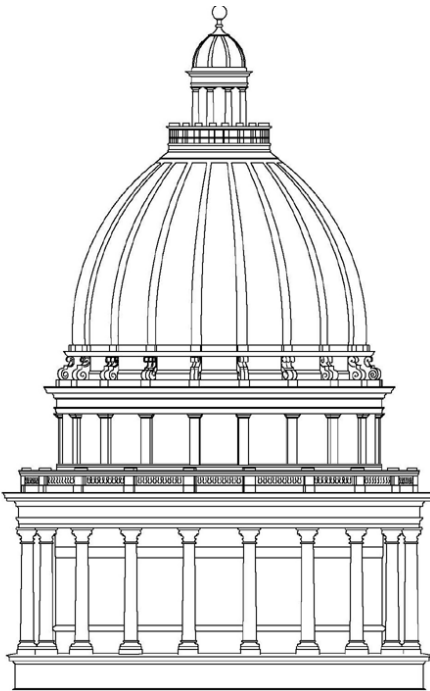


A Review of the Division of Drinking Water's Minimum Source Sizing Requirements



Report to the Natural Resources,
Agriculture, and Environment
Interim Committee

June 15, 2016

Chapter I: Introduction

The Division of Drinking Water ensures that public water systems are “reliably capable of supplying adequate quantities of water.”

R309-510-7 Source Capacity

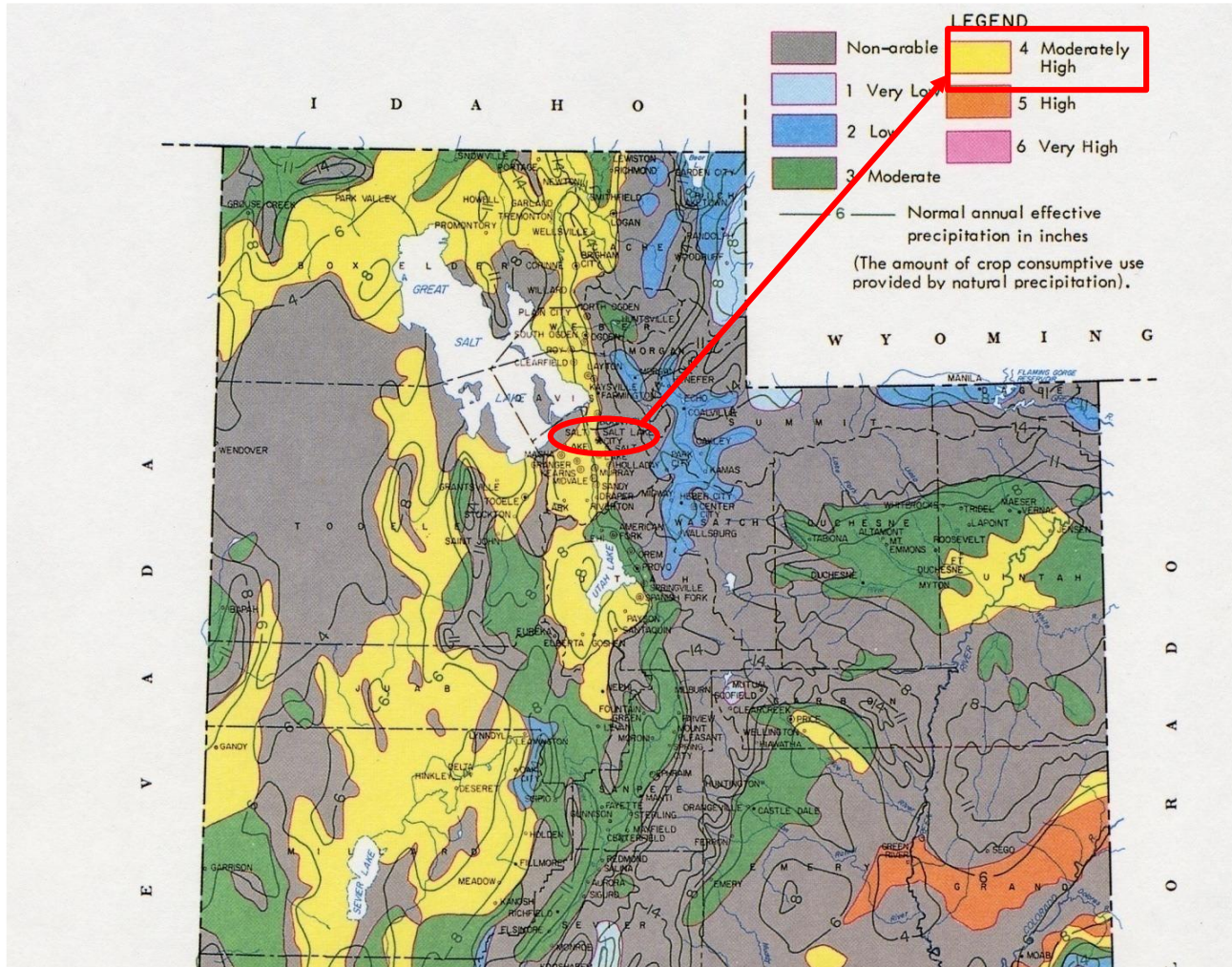
A high-speed photograph of a single water droplet falling into a pool of water. The droplet is captured mid-fall, just above the surface, with a small splash of water below it. The impact has created several concentric ripples that spread outwards from the center. The background is a soft, light blue gradient.

