

2013

DROUGHT RESPONSE

STAGES & ACTION STEPS

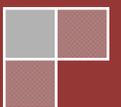


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How Drought Stages are Defined

The City of Wichita will use a 12-month average of the conservation pool level in Cheney Reservoir in order to determine the establishment and severity of a drought. The US Army Corps of Engineers provides hourly data on how full the conservation pool is. Cheney Reservoir is one of the City's two water sources and is the most susceptible to drought conditions. The 12-month average will smooth out seasonal variations to ensure that low points experienced in normal years do not move the City of Wichita into a drought response.

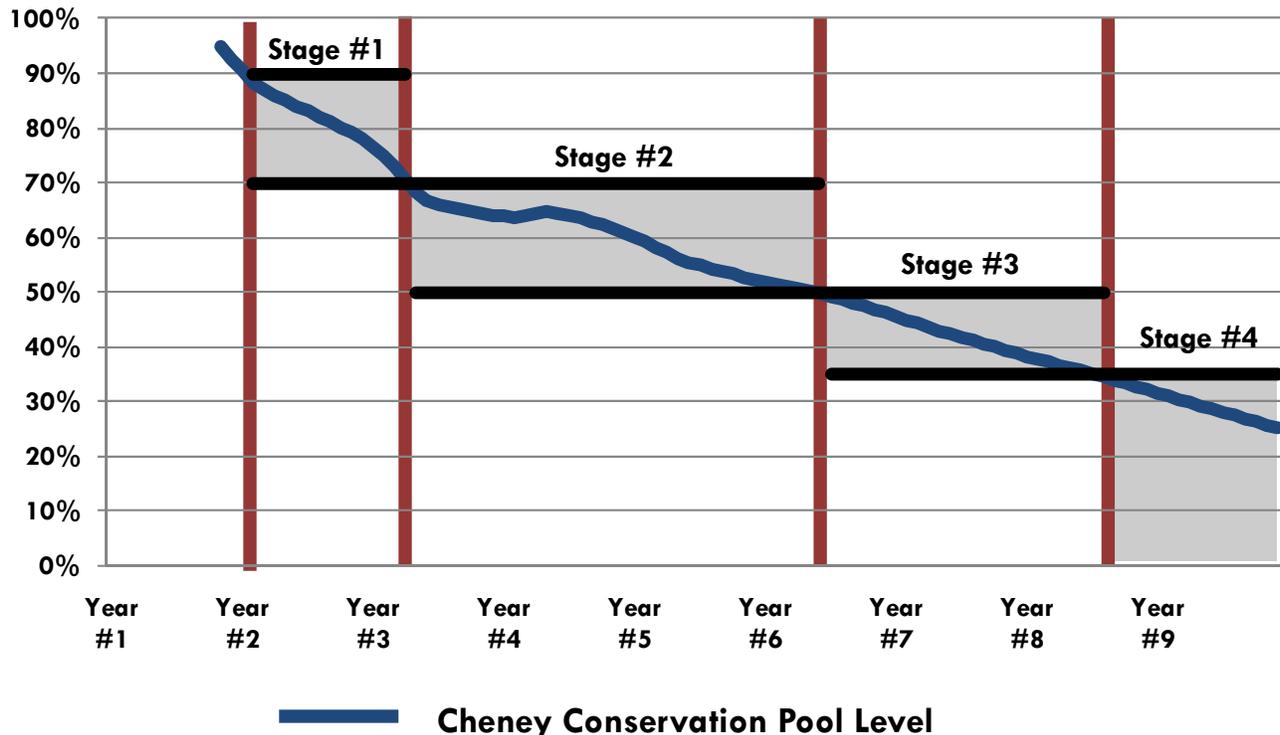
Trigger Points for Each Stage

Four stages of progressive measures will be instituted during a long-term drought in Wichita. The lake level triggers for each stage are included in the accompanying chart and table.

