

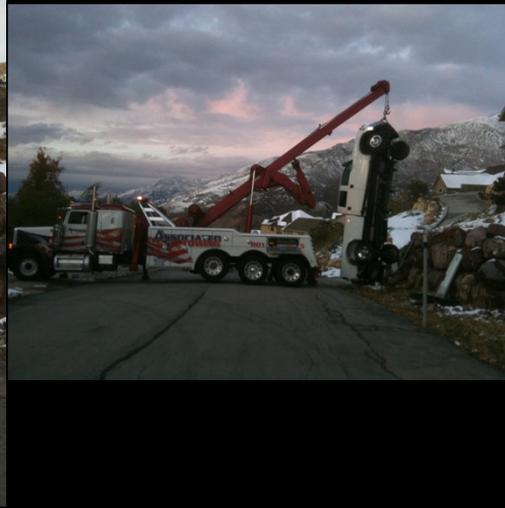
Navigate the Maze of Plan Review

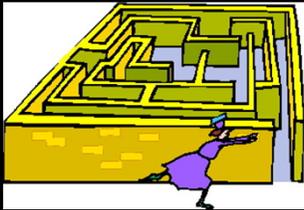
RWAU Annual Conference
February 28, 2012

Utah Division of Drinking Water
Ying-Ying Macauley



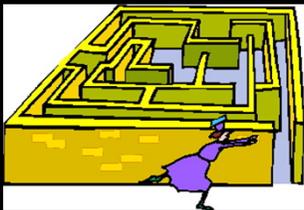
Avoid a Wreck





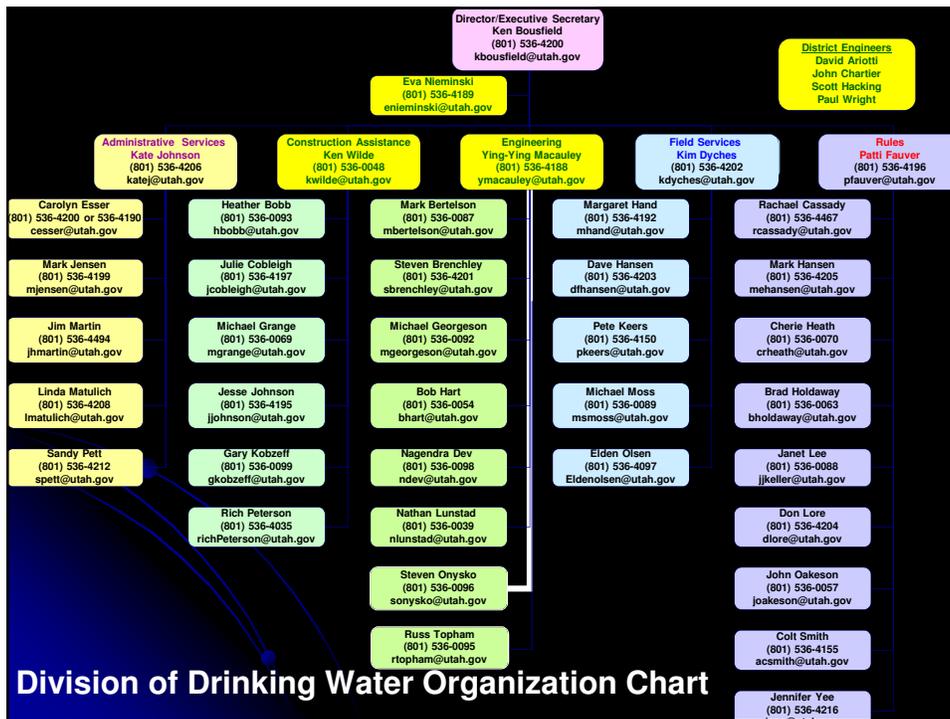
Presentation Topics

- I. DDW Overview
- II. Which Projects are Subject to Plan Review
- III. Plan Review Process
- IV. Plan Submittal Waiver
- V. Hydraulic Modeling Requirements & Off Ramps
- VI. Exception-to-Rule



