

Drought Emergency Plan

City Council

February 2, 2021



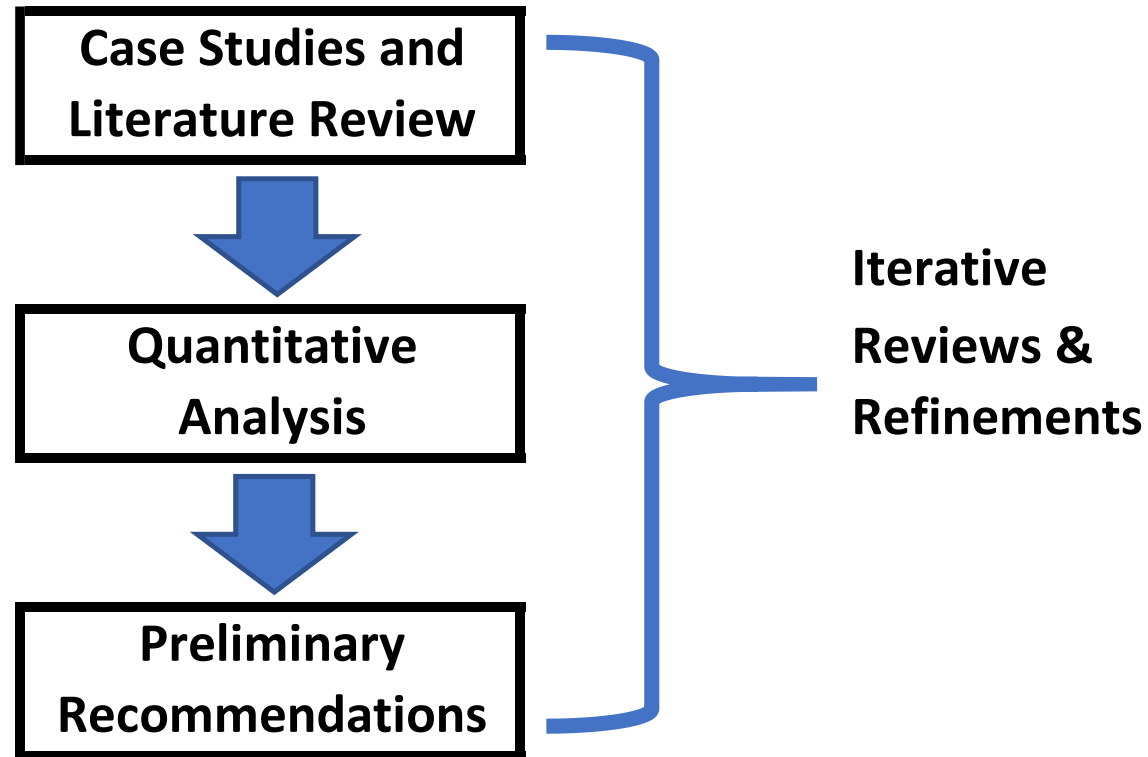
Need for an Updated Drought Plan

- **Greeley's current drought plan is more than 15 years old**
- **Since that time, a lot has changed:**
 - **Water use per account has declined substantially**
 - **Greeley has re-examined its future water needs, and system drought performance, as part of the Milton Seaman Revised Alternative Screening Process**
 - **Greeley converted to water budget-based rates for single family residential customers in 2017**

Timeline

- **In mid-2019, staff began to evaluate a revised drought plan**
- **Hired BBC to assist with analysis and development of plan**
- **Presented initial plan at August 2020 W&S Board meeting**
- **Addressed feedback at October 2020 W&S Board meeting**