CHENEY CONSERVATION POOL: 12-MONTH AVERAGE		
	Top Level	Bottom Level
Normal Conditions	100%	90%
Stage #1	89%	70%
Stage #2	69%	50%
Stage #3	49%	35%
Stage #4	34%	0%

Wichita will need to experience a multi-year drought to enter any of these stages. Should the area experience a drought similar to the 2011-2012 conditions, there would be a full year before an enhanced drought response would be initiated. The City of Wichita would then progress through different stages until the drought ends.

Drought Stage Triggers



Monitoring Cheney Lake Levels

The Department of Public Works & Utilities is responsible for managing the City of Wichita water supply. This includes monitoring the lake levels at Cheney Reservoir. Public Works & Utilities staff will regularly review the data published by the US Army Corps of Engineers and will keep a 12-month average level of water in the conservation pool.

When the Wichita area enters a drought, the 12-month average lake level will begin to decline from its normal level. Public Works & Utilities will chart the level of the conservation pool and provide updates to the City Manager in the first year of a drought, before the first drought stage is effective.

Entering More Severe Drought Stages

This drought plan, the triggering mechanisms for each stage, and the progressive water reduction actions were approved by the Wichita City Council in 2013. Therefore, this is the official policy plan for the community when Wichita is confronted with the drought.

As these actions have already been approved by the Wichita City Council, the City Manager is responsible for carrying out this plan and providing all necessary written approvals for entering into each stage. No further action will be required by the City Council.

The Public Works & Utilities Department will provide regular updates to the level of the conservation pool at Cheney Reservoir. Should the 12-month average level reach the of the triggering point for Stage #1 or any of the further drought stages, the City Manager will provide written authorization prior to implementing the requisite actions.

Coming Out of a Drought

The same process will be used when lake levels at Cheney increase, making it necessary to declare drought stages that have ended. Staff from Public Works & Utilities will provide the City Manager with regular updates about the 12-month average level in the Cheney conservation pool.

Whenever that moving average raises above a drought stage threshold, the City Manager will provide written authorization to move the utility to the less-severe drought stage. Once the level increases above the Stage #1 threshold, the City Manager's written authorization will end all drought response actions.

It may be appropriate for the City of Wichita to move out of the drought much quicker than it can enter the drought—this would be caused by a rapid re-fill of Cheney Reservoir. Should an hourly reading at Cheney Reservoir show that the capacity level has increased above the maximum threshold for Stage #1 (90%), the City Manager will authorize an immediate end to all drought actions that are presently in effect.

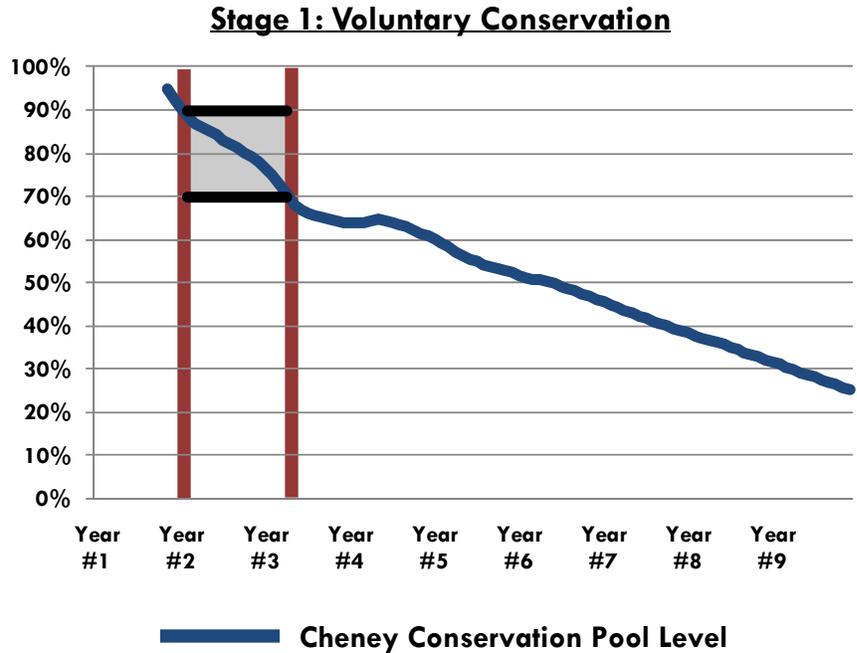
STAGE 1: VOLUNTARY CONSERVATION

Description

The beginning stage of drought response would likely occur after the first year of a drought and would last through a full irrigation season.