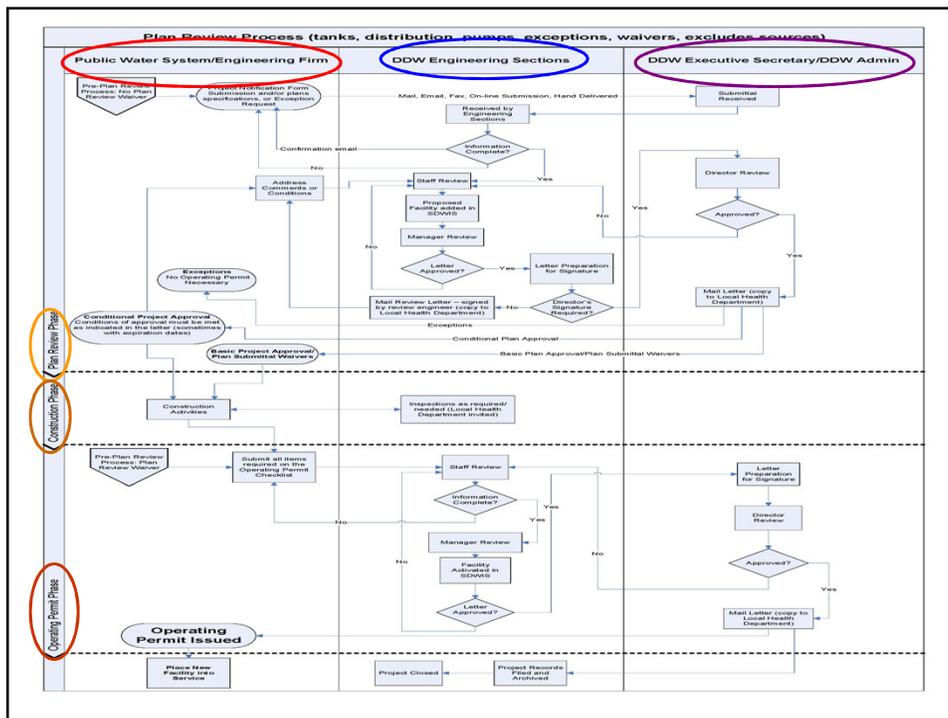
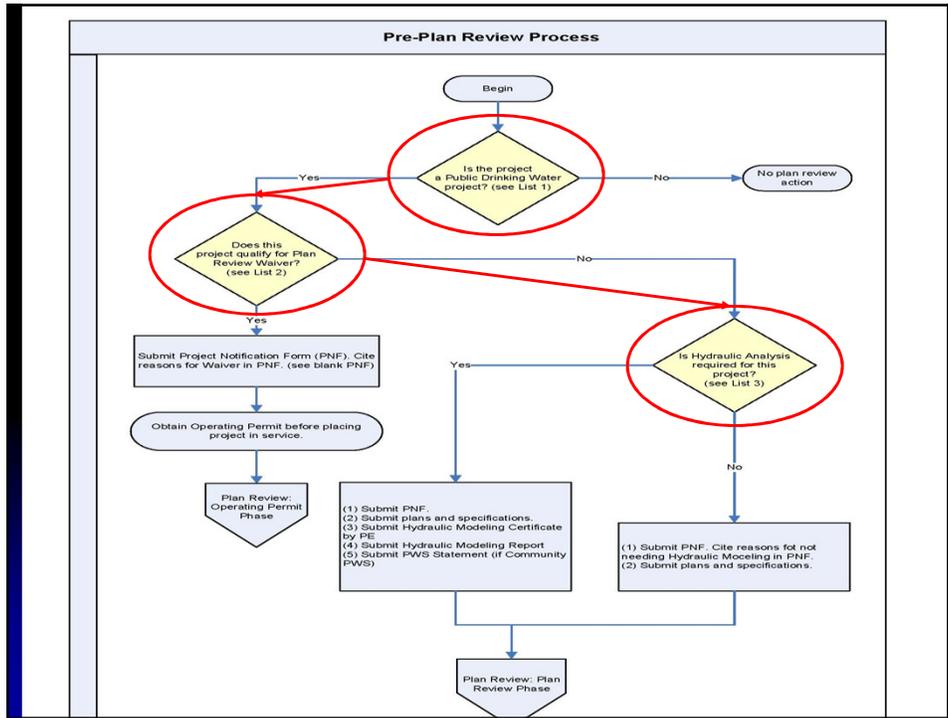
Presentation Topics