State Indoor Requirements

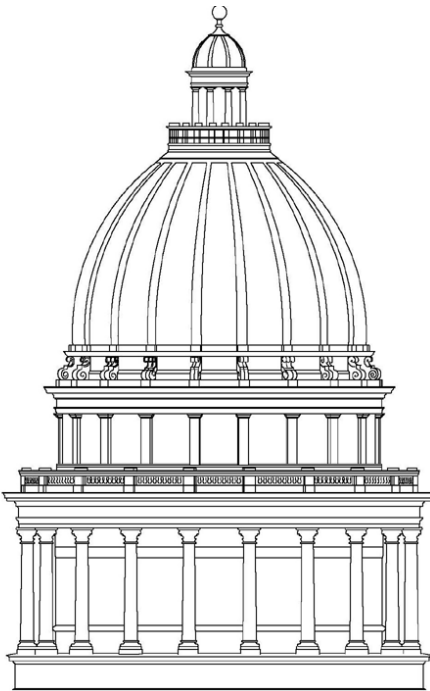
Peak Day: 800 gpd for every residential connection
Average Day: 400 gpd per residential connection



State Outdoor Requirements



Chapter II



Indoor Source Sizing
Requirements Appear Excessive

Indoor Source Sizing Requirements Appear Outdated and Lack Supporting Data

Source sizing requirements have not changed in 35 years

“Residential water use has declined by 13 percent in 30 states and Canada during the past 30 years”

- American Water

FOR MORE INFORMATION

See Chapter II, pages 7 to 8

Average Day Indoor Standard Appears Excessive

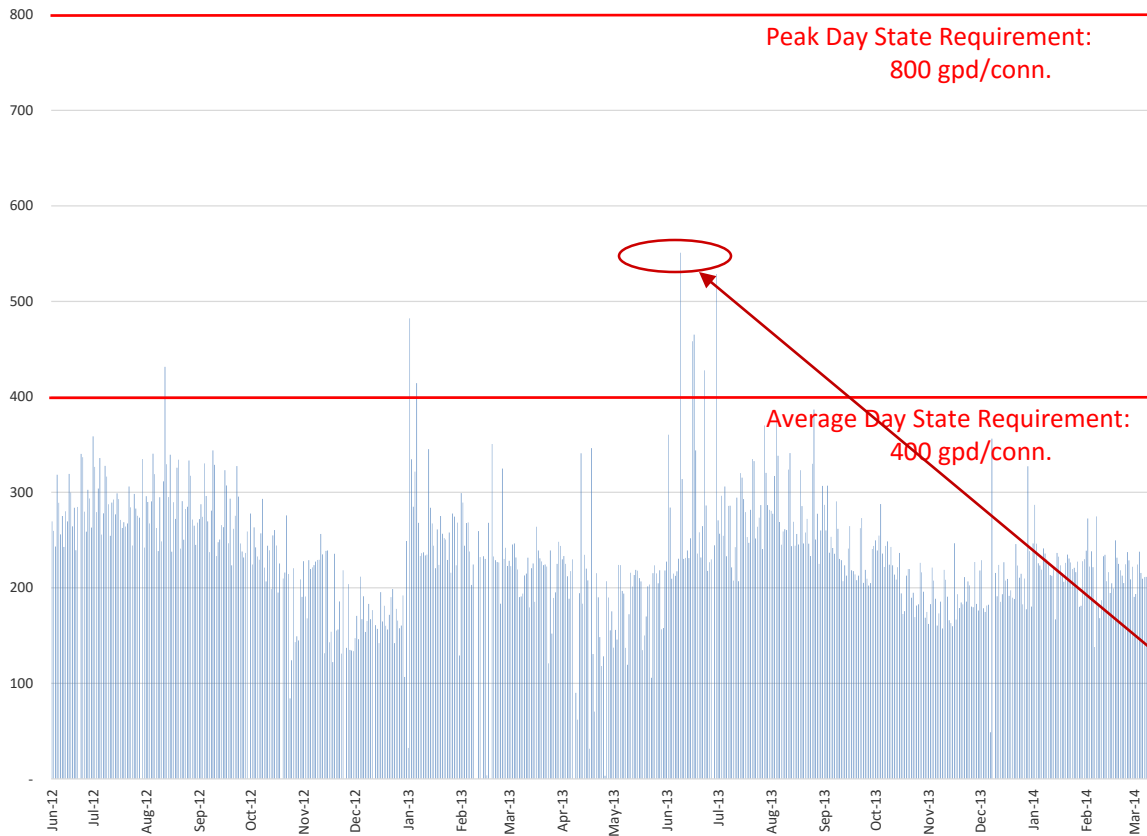
These water systems used 40-50 percent less water than the state average day requirement