Voluntary water conservation is the focus of Stage #1. Utility customers will be encouraged to reduce water usage by participating in a rebate program that provide incentives for lower usage. The City of Wichita will culminate a high-profile marketing campaign to raise

drought awareness and publicize tips for conserving water. It will also continue to implement its permanent water conservation measures for its own operations.



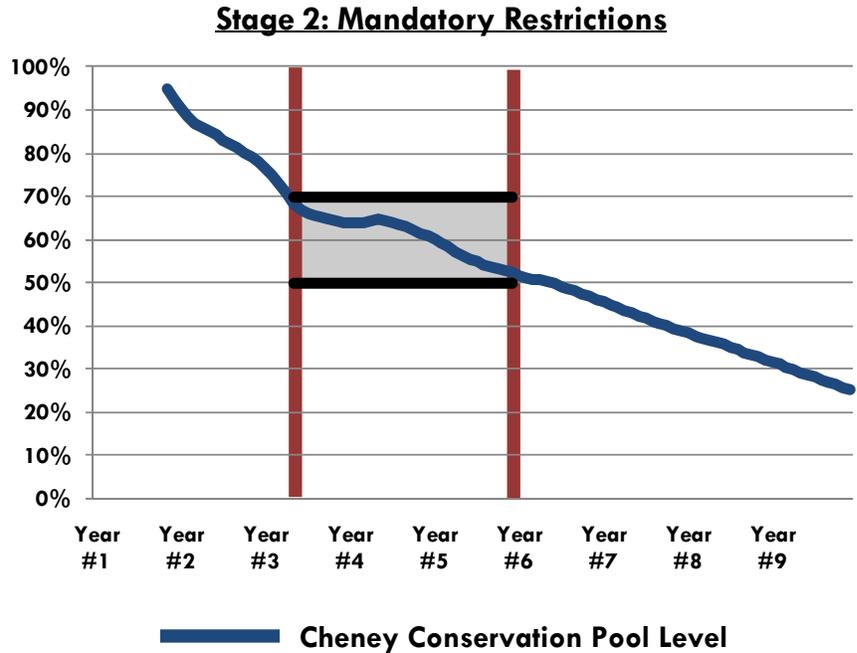
STAGE #1 ACTIONS	
Utility Customers	City of Wichita—Internal Conservation
<ul style="list-style-type: none"> ◆ Respond to enhanced publicity efforts to raise drought awareness ◆ Conserve water voluntarily ◆ Take advantage of a rebate program to incentivize indoor and outdoor water conservation 	<p><u>Continue permanent conservation measures:</u></p> <ul style="list-style-type: none"> ◆ Use graywater from Herman Hill Park to water trees ◆ Realize water savings from motion sensors installed on splash pads and spray parks ◆ Follow landscape design guidelines for new municipal construction ◆ Decide whether drought-tolerant grasses or artificial turf is appropriate on existing fields ◆ Implement conservation protocol for taste and odor complaints ◆ Mow grass to a higher length to increase shade and reduce evaporative losses

STAGE 2: MANDATORY RESTRICTIONS

Description

Stage #2 brings the first mandatory restrictions during a drought and would be triggered when the 12-month average in Cheney’s conservation pool reaches 69%.

Outdoor water usage would be restricted to one day per week, using the quadrant schedule included on the following page. The City of Wichita would initiate further conservation measures for its own operations.