- I. **DDW Overview**
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Key Questions for Drinking Water Projects

1. Is it a public drinking water project or an on-going O&M procedure?
2. Does it qualify for plan submittal waiver?
3. Is hydraulic analysis required?



II. Projects Subject to Plan Review



Public Drinking Water Projects

“Construction, Addition, and Modification” of Drinking Water Facilities — *Plan Review Required*

1. Re-coating or re-lining storage tank interior



Public Drinking Water Projects

Plan Review Required

2. "In-situ" re-lining of pipeline



Public Drinking Water Projects

Plan Review Required

3. A change or addition of treatment chemical



Public Drinking Water Projects

Plan Review Required

4. Develop a new spring or redevelopment of an existing spring



Public Drinking Water Projects

Plan Review Required

5. Replacement of well pump with one of different capacity



Public Drinking Water Projects

Plan Review Required

6. Deepen a well
7. Construct a new well or a replacement well



Public Drinking Water Projects

Plan Review Required

8. Add a booster pump, or PRV, or a chlorinator



Projects Not Subject to Plan Review
Ongoing O & M Procedures



Ongoing O & M Procedures
*Plan Review **NOT** Required*

1. Pipeline leak repair



Ongoing O & M Procedures

Plan Review NOT Required

2. Replacement of existing pipeline
 - a) Same size pipe
 - b) Upgrade to meet minimum pipeline sizes or larger sizes determined by a hydraulic analysis



Ongoing O & M Procedures

Plan Review NOT Required

3. Tapping existing water mains to connect new service laterals



Ongoing O & M Procedures

Plan Review **NOT** Required

4. Distribution pipeline addition <500' or total <1,000'/yr
 - a) Same size pipe
 - b) **Pipe size meeting minimum pipeline sizes or larger sizes determined by a hydraulic analysis**



Ongoing O & M Procedures

Plan Review **NOT** Required

5. Inspect, clean, and maintain a tank



Ongoing O & M Procedures

*Plan Review **NOT** Required*

6. Replacement of equipment or appurtenances of same type, size, and rated capacity



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Plan Review Process

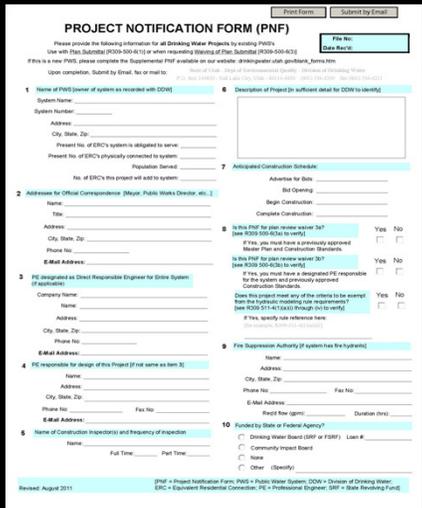


1. Submit **Project Notification Form** to DDW.
2. Submit engineering plans and specifications.
3. Receive **Plan Approval** from DDW & start construction.
4. Complete construction & request for **Operating Permit**.
5. Receive **Operating Permit** from DDW & place new facility into service.



