jun , Jul , Aug	Low

Peak Bloom Season is Spring:

- April: 53 plants (peak bloom month!)
- March: 49 plants
- May: 38 plants
- June: 32 plants

Summer Challenge:

- July: only 10 plants blooming
- August: only 3 plants
- This shows the "summer gap" when most desert plants go dormant during extreme heat

The monsoon bloomers are valuable. Those plants that bloom July-September are special because they provide color during the hottest months when most plants are resting.

Great monsoon season options:

- **Desert Sand Verbena** - blooms Feb through July
- **Prairie Acacia** - blooms Jun-Sep (perfect monsoon timing!)
- **Palmer's Century Plant** - dramatic agave bloom Jun-Aug
- **Purple Threeawn grass** - long bloomer Apr-Oct

Business application:

- "Plan for spectacular spring displays with 130+ plants blooming March-May"
- "Beat the summer heat gap with 10+ monsoon-blooming species"
- "Year-round color is possible with strategic plant selection"

WINTER SUPERSTARS:

Amazing Winter/Early Spring Bloomers:

January Bloomers (4 plants - rare!):

- Alligator Juniper - evergreen structure with winter interest
- Desert Holly - silvery foliage with winter blooms
- Mojave Lupine - beautiful purple flowers starting in January
- Jojoba - native shrub with winter blooms

February Stars:

- Gordon's Bladderpod - early yellow flowers
- Pringle Manzanita - pink blooms
- Desert Ironwood - gorgeous purple flowers

- Desert Evening-primrose - bright yellow blooms

Extended Season Champions:

- Desert Globemallow - blooms Feb-Nov (almost year-round!)
- Prairie Verbena - Mar-Dec (9+ months of color!)
- Apache Plume - May-Dec (great fall interest)
- Rush Milkweed - Apr-Dec (monarch butterfly magnet!)

This solves Tucson's "winter garden" problem! Most people believe desert gardens look dead in winter, but the data shows:

- **4 plants blooming in January**
- **14 plants blooming in February**
- **Several that bloom 8+ months per year**

Business framing:

- "Beat the winter blues with 4+ plants that bloom in January"
- "Desert Globemallow provides nearly year-round color"
- "Strategic selection creates 12 months of garden interest"

Copied from DBeaver:

toxic_humans	**toxic_pets**	count
Not toxic	Not toxic	117
Not toxic	Not toxic*	14
As above	As above	12
Toxic	Toxic	12
Not toxic*	Not toxic*	6
Not toxic	Not toxic (spines injure)	4
Not toxic	Not toxic (spines dangerous)	3
Not toxic*	As above	3
Not toxic	Not toxic (spines)	2

Not toxic (see above)	Not toxic*	1
Not toxic (pods not for humans)	*Seed pods can cause GI upset if eaten	1
Berries edible in moderation	Can be toxic in quantity	1
Irritating hairs	Irritating hairs	1
Not toxic*	*Can cause mild GI upset if much eaten	1
Possibly toxic (no major reports)	Possibly toxic (mild)	1
Mild GI upset, poison sumac rare confusion	Mild GI upset in excess	1
Not toxic*	*Seed pods possibly toxic	1
Mildly toxic (unpalatable)	Not toxic (unpalatable)	1
Raw parts can cause GI upset	Raw parts can cause GI upset	1
Not toxic (irritation if eaten raw)	Not toxic	1
Not toxic	Not toxic (mild GI possible)	1
Mildly toxic (GI upset)	Mildly toxic (GI upset)*	1
Not toxic	Not toxic (spines cause injury)	1
Mildly toxic (large amt)	Mildly toxic	1
Mild GI upset if overripe berries	Mild GI upset	1
Roots may be toxic	Roots may be toxic	1
Generally not toxic	Low risk, avoid rotten nuts/shells	1
Not toxic*	*Mild GI upset if large amt.	1
Possibly toxic (high dose)	Possibly toxic at high dose	1
Mildly toxic (large amt)	Mildly toxic (large amt)	1
Mildly toxic	Mildly toxic	1
Not toxic	Not toxic (mild GI upset rare)	1
Toxic if eaten	Toxic	1