PENALTY SCHEDULE PER VIOLATION	
1 st Incident	Warning
2 nd Incident	\$50
3 rd Incident & Beyond	\$100

Exemptions

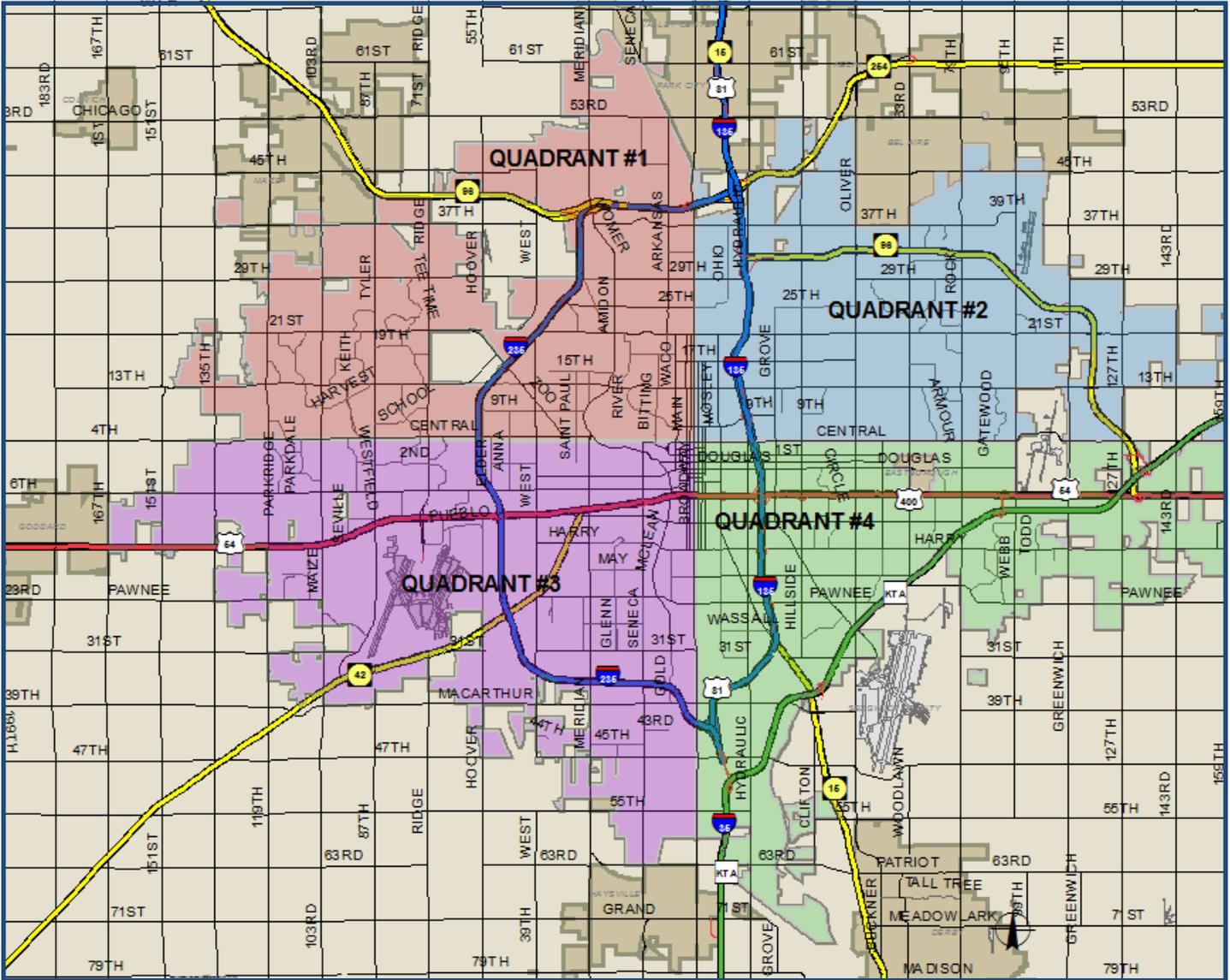
Food producing gardens utilizing drip irrigation or hand watering and businesses that generate their core economic activity from outdoor usage will be exempt. Such businesses include golf courses, car-washes, nurseries, sod companies, and others identified by the City Manager.