| Average Indoor Water Demand in gpd/ERC | |
|--|------------|
| State Requirement | 400 |
| Blanding City | 207 |
| Draper City | 216 |
| Granger-Hunter Improvement District | 273 |
| Layton City | 224 |
| Midvale City | 236 |
| Provo City | 320 |
| Salt Lake City | 185 |
| Sandy City | 269 |
| South Jordan City | 202 |
| South Salt Lake City | 225 |
| Spanish Fork City | 259 |
| Timpanogos Special Service District | 249 |
| Average | 239 |

FOR MORE INFORMATION

See Chapter II, pages 9 to 12

Peak Day Indoor Standard Appears Excessive



Peak Day State Standard:
800 gpd per connection

Woods Cross City:
345 gpd per connection

Spanish Fork City:
437 gpd per connection

Centerville City:
551 gpd per connection

FOR MORE INFORMATION

See Chapter II, pages 12 to 14

Lower Source Sizing Standard Could Reduce Some System Costs

Water Rights

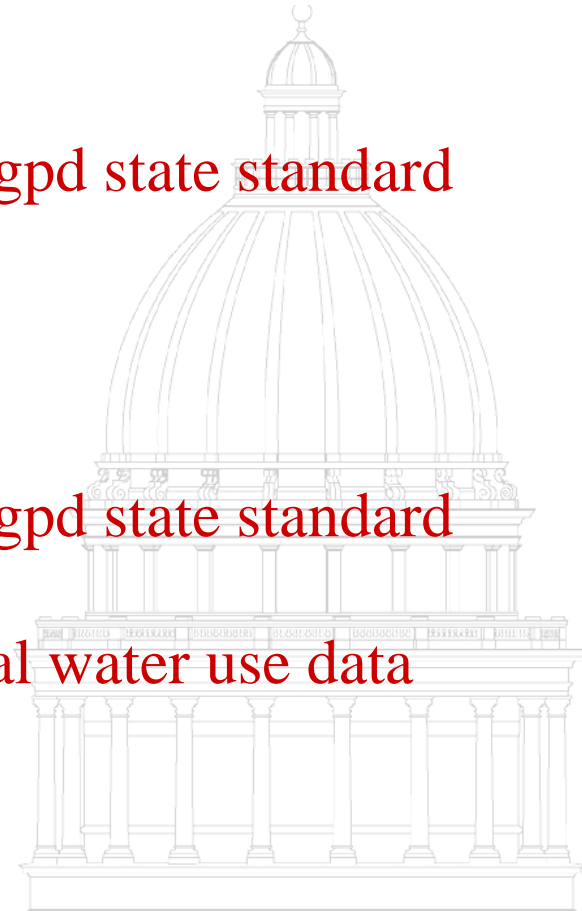
- **Herriman City**
 - **St. George City**
- ➔ Fees based on 400 gpd state standard

