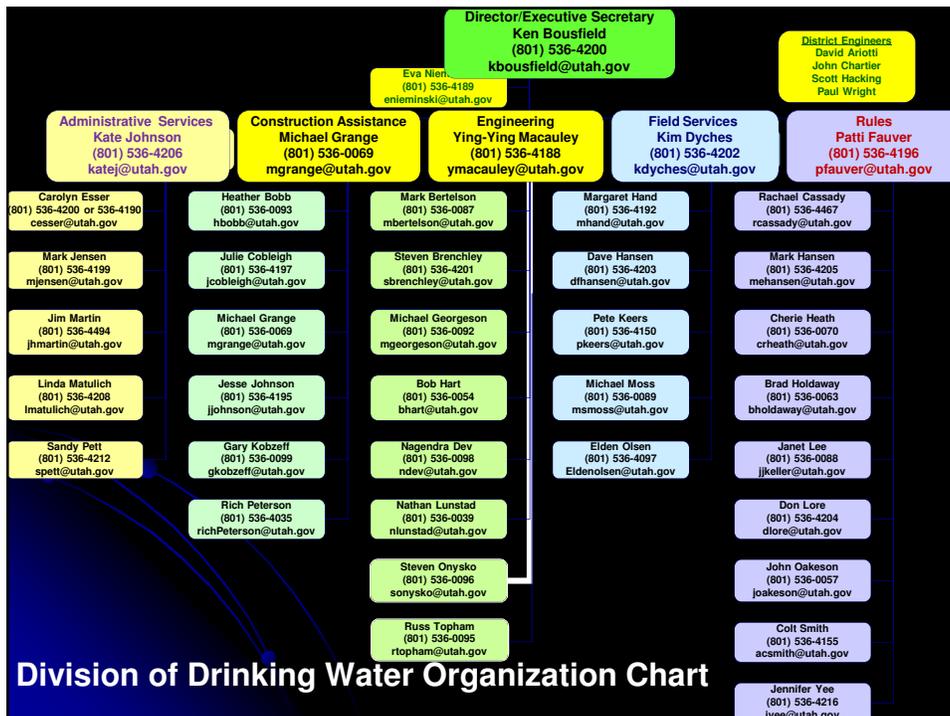


Dealing with Significant Deficiencies

RWAU Annual Conference
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Utah Division of Drinking Water
Ying-Ying Macauley



Why “Significant Deficiencies” Are Significant?

- Federal Ground Water Rule & IESWTR
- Correct within 120 days of being notified of the significant deficiency
- Independent of Utah’s Water System Rating or IPS total points
- Federal enforcement possible
- “Treatment technique violation”
 - Often not related to treatment

Improper Tank



Improper Spring Construction



Fire Hydrant Connections



No backflow protection on construction connection

Fire Hydrant Connections

Backflow protection on construction connection



Significant Deficiencies

- 450+ warning letters sent in May 2011 (not including source protection deficiencies).
- Primary Contact
 - John Oakeson (801) 536-0057
 - J.J. Trussell (801) 536-4198
 - Ying-Ying Macauley (801) 536-4188
- DDW will send out violation letters soon.
 - Tier 3 public notice is required
 - IPS points will be assigned
- Report "Treatment Technique Violations" to EPA quarterly via SDWIS

Options

1. Correct deficiency and notify DDW (John Oakson, 801-536-0057)
2. Enter into a Corrective Action Plan with DDW (J.J. Trussell, 801-536-4198)
3. Request exception with justifications
4. Request technical review or re-evaluation
 - Storage capacity requirement
 - Source requirement
5. Do nothing & face enforcement actions from state and EPA

Options

1. **Correct deficiency and notify DDW**
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Tank Overflow and Drain Lines



Overflow and drain lines shall not be connected to, or discharge into, any sanitary sewer system.