Process for Developing a New Drought Plan



Important considerations



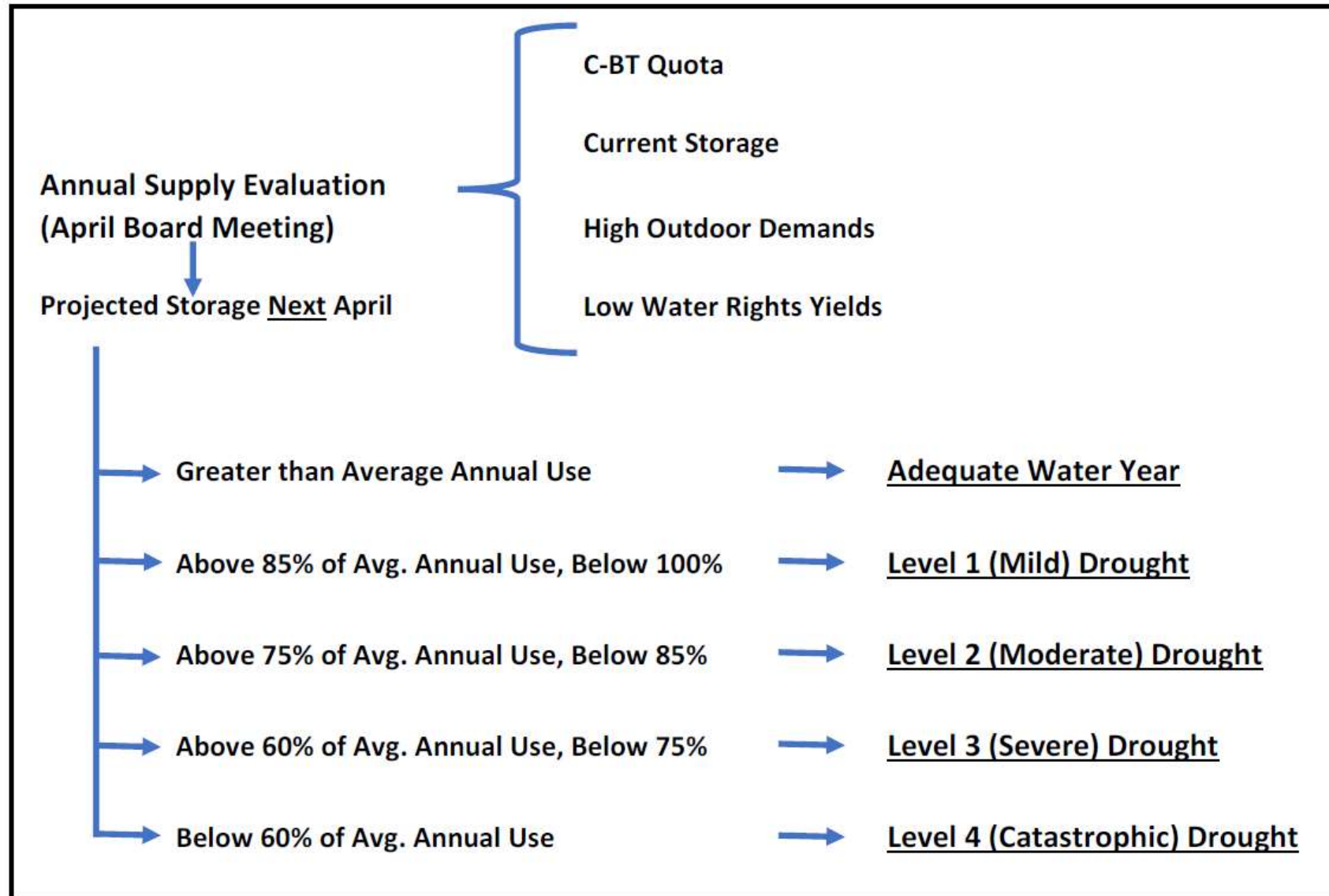
Equity among Greeley's customers: while outdoor water use by single family customers must be a focus, other customer classes need to contribute their share to water savings.

Minimize impacts to landscapes: modifications to water budgets and watering restrictions should be designed to avoid long-term damage to trees and other non-turf vegetation as much as possible.



Minimize financial impacts to customers and the water utility: In general, if customers meet the water savings goals, they will pay less than normal during drought conditions. If customers do not reduce their use, they will pay more.

Drought Response Trigger and Declaration Process



Drought Response Trigger and Declaration Process

- **Current Target Storage is 21,300 AF**
 - **Will be re-evaluated regularly**
- **Reductions and restrictions are for *outdoor irrigation only***
- **Using Water Budget as one of *many* tools for Single-family residential customers**
 - **Savings assumes single family customers are using 100% of their water budgets**
- **Recommending a 2 year recovery period**
- **Equitable: same % reductions for single family residential, multi-family, commercial and industrial**