Plan Review Process

Step 1 — Submit project notification form



PROJECT NOTIFICATION FORM (PNF)

Please provide the following information for all Drinking Water Projects by existing PNFs. Use with the Schedule (SDS-0006) to be when requesting issuance of the Schedule (SDS-0006-02).

If this is a new PNF, please complete the Supplemental PNF available on our website: interoperable.gov/blank_forms.htm

Upon completion, Submit by Email, fax or mail to: DDW@ddw.state.tx.us, 500 West 14th Street, Suite 1400, Fort Worth, TX 76102

1. Name of PNF (owner of system as recorded with DDW)
 System Name: _____
 System Number: _____
 Address: _____
 City, State, Zip: _____
 Present No. of ERC's systems is delegated to serve: _____
 Present No. of ERC's physically connected to system: _____
 Population Served: _____
 No. of ERC's this project will add to system: _____

2. Address for Official Correspondence (Mayor, Public Works Director, etc.)
 Name: _____
 Title: _____
 Address: _____
 City, State, Zip: _____
 Phone No.: _____
 E-Mail Address: _____

3. PE completed by Direct Responsible Engineer for Drinking System (if applicable)
 Company Name: _____
 Name: _____
 Address: _____
 City, State, Zip: _____
 Phone No.: _____
 E-Mail Address: _____

4. PE responsible for design of this Project (if not same as item 3)
 Name: _____
 Address: _____
 City, State, Zip: _____
 Phone No.: _____
 Fax No.: _____
 E-Mail Address: _____

5. Name of Contribution Inspector(s) and frequency of inspection
 Name: _____
 Full Time: _____ Part Time: _____

6. Description of Project (in sufficient detail for DDW to identify)

7. Anticipated Construction Schedule:
 Advertise for bids: _____
 Bid Opening: _____
 Begin Construction: _____
 Complete Construction: _____

8. Is this PNF for plan review under 347 (see SDS-0006 to verify)? Yes No
 Yes, you must have a previously approved Water Plan and Construction Standards.
 Is this PNF for plan review approved 347 (see SDS-0006 to verify)? Yes No
 Yes, you must have a designated PE responsible for the system and previously approved Construction Standards.
 Does this project meet any of the criteria for a exempt from this PNF (see SDS-0006 through this version)? Yes No
 Yes, specify rule reference here: _____

9. Fire Suppression Authority (if system has fire hydrants)
 Name: _____
 Address: _____
 City, State, Zip: _____
 Phone No.: _____ Fax No.: _____
 E-Mail Address: _____
 Read flow (gpm): _____ Duration (hrs): _____

10. Funded by State or Federal Agency?
 Drinking Water Board (DWB) or (DWP) Local # _____
 Community Impact Board None
 Other (Specify): _____

PNF = Project Notification Form; PWS = Public Water System; DDW = Division of Drinking Water; ERC = Equivalent Residential Connection; PE = Professional Engineer; SRF = State Revolving Fund
 Revised: August 2011

Print Form Submit by Email

PROJECT NOTIFICATION FORM (PNF)

Please provide the following information for all Drinking Water Projects by existing PWS's
Use with Plan Submittal (R309-500-61) or when requesting Waiving of Plan Submittal (R309-500-62)
If this is a new PWS, please complete the Supplemental PNF available on our website: drinkingwater.utah.gov/Plan_Forms.htm

File No: _____
Date Rec'd: _____

Utah State Office: Division of Environmental Quality, Division of Drinking Water
Upon completion, Submit by Email, fax or mail to: P.O. Box 148894, Salt Lake City, Utah 84114-8894 (801) 526-6200 Fax (801) 526-6211