Drain and Overflow Lines Discharging into Sewer System

Options

1. Correct deficiency and notify DDW
2. **Enter into a Corrective Action Plan with DDW**
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Corrective Action Plan (CAP)

- An agreement between DDW & PWS detailing how significant deficiencies will be resolved
 - If deficiencies can't be corrected within 120 days
 - With specific milestones and timeframe
- Enter into CAP before violations are issued
 - Delay "Treatment Technique Violation" reporting
 - CAP does not include financial penalty clause
- DDW will report "Treatment Technique Violation" if the terms in CAP are not met
- Formal enforcement order (BCA or AO) is required if IPS points above rating threshold
- Contact J.J. Trussell (801) 536-4198

Options

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Request for Exception-to-Rule

If the intent of the rule can be met, submit a written request to Executive Secretary with:

1. Citation of specific rule
 - R309-500 through 550 Construction Standards
2. A detailed explanation of why the conditions of rule cannot be met for which facility
3. What the water system proposes in lieu of rule
4. Justifications

Exception to Flow Measuring Device Requirement

1. Exception to R309-515-7(7)(h) spring flow measure device requirement
2. Fox Spring (WS002) can't meet this requirement due to cost & partial/variable flow.
3. Propose to conduct the beginning and the end of the season & monthly flow measurements during operating months using a bucket and stop watch.
4. Maintain spring flow records for DDW review.

Exception to Storage Requirement

1. Exception to R309-510-8 storage sizing req't
2. RV Park Tank (ST001) can't meet the rule because of cost and lacking land & elevation.
3. Propose to install dual well pumps and a backup generator.
4. Justifications:
 - Well capacity far exceeds peak day demand
 - No fire demand
 - Has a back up system to meet the intent of the rule.

Options

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Minimum Sizing Requirements



R309-510-7 Source Capacity

R309-510-8 Storage Volume

Indoor Use Demand

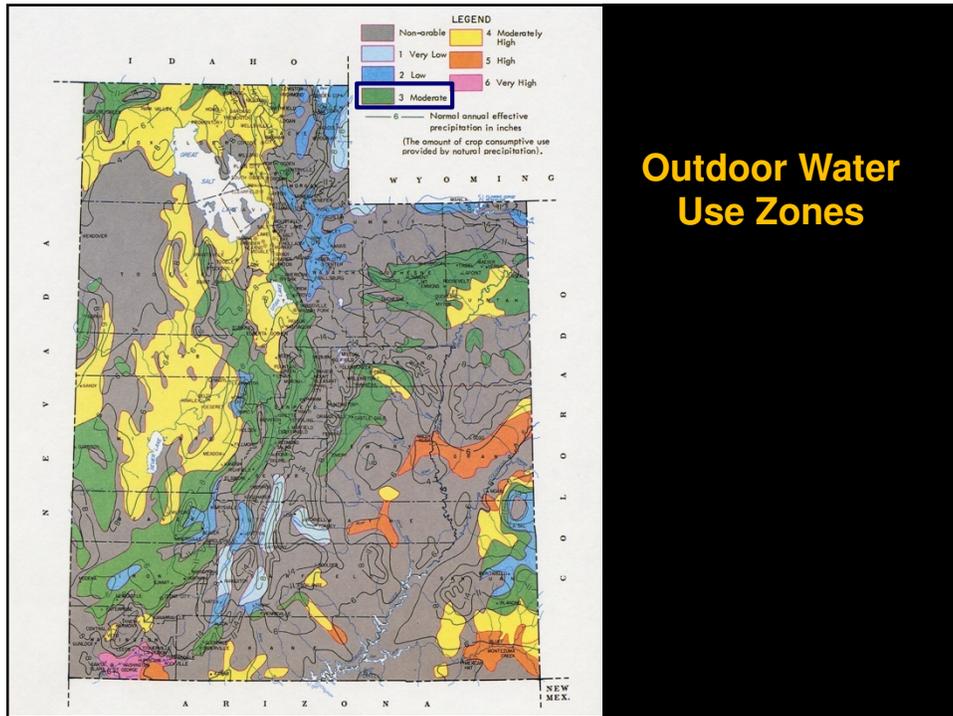
Table 510-1
Source Demand for Indoor Use