Drought Response Strategies

Droughts are uncertain

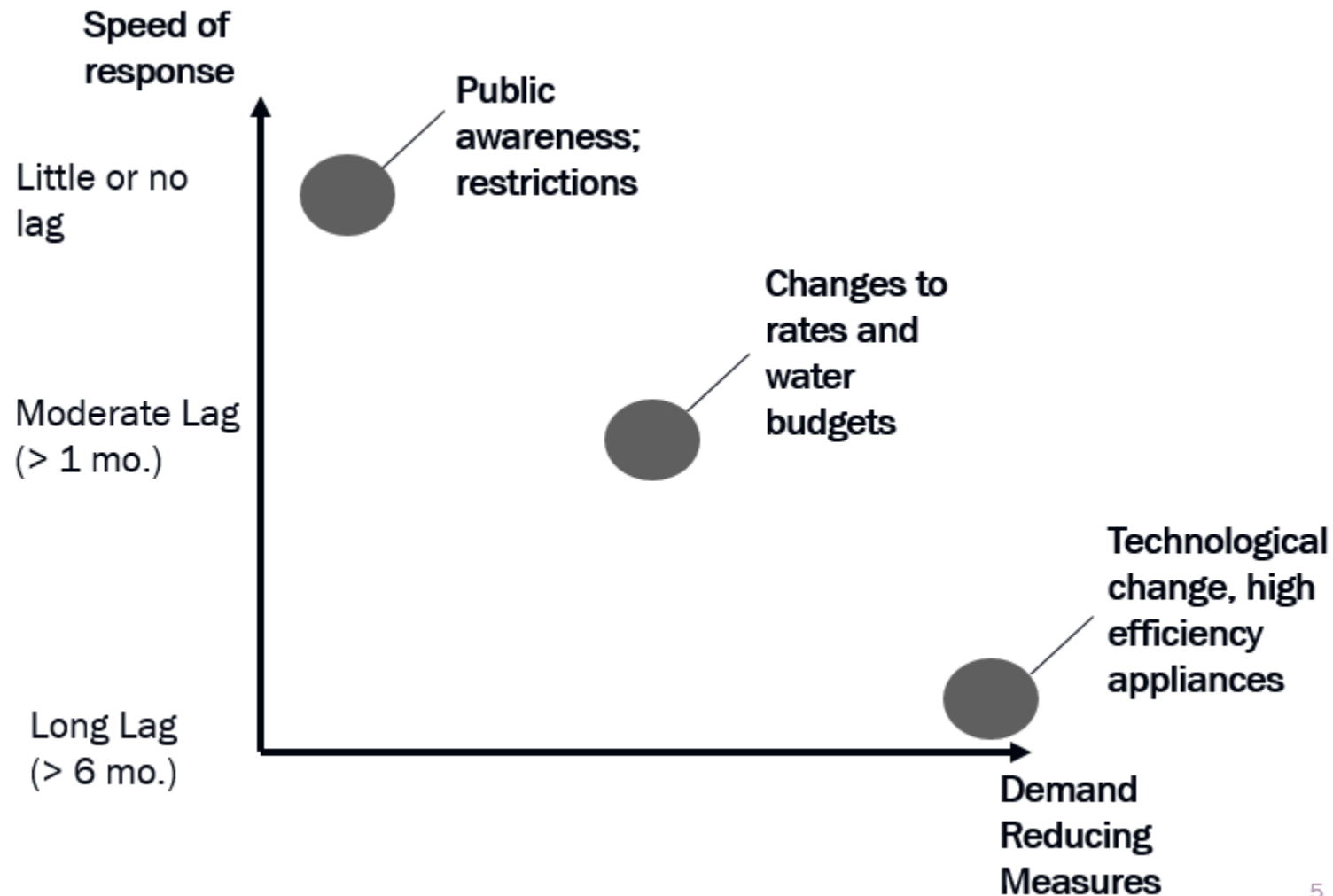
- **Hard to project how long they will last or how severe they will be.**
- **Also, difficult to predict how customers will respond and thus, how much water will be saved by different drought measures.**