Impact Fees

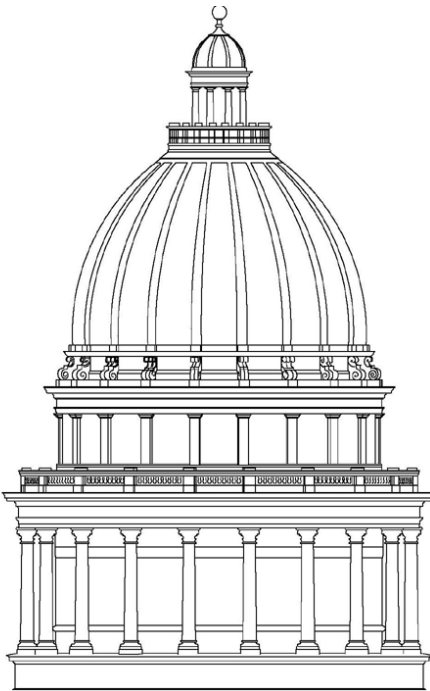
- **Eagle Mountain City**
 - **Herriman City**
 - **Centerville**
- ➔ Fees based on 800 gpd state standard
- ➔ Fees based on actual water use data

FOR MORE INFORMATION

See Chapter II, pages 15 to 17



Chapter III



Outdoor Source Sizing
Requirements Appear Too Low

Data Suggests Actual Outdoor Water Demand Is Higher than State Standards

| Average Day gpd/connection | | | |
|----------------------------|----------------|---------------|------------|
| | State Standard | Actual Demand | Difference |
| Salt Lake City | 243 | 260 | 7% |
| Sandy City | 242 | 509 | 110% |
| Provo City | 194 | 381 | 96% |

Sandy City Residents use more than twice the amount of water required by the average day state standard.

FOR MORE INFORMATION

See Chapter III, pages 19 to 22

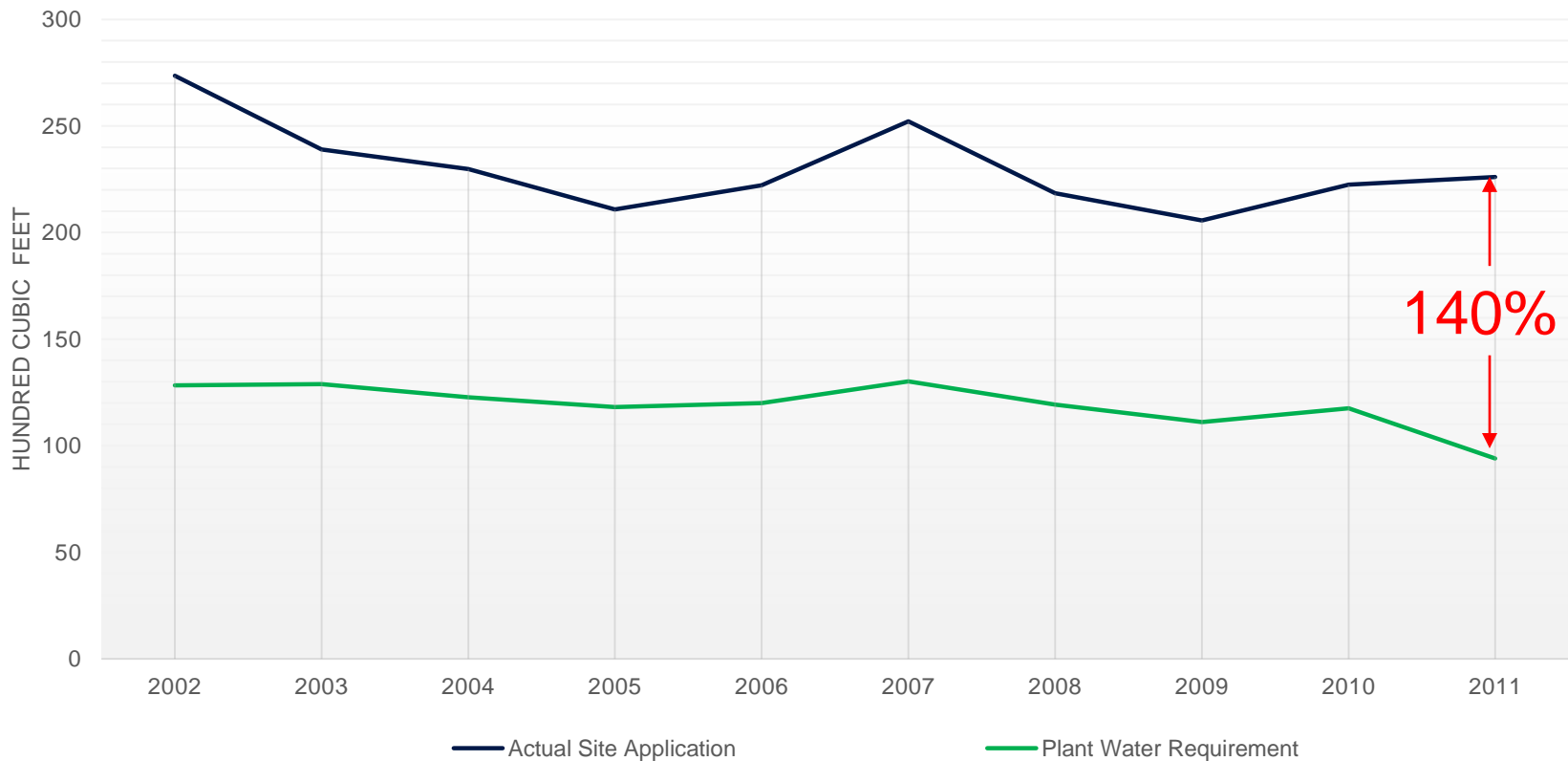
Data Suggests Actual Outdoor Water Demand Is Higher than State Standards