<p>1 Name of PWS (owner of system as recorded with DDW)</p> <p>System Name: _____ System Number: _____ Address: _____ City, State, Zip: _____ Present No. of ERC's system is obligated to serve: _____ Present No. of ERC's physically connected to system: _____ Population Served: _____ No. of ERC's this project will add to system: _____</p> <p>2 Addressee for Official Correspondence (Mayor, Public Works Director, etc.)</p> <p>Name: _____ Title: _____ Address: _____ City, State, Zip: _____ Phone No: _____ E-Mail Address: _____</p> <p>3 PE designated as Direct Responsible Engineer for Entire System (if applicable)</p> <p>Company Name: _____ Name: _____ Address: _____ City, State, Zip: _____ Phone No: _____ E-Mail Address: _____</p> <p>4 PE responsible for design of this Project (if not same as item 3)</p> <p>Name: _____ Address: _____ City, State, Zip: _____ Phone No: _____ Fax No: _____ E-Mail Address: _____</p> <p>5 Name of Construction Inspector(s) and frequency of inspection</p> <p>Name: _____ Full Time: _____ Part Time: _____</p>	<p>6 Description of Project (in sufficient detail for DDW to identify)</p> <p>_____</p> <p>7 Anticipated Construction Schedule:</p> <p>Advertise for Bids: _____ Bid Opening: _____ Begin Construction: _____ Complete Construction: _____</p> <p>8 Is this PNF for plan review waiver 3a? (see R309 500-6(3a) to verify) Yes No <input type="checkbox"/> <input type="checkbox"/></p> <p>If Yes, you must have a previously approved Master Plan and Construction Standards</p> <p>Is this PNF for plan review waiver 3b? (see R309 500-6(3b) to verify) Yes No <input type="checkbox"/> <input type="checkbox"/></p> <p>If Yes, you must have a designated PE responsible for the system and previously approved Construction Standards</p> <p>Does this project meet any of the criteria to be exempt from the hydraulic modeling rule requirements? (see R309 511-4(1)(a)(i) through (iv) to verify) Yes No <input type="checkbox"/> <input type="checkbox"/></p> <p>If Yes, specify rule reference here: _____ <small>(for example, 9.309-511-4(1)(a)(i))</small></p> <p>9 Fire Suppression Authority (if system has fire hydrants)</p> <p>Name: _____ Address: _____ City, State, Zip: _____ Phone No: _____ Fax No: _____ E-Mail Address: _____ Req'd flow (gpm): _____ Duration (hrs): _____</p> <p>10 Funded by State or Federal Agency? Loan #</p> <p><input type="radio"/> Drinking Water Board (SRF or FSRF) Loan # _____ <input type="radio"/> Community Impact Board _____ <input type="radio"/> None _____ <input type="radio"/> Other (Specify) _____</p>
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Revised August 2011 (PNF = Project Notification Form; PWS = Public Water System; DDW = Division of Drinking Water; ERC = Equivalent Residential Connection; PE = Professional Engineer; SRF = State Revolving Fund)

1. PWS Info

2. Contact Info

3. PWS Engineer (optional)

4. Design Engineer

5. Inspector (optional)

6. Detailed Project Description

7. Schedule (optional)

8. Plan Submittal Waiver Request

8. Hydraulic Modeling Exemption

9. Fire Authority Info

10. Funding



Plan Review Process

Step 2 — Submit plans and specifications

1. Submit at least 30 days in advance.
2. Should be previously reviewed by the PWS for conformance with their own requirements.
3. The submittal should be made by the PWS.
4. DDW does not approve subdivision plats.
5. Should be final and complete for actual construction.
6. Stamped, signed, and dated by a Utah P.E.



Plan Review Process

Step 3 — Receive **Plan Approval** before starting construction

- 50 deficiency points for not obtaining Plan Approval

Last Step — Obtain **Operating Permit** before placing the facility in service

- 50 to 150 deficiency points for not obtaining OP

Operating Permit Checklist - General

1. PE Statement of Changes
2. PE Certification of Conformance
3. As-builts Submitted to DDW
4. As-builts Received by PWS
5. Evidence of Flushing and Disinfection
6. Submit other Water Quality Data if needed
7. O&M Manuals given to PWS