**Important to have a variety
of tools for customers to use**



**Need flexibility in the
drought plan to adapt to
changing circumstances**

Short run vs. long run response



Drought Response Strategies

GREELEY DROUGHT RESPONSE PROGRAM 2020					
With a two year recovery period	Adequate Yr	Mild	Moderate	Severe	Catastrophic
LEVEL OF RESPONSE	no drought	1	2	3	4
Target Storage	100%	85% to 99%	75% to 84%	60% to 74%	Less than 60%
Target Reduction (outdoor)	0%	15%	25%	50%	70%
Target Storage (in AF)	21,300	18,100	16,000	12,800	10,700
Annual Outdoor Reduction Goal	normal conservation	1,530	2,560	5,130	7,170
MEASURES					
Water Budget and Restrictions					
Single Family Residential on Water Budget		15%	25%	50%	70%
Proposed Water Budget Reduction	0%	15%	25%	50%	70%
Recommended Schedule Suggested Days		max 3 days/week	2 days/week	1 day/week	
Multi Family & HOA Not on Water Budget	mand. 3/wk	max 3 days/week	2 days/week	1 day/week	no watering
Reductions in Use	0%	15%	25%	50%	70%
Commercial Industrial Institutional (ICI)	mand. 3/wk	3 days/week	2 days/week	1 day/week	no watering
Reduction on Landscape Water Same as SFR	Normal conservation	15%	25%	50%	70%
Restrictions Landscape (Non Water Budget)					
Lawns/Turf	set day /week 3 days/week	no irrigation until May1 or after Sept. 30	irrigation May-Oct; 1"/week	no watering in July; let go dormant	no watering June 15-Aug 15
Non-watering Hours	10am-6pm	10am-6pm	10am-6pm	8am-8pm	8am-8pm
Installing New Lawns & Watering Permits	yes w/soil prep	yes w/soil prep	not June-Aug	not June-Aug	none
Multi Family	3 days/week	3 days/week	2 days/week	1 day/week	no watering
Large Properties with > 4 acres of Turf Need to Submit a Water Budget to Get a Watering Variance	3 days/week	1.5"/week WB	1.0"/week WB	only enough to keep it alive	not allowed
Trees and Shrubs		on days or drip or by hand			
Vegetable Gardens		on days or drip or by hand			
Flower Gardens		on days or drip or by hand			
Non Potable Ditch Water (city system)		follow restrictions or restrictions due to delivery			
Non Potable Ditch Water (private)		cannot regulate			
Well Water		cannot regulate			

Drought Response Strategies

GREELEY DROUGHT RESPONSE PROGRAM 2020					
With a Two Year Recovery Period	Adequate Yr	Mild	Moderate	Severe	Catastrophic
LEVEL OF RESPONSE	No drought	1	2	3	4
Other outdoor Uses (hosing and washing)					
Home Car Washing	with BMPs and no runoff	bucket & shut off	bucket & shut off	commercial car wash	commercial car wash
Frequency		1x/week	1x/month	not allowed	not allowed
Washing Sidewalks, Driveways, Garages or Other Pavement		prohibited except for health or safety			not allowed
Siding on Houses, Patios, Decks		only in prep. for painting/staining 1 x per year with power washer			not allowed
Fleet Washing at Auto Dealerships/Mobile		1x/week	1x/month	not allowed	not allowed
Car Washes -Fundraising		prohibited except at commercial carwashes			
Commercial/restaurant/fast food					
Drive Thru/Sidewalk		prohibited except for health or safety			only with a bucket & broom
Parking Lot		prohibited			
Fountains/Ponds/Pools/Spas					
Water Fountains (w/o fish)		unrestricted	no topping off	no water	no water
Public		unrestricted	no topping off	no water	no water
Private		unrestricted	unrestricted	no topping off	no topping off
Ponds with Fish or Plants		unrestricted	unrestricted	unrestricted	topping only to preserve fish
Swimming Pools and Spa's Private		unrestricted	Unrestricted	not allowed	not allowed
Semi-Private Neighborhoods		unrestricted	Unrestricted	not allowed	not allowed
City Pools		unrestricted	Unrestricted	no topping off	no topping off
City Uses					
City Parks /Athletic Fields		water budget	water budget cut	prioritize athletic fields only	
Golf Courses		10-20% cut back	10-20% cut back no watering roughs	max 1"/wk for tees and greens only	max 1"/wk for tees and greens only
City Facilities & Around Buildings		3 days/wk	2 days/week	1 day/week	no watering
Street Cleaning/Parking Lots with Trucks		unrestricted	unrestricted	restricted to essential situations	
Hydrant Flushing & Testing		unrestricted	limited to critical situations		
Washing Fleet Vehicles & Mobile Washers		1 x /week	every other week	1 x /month	none