Type of Connection	Peak Day Demand	Average Yearly Demand
<i>Year-Round Use</i>		
Residential	800 gpd/conn	146,000 gal./conn
ERC	800 gpd/ERC	146,000 gal./ERC
<i>Seasonal / Non-Residential Use</i>		
Modern Recreation Camp	60 gpd/person	(see note 1)
Semi-Developed Camp		
a. With pit privies	5 gpd/person	(See note1)
b. With flush toilets	20 gpd/person	(See note 1)
Hotels, Motel & Resort	150 gpd/unit	(See note1)
Labor Camp	50 gpd/person	(See note1)
Recreational Vehicle Park	100 gpd/pad	(See note1)
Roadway Rest Stop	7 gpd/vehicle	(See note1)
Recreational Home Development	400 gpd/conn	(See note1)

Outdoor Use Demand

Table 510-3
Source Demand for Irrigation (Outdoor Use)

Map Zone	Peak Day Demand(gpm/irrigated acre)	Average Yearly Demand(AF/ irrigated acre)
1	2.26	1.17
2	2.80	1.23
3	3.39	1.66
4	3.96	1.87
5	4.52	2.69
6	4.90	3.26



R309-510-7 Minimum **Source Sizing**

Indoor + Outdoor

- **Indoor Water Use** (*Residential Connection or ERC*)
 - Peak Day Demand = 800 gpd
 - Avg. Yearly Demand = 146,000 gallon
- **Outdoor Water Use** (*assuming in Zone 3*)
 - Peak Day Demand = 3.39 gpm/irrigated acre
 - Avg. Yearly Demand = 1.66 AF/irrigated acre

Minimum Sizing Requirements



R309-510-7 Source Capacity

R309-510-8 Storage Volume

Storage for Indoor Use

Storage for Outdoor Use

Table 510-4
Storage Volume for Indoor Use

Type	Volume Required(gallons)
Community Systems	
Residential; per single resident service connection	400
Non-Residential; per Equivalent Residential Connection (ERC)	400
Non-Community Systems	
Modern Recreation Camp; per person	30
Semi-Developed Camp; per person	
a. with Pit Privies	2.5
b. with Flush Toilets	10
Hotel, Motel, & Resorts; per unit	75
Labor Camp; per unit	25
Recreational Vehicle Park; per pad	50
Roadway Rest Stop; per vehicle	3.5
Recreational Home Development; per connection	400

Table 510-5
Storage Volume for Outdoor Use

Map Zone	Volume Required (gallons/irrigated acre)
1	1,782
2	1,873
3	2,528
4	2,848
5	4,081
6	4,964

*R309-510-8 Minimum **Storage** Sizing*

Indoor + Outdoor + Fire + Emergency

- **Indoor & Outdoor Storage Volume**
 - Indoor Use = 400 gal/ERC (average day demand)
 - Outdoor Use = 2,528 gal/irrigated acre (in Zone 3)
- **Fire Suppression Storage Volume**
 - Local fire marshal requirements of flow and duration
 - Default 120,000 gal (= 1,000 gpm x 120 min) if no better data
- **Emergency Storage Volume**
 - System determines need & volume

Re-evaluation of Source & Storage

1. A ski resort's sanitary survey indicated inadequate source and storage
2. Well capacity 50 gpm versus estimated peak day indoor demand 10 gpm in winter
3. Fire storage of 34,000 gal required by fire chief versus 120,000 gal by default
4. Existing storage capacity of 58,000 gal versus required storage 41,000 gal

Significant Deficiency Options

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QUESTIONS?

Utah Division of Drinking Water

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