DIVISION OF DRINKING WATER OPERATING PERMIT CHECKLIST

With the exception of ~~distribution lines~~ (and ~~distribution lines with booster pumps and pressure-reducing valves~~), the following items must be submitted and found to be acceptable for all projects:

- Utah Registered Engineer's statement of what plan changes, if any, were necessary during construction and Utah Registered Engineer's Certification of Conformance that all of these changes were in accordance with applicable Utah Administrative Code, namely, Rule Series 500, Drinking Water Facility, Construction, Design, and Operation.
- Utah Registered Engineer's R309-500-9 Certification of Rule Conformance that all conditions of plan approval (including conditions set forth by the Executive Secretary in any conditional approval letter) have been accomplished.
- As-built drawings have been received at the Division (unless no changes were made to the pre-construction drawings).
- Confirmation that as-built drawings have been received at the water system (unless no changes were made to the pre-construction drawings).
- Evidence of proper flushing and disinfection in accordance with the appropriate ANSI/AWWA Standard.
 - ANSI/AWWA C651-92 AWWA Standard for Disinfecting Water Mains
 - Two consecutive sample sets (each 1200 feet, end-of-line, each branch, etc.), none positive, at least 24 hours apart.
 - ANSI/AWWA C652-92 AWWA Standard for Disinfection of Water-Storage Facilities
 - One or more samples, none positive.
 - ANSI/AWWA C653-97 AWWA Standard for Disinfection of Water Treatment Plants
 - Two consecutive samples per unit, none positive, no less than 30 minutes apart.
 - ANSI/AWWA C654-97 AWWA Standard for Disinfection of Wells
 - Two consecutive samples, none positive, no less than 30 minutes apart.
- Water quality data, where appropriate.
- Water system owner has been provided with O&M manuals for any new facilities.

Spring Approval Checklist

1. Approval to Develop the Spring

2. Operating Permit to Use the Spring Water

DIVISION OF DRINKING WATER Checklist for New or Re-developed Public Drinking Water Springs (Per Utah Administrative Code R309-515-7)

System Name: _____ System Number: _____

Spring Name & Description: _____

1. Approval to Develop the Spring

- Project Notification Form
- Preliminary Evaluation Report (PER) concurrence (for new springs)
- Spring location data
- Documentation of valid water right(s)
- An engineer's or geologist's statement indicating:
 - o The historical record (if available) of spring flow variation
 - o Expected minimum flow and the time of the year it will occur
 - o Expected maximum flow and the time of the year it will occur
 - o Expected average flow
 - o The behavior of the spring during drought conditions
- New source chemical analyses of the spring water (for new springs) *[R309-515-4(B)]*
- An assessment of whether the spring is "under the direct influence of surface water"
[Guidance: This assessment can be based on on-site inspection, known geological conditions, or specific water analyses results such as MPA.]
- Detailed plans and specifications for spring development or re-development

2. Operating Permit to Use the Spring Water

- Design engineer's statement of conformance with plan approval conditions
- Design engineer's certification of rule conformance for any deviation from the approved plans
- Information on the rate of flow developed from the spring
- As-built drawings
- Recorded land use agreements or documentation that the requirements for coverage under the City/County source protection ordinance have been met
- Proof of satisfactory bacteriological quality
- Water quality data, where appropriate. *[Guidance: If the initial new source sampling indicates unsatisfactory turbidity, the spring water must be re-sampled and proven to have turbidity level below MCL.]*

Well Approval Checklist

1. Approval to Drill

2. Approval to Equip

3. Operating Permit to Place the Well in Service

DIVISION OF DRINKING WATER Checklist for New Public Drinking Water Wells (Per Utah Administrative Code R309-515-6)

System Name: _____ System Number: _____

Well Name & Description: _____

1. Approval to Drill the Well

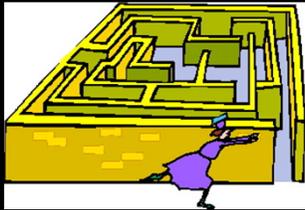
- Project Notification Form
- Preliminary Evaluation Report (PER) concurrence
- Well drilling specifications and plans
- Valid Start Card or authorization to drill letter from the Division of Water Rights