Possibly toxic	Possibly toxic	1
Toxic seeds	Mildly toxic	1
Toxic to many mammals (jojoba)	Toxic	1
Toxic (contact dermatitis)	Toxic	1
As above (see A. americana)	As above	1
Not toxic*	*May cause mild GI upset	1
Slightly toxic (large amt)	Slightly toxic (bark, needles, horses)	1
Toxic (unripe/raw seeds/leaves)	Toxic	1
Can cause mild irritation (sap)	Mildly toxic (sap)	1
Not toxic	Not toxic (mild dermatitis possible)	1
Not toxic*	Not toxic	1
Not toxic*	Slightly toxic (mild GI)	1
Mild irritation*	Mild irritation*	1
Bulb edible	Not toxic*	1
Not toxic	Not toxic (horses can be affected by some maples)	1
Acorns mildly toxic raw	Acorns mildly toxic raw	1
Mildly toxic (large qty)	Toxic (all Allium spp.)	1
Not toxic	Not toxic (mild GI upsets)	1

Most Plants Are Safe:

- 131 plants (61%) are completely non-toxic to both humans and pets
- *14 plants marked "Not toxic"** (minor issues like mild GI upset)
- Only 12 plants (6%) are truly toxic to both humans and pets

Physical Safety Concerns:

- 10+ plants have spine warnings (cacti/agaves) - injury risk, not toxicity
- Most spine plants are "not toxic" but physically dangerous

Pet-Specific Concerns:

- Allium species (onions) - toxic to pets but not humans
- Some maple species - can affect horses specifically

Business messaging:

- "Over 60% of recommended plants are completely safe for families with children and pets"
- "Only 6% require caution due to toxicity"
- "Physical hazards (spines) are clearly marked for informed plant placement"

Copied from DBeaver:

scientific_name |common_names |water_use|price_range|

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Enceliopsis nudicaulis |Nakedstem Sunray, Sunray |Low |— |

Machaeranthera bigelovii|Bigelow's Tansyaster, Sticky Aster |Low |— |

Eriogonum racemosum |Redroot Buckwheat, Red-root Wild Buckwheat |Low |— |

Kallstroemia grandiflora|Arizona Poppy, Desert Poppy, Orange Caltrop, Summer Poppy|Low |— |

Hibiscus coulteri |Desert Rosemallow, Desert Rose-mallow, Coulter Hibiscus |Low |$10–17 |

Poliomintha incana |Frosted Mint, Hoary Rosemary-mint, Mintbush |Low |$10–18 |

Fallugia paradoxa |Apache Plume, Ponil |Low |$10–22 |

Fendlera rupicola |Cliff Fendlerbush, False Mock-orange |Low |$10–22 |

Hibiscus denudatus |Paleface, Rock Hibiscus |Low |$11–22 |

Ceanothus greggii |Desert Ceanothus |Low |$12–$22 |

4 plants with missing prices - might be rare/specialty items or seed-only options

Budget-Friendly Family Favorites:

- Hibiscus coulteri (Desert Rosemallow) - $10-17 - Beautiful hibiscus flowers, completely safe
- Poliomintha incana (Frosted Mint) - $10-18 - Fragrant mint family plant
- Apache Plume - $10-22 - Gorgeous white flowers with fluffy seed heads
- Cliff Fendlerbush - $10-22 - White Mock-orange flowers
- Rock Hibiscus - $11-22 - Another safe hibiscus option
- Desert Ceanothus - $12-22 - Beautiful blue/white flower clusters

Could offer a **Family Garden Starter Pack** “Beautiful, safe, affordable, and water-wise!”