STAGE #2 ACTIONS	
Utility Customers	City of Wichita—Internal Conservation
<ul style="list-style-type: none"> Continue all measures from Stage #1 Follow mandatory restrictions on outdoor water usage Outdoor water usage prohibited from 10am until 8pm on all days. It is not allowed at all on Saturdays, Sundays, or Mondays Quadrant #1 can water on Tuesdays; Quadrant #2 can water on Wednesdays; Quadrant #3 can water on Thursdays, and Quadrant #4 can water on Fridays Violations will be enforced through the penalty schedule included above 	<ul style="list-style-type: none"> Continue all measures from Stage #1 Follow all mandatory restrictions that are in place for water customers Switch water allocation to increase amount taken from the Equus Beds Replace Wichita Fire Department spray-downs with activities from the mobile prevention truck and utilize alternative hydrant maintenance schedule

DROUGHT RESPONSE

STAGE 2: MANDATORY RESTRICTIONS

The following map illustrates the quadrants that make up the City of Wichita watering grid during Stage #2 restrictions. The intersection of Central & Broadway is the dividing point for the quadrants. Each quadrant is allowed to use water outdoors on one day per week, according to the schedule provided below. In addition, no water may be used during the hottest part of the day, from 10am until 8pm.



WATERING DAYS & TIMES

Quadrant #1
Tuesdays

Quadrant #2
Wednesdays

Quadrant #3
Thursdays

Quadrant #4
Fridays

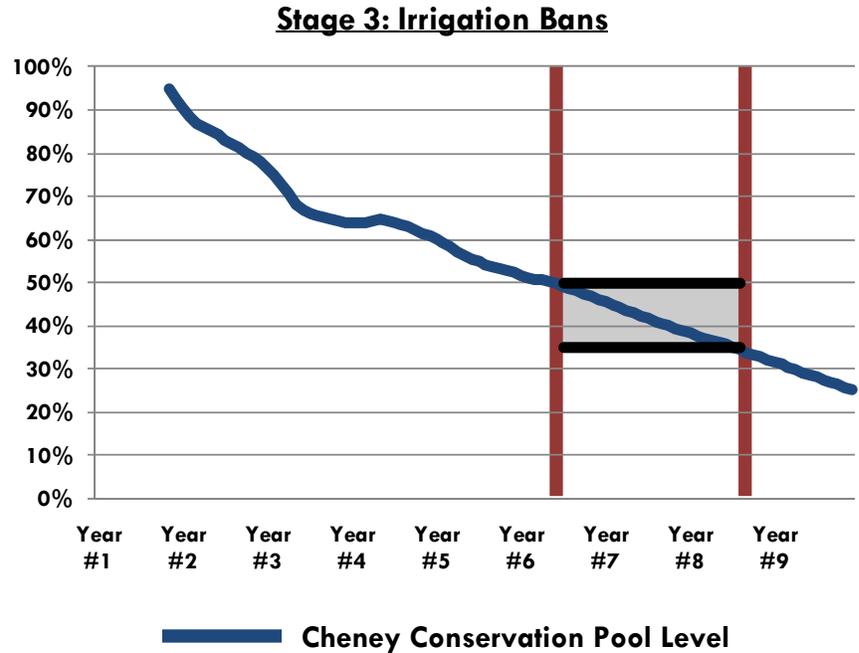
**Watering allowed from 8pm—10am*

Description

Once Cheney's conservation pool drops below 50% with a 12-month average, Stage #3 will be in effect. This is the second to last drought stage and thus includes more severe actions.

All outdoor water usage will be banned. Customers who previously could use water one day per week in Stage #2 would be prohibited from using any water outdoors. The penalty for violations will increase dramatically, topping out at \$500

per incident, for repeated violations. The City of Wichita will expedite repairs on its water main breaks and irrigation leaks, to reduce water loss. Operational hours at public fountains will be reduced, while municipally owned grasses will not be irrigated, except for those that are exempt under this drought stage.