2. Approval to Equip the Well

- Project Notification Form
- Well location data
- Certification of well seal
- Well driller's report (well log)
- Aquifer drawdown test results (step drawdown test & constant-rate test) for well yield determination
- Chemical analyses of the well water
- Plans and specifications for equipping the well
 - o Pump information (e.g., pump specifications, pump curve & operating point, motor information, etc.)
 - o Well head discharge piping
 - o Well house design

3. Operating Permit to Introduce the Well Water

- Documentation of valid water right(s)
- Design engineer's statement of conformance with approval conditions
- Design engineer's statement of conformance with the Rule for any deviation from the plan approval or plan review exemption
- Evidence of O&M manual delivery
- As-built drawings
- Recorded land use agreements or documentation that the requirements for coverage under the City/County source protection ordinance have been met
- Satisfactory bacteriological results



Presentation Topics

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Qualify for Plan Submittal Waiver **R309-500-6(3)**

Distribution system improvements excluding PRV & booster pump stations (= waterline projects)

- a) Previously approved master plan & standard installation drawings
- b) Designated PE directly responsible for PWS
 Approved standard installation drawings
 Meeting limits of pipe size and population

Waiving Plan Submittal

R309-500-6(3)



1. Submit **PNF** & request for plan submittal waiver.
2. Receive **Plan Submittal Waiver** from DDW & start construction.
3. Complete construction & request for Operating Permit.
4. Obtain **Operating Permit** & place new waterlines into service.

* Operating Permit is still required even if a plan submittal waiver is granted.

PROJECT NOTIFICATION FORM (PNF)

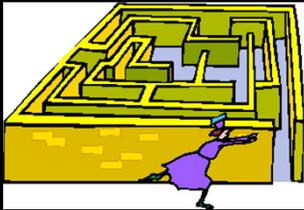
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Use with Plan Submittal (R309-500-6(1)) or when requesting Waiving of Plan Submittal (R309-500-6(3))

File No: _____
 Date Rec'd: _____

If this is a new PWS, please complete the Supplemental PNF available on our website: drinkingwater.utah.gov/bank_forms.htm
 Upon completion, Submit by Email, fax or mail to: State of Utah - Dept. of Environmental Quality - Division of Drinking Water
 P.O. Box 144830 - Salt Lake City, Utah - 84114-4830 (801) 536-4200 Fax (801) 536-4211

<p>1 Name of PWS (owner of system as recorded with DDW)</p> <p>System Name: _____ System Number: _____ Address: _____ City, State, Zip: _____ Present No. of ERC's system is obligated to serve: _____ Present No. of ERC's physically connected to system: _____ Population Served: _____ No. of ERC's this project will add to system: _____</p> <p>2 Addressee for Official Correspondence (Mayor, Public Works Director, etc...)</p> <p>Name: _____ Title: _____ Address: _____ City, State, Zip: _____ Phone No: _____ E-Mail Address: _____</p> <p>3 PE designated as Direct Responsible Engineer for Entire System (if applicable)</p> <p>Company Name: _____ Name: _____ Address: _____ City, State, Zip: _____ Phone No: _____ E-Mail Address: _____</p> <p>4 PE responsible for design of this Project (if not same as item 3)</p> <p>Name: _____ Address: _____ City, State, Zip: _____ Phone No: _____ Fax No: _____ E-Mail Address: _____</p> <p>5 Name of Construction Inspector(s) and frequency of inspection</p> <p>Name: _____ Full Time: _____ Part Time: _____</p>	<p>6 Description of Project (in sufficient detail for DDW to identify)</p> <div style="border: 1px solid black; height: 100px; width: 100%;"></div> <p>7 Anticipated Construction