These plants offer:

- Gorgeous flowers (hibiscus, apache plume)
- Fragrant foliage (frosted mint)
- Interesting textures (apache plume's fluffy seeds)
- Year-round structure (ceanothus, fendlerbush)

Business messaging:

- "Safe garden starts at just $10 with Desert Rosemallow"
- "Family-friendly xeriscaping with beautiful flowering shrubs"
- "No worries about curious kids or pets with these proven-safe options"

Plant Availability:

Top Local Nurseries:

- Spadefoot Nursery - appears in 60+ plant listings
- Civano Nursery - appears in 50+ listings
- Desert Survivors - appears in 40+ listings
- AZDM (Arizona-Sonora Desert Museum) - specialty/plant sales

Availability Challenges:

- 38 plants "Not found" locally (18% need special ordering/seeds)
- 31 plants available as seeds only
- Many require special orders or seasonal availability

Plant Sizes:

- Small: 69 plants (perfect for containers, small yards)
- Medium: 66 plants (main landscape plants)
- Large/Extra Large: 62 plants (shade trees, major specimens)
- Good size transition options (Small-Medium, Medium-Large)

Heat Tolerance:

- Heat Tolerant: 109 plants (51%) - your workhorses
- Heat Lovers: 83 plants (39%) - thrive in extreme heat
- Heat Sensitive: 23 plants (11%) - need protection/microclimates

7/24/25: Beginning to do the visualizations on the desktop version of tableau Public. I will be exporting the data from DBeaver as .CSV files and putting it into Tableau. It only exported the raw (cleaned) data, not the data from the queries. Can skip DBeaver or export the data from each query.

I needed to go back and clean up the pricing data. Woops!

- Budget Category ($3-15)
- Moderate Category ($16-40)
- Investment Category ($41+)

7/26/25: Loaded new budget category data into Tableau and will now continue with the visualizations. Apparently I do not have all the data I need to calculate things like ROI and other business focused questions and I'm mad. Next time, I'll plan the types of data needed more carefully and ensure I have it all before moving on to exploration and analysis.

I used Perplexity.ai to research the amount of water the average household in Tucson & surrounding areas. Usually I'd prefer scraping it myself, but I am at the point where I do not want to go backwards in the project.

Calculation metrics:
Avg. total single-family water use[1] (gal yr^{-1} hh^{-1})
Est. landscape share (≈ 50%) (gal yr^{-1} hh^{-1})

Used Claude.ai to expand and clean data. This worked surprisingly well, and will use it in the future as a data cleansing tool, vs doing it manually, which takes tons of time. Looked over it in Sheets to ensure accuracy.

Added to Tableau and making business questions visualizations now.

Here are the charts I made:

1. Water Use Breakdown (Pie Chart)

- Question Answered: "What percentage of drought-resistant plants need zero irrigation?"
- Key Finding: 25% of plants (54 species) require rainfall only - eliminating ongoing water costs

2. Plant Options by Heat Tolerance (Bar Chart)

- Question Answered: "Does every yard microclimate have viable xeriscaping options?"
- Key Finding: Every zone has solutions - from 23 options (challenging areas) to 109 options (ideal areas)

3. Seasonal Bloom Calendar (Bar Chart)

- Question Answered: "Can xeriscaping provide year-round beauty?"
- Key Finding: Spring peak (49+ plants) with consistent options throughout the year, including monsoon bloomers

4. Budget vs Water Use (Grouped Bar Chart)

- Question Answered: "Are water-efficient plants available at every budget level?"
- Key Finding: Budget-friendly options exist in all water-use categories - water savings aren't just for expensive gardens

5. Current Landscape Water Costs (Bar Chart with ROI Context)

- Question Answered: "What's the potential cost reduction from xeriscaping?"
- Key Finding: Annual landscape water costs ($150 or less) vs. one-time xeriscaping investment ($30-600) - clear ROI potential

6. Implementation Readiness by Yard Area (Bar Chart)

- Question Answered: "Which areas should we target first for xeriscaping programs?"
- Key Finding: Implementation complexity varies by yard area - guides strategic rollout planning

Finished visualizations and uploaded to Tableau Public. Had an issue with only one sheet/page showing, but fixed it.

7/27/25 Now working on my portfolio page on my sub-site for this project. Editing my Project Log, Bibliography, and dataset in order to share on the project webpage.

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