| Peak Day gpd/connection | | | |
|--------------------------------|-----------------------|----------------------|-------------------|
| | State Standard | Actual Demand | Difference |
| Salt Lake City | 830 | 955 | 15% |
| Sandy City | 827 | 1501 | 82% |
| Provo City | 640 | 1248 | 95% |

FOR MORE INFORMATION

See Chapter III, pages 19 to 22

Inaccurate Assumptions Underlie State Requirements for Outdoor Water Use



FOR MORE INFORMATION

See Chapter III, pages 22 to 24

The Effects of Low Outdoor Standards Are Unclear

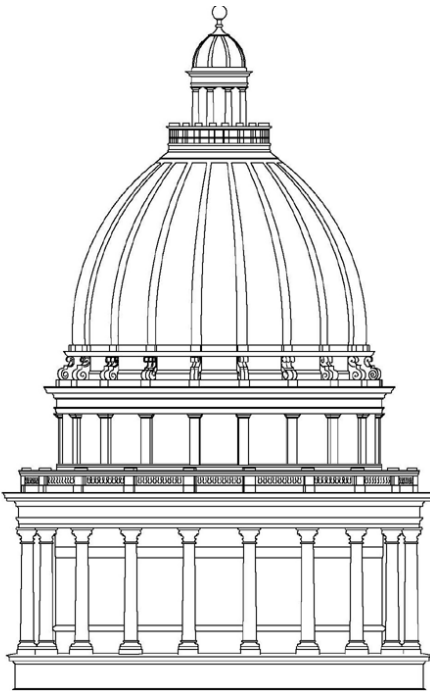


Only one water system was found to be undersized

FOR MORE INFORMATION

See Chapter III, pages 24 to 25

Chapter IV



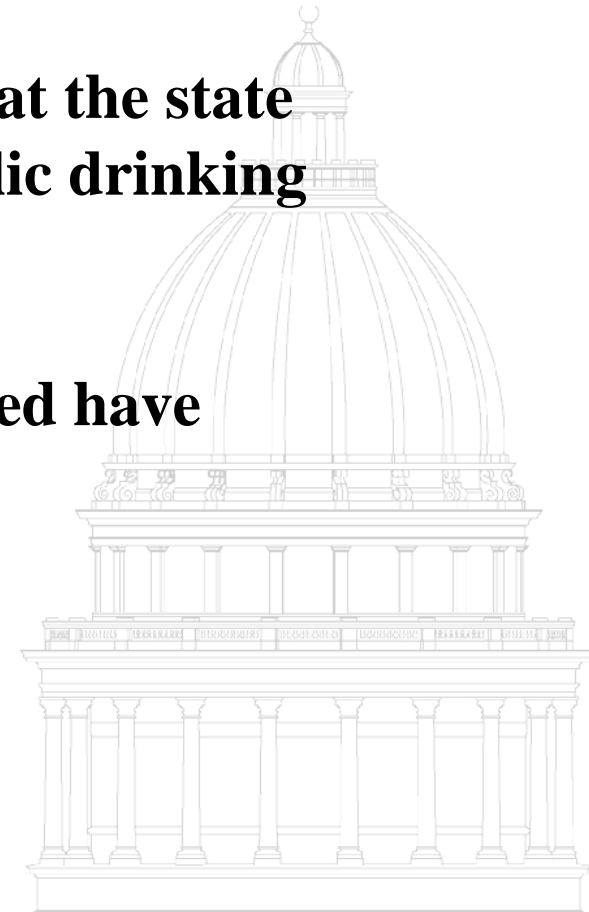
State Requirements Are Needed;
Regulatory Process Can Be Improved