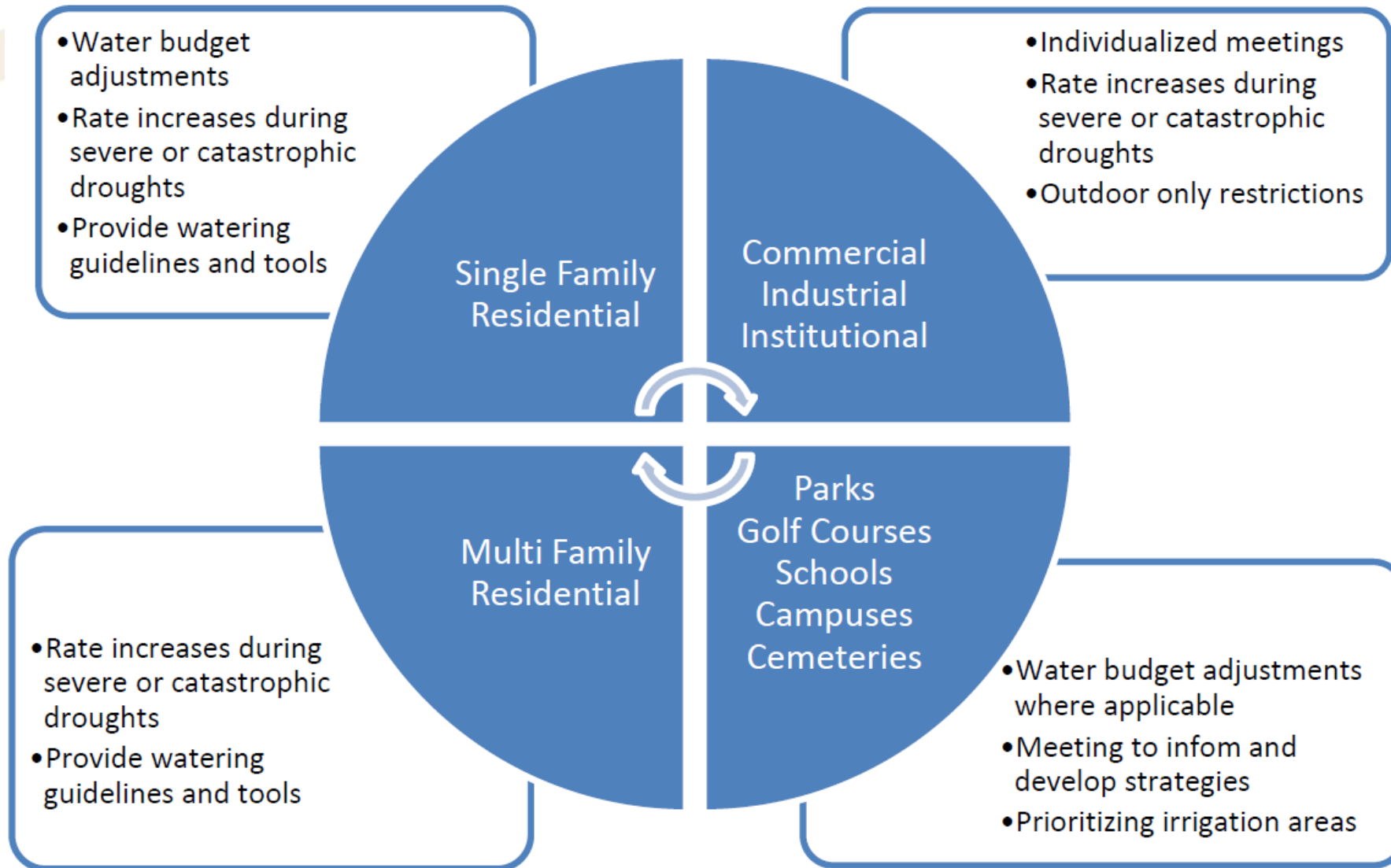
Drought Response Strategies

Rate Increases

- **Level 3 = 25% increase**
- **Level 4 = 35% increase**
- **Helps reduce Greeley Water's financial vulnerability during droughts**
 - **Absent rate increases, annual revenues could decline by as much as 21 % under a Level 4 drought**
- **Sends financial signals to customers to reinforce need to conserve water**



Messaging Strategy



Reserve Fund

- **Annual revenues are projected to be reduced by \$1.6 to \$3.0 million per year (4 to 8 % of normal revenue) during drought response**
- **Greeley plans to implement and gradually accrue a drought reserve fund for future use in mitigating reductions in revenues due to decreased water sales during drought emergencies**



Code changes

- **Code changes required in Sections 14.08.090 and 14.08.160**
 - **Prescribes the means by which City residents may irrigate their property and make other uses of City water during periods of adequate water supply and drought**

Recommendations

- **Staff feels this plan meets the goals of:**
 - **Reducing water use and building savings during drought**
 - **Equity among customers**
 - **Minimal financial impacts**
 - **Flexibility to adapt**
- **Timing is critical as we face increasing drought conditions**
- **Water and Sewer Board adopted plan at their January 20, 2021 and recommended Council approval for necessary code changes**