PENALTY SCHEDULE PER VIOLATION	
1 st Incident	Warning
2 nd Incident	\$250
3 rd Incident & Beyond	\$500

Exemptions

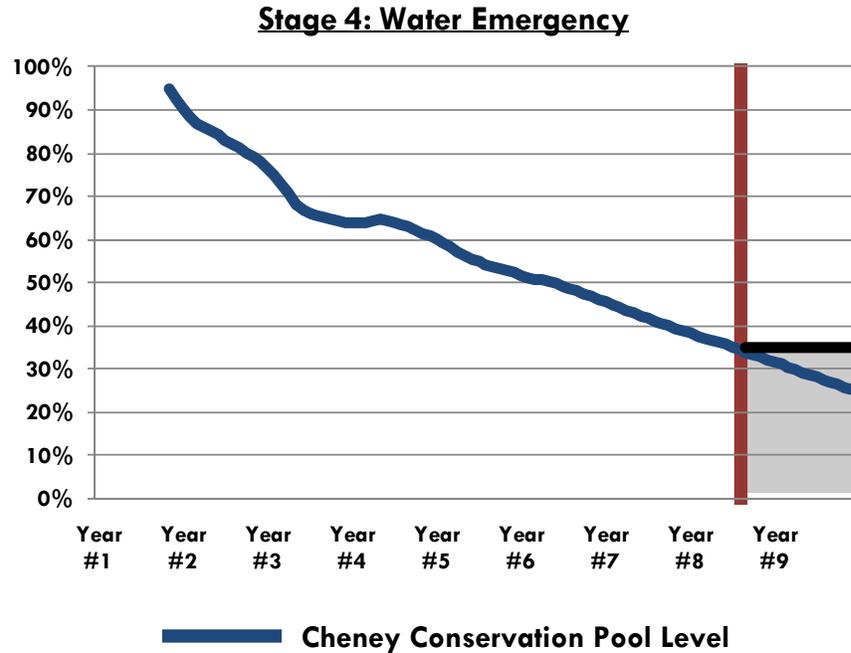
The same exemptions that are in effect in Stage #2 will apply to this stage. That includes food producing gardens utilizing drip irrigation or hand watering and all businesses that rely directly on outdoor water usage to generate their core economic activity.

STAGE #3 ACTIONS	
Utility Customers	City of Wichita—Internal Conservation
<ul style="list-style-type: none"> Continue all measures from Stage #1 All outdoor watering is banned Exemptions provided for businesses generating economic activity directly from outdoor irrigation 	<ul style="list-style-type: none"> Continue all measures from Stages #1-2 Reduce hours at City-owned fountains Eliminate irrigation on City-owned grasses that are not exempted due to the economic activity they create Expedite repair on water main breaks and irrigation leaks

Description

Triggered when the 12-month average level at Cheney is below 35%, the final drought stage would likely be reached after a prolonged and severe drought. The most restrictive water usage regulations would be applied, in order to preserve the remaining water at Cheney Reservoir.

All outdoor water usage would be banned, even from those businesses previously exempted. Customers would have to reduce base demand by 15%, meaning that their usage would need to be 15% lower than their Average Winter Consumption at the beginning of Stage #4. Repeated violations would result in a



flow restrictor to ensure compliance with the regulations.

PENALTY SCHEDULE PER VIOLATION	
1 st Incident/Month	Warning
2 nd Incident/Month	\$250
3 rd Incident/Month & Beyond	\$500 + Flow Restrictor

Exemptions

Major hospitals would not need to reduce base demand. These include Wesley and Via Christi hospital campuses, the Kansas Medical Center, the VA Hospital, the Kansas Spine Hospital, the Kansas Surgery & Recovery, and Select Specialty Hospital.

STAGE #4 ACTIONS	
Utility Customers	City of Wichita—Internal Conservation
<ul style="list-style-type: none"> Continue all measures from Stage #1 All outdoor water usage is banned, without exemptions Water usage must be 15% below the Average Winter Consumption (AWC), at the beginning of drought Stage #4 Major hospitals are exempt from the 15% water usage AWC reduction 	<ul style="list-style-type: none"> Continue all measures from Stages #1-3 Shutdown all City-owned fountains