State Requirements Are Needed to Protect Public Drinking Water Systems

- **Engineers and water managers agree that the state requirements are needed to protect public drinking water systems.**
- **Five of the six western states we contacted have minimum sizing standards.**

FOR MORE INFORMATION

See Chapter IV, pages 27 to 30



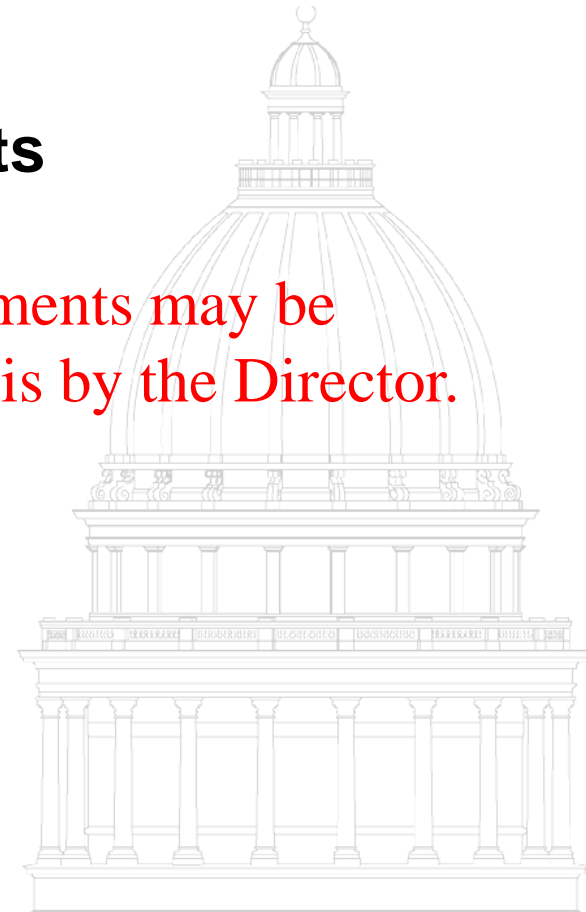
The Process for Receiving a Reduction Is Difficult but Is Improving

R309-510-5 Reduction of Requirements

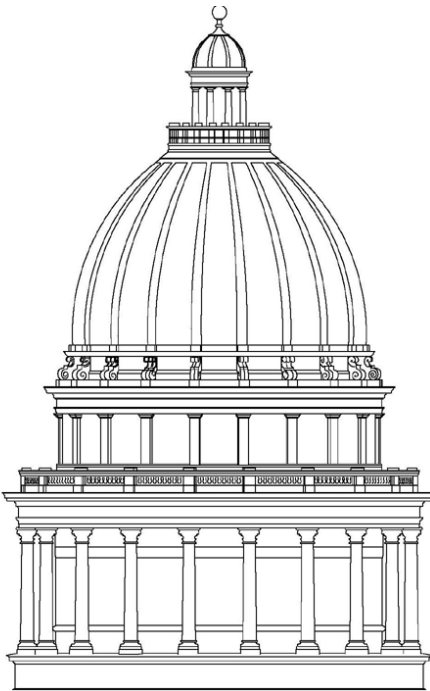
If acceptable data are presented...the requirements may be appropriately reduced...on a case by case basis by the Director.

FOR MORE INFORMATION

See Chapter IV, pages 30 to 33



A Review of the Division of Drinking Water's Minimum Source Sizing Requirements



Report to the
Legislative Audit Subcommittee

December 18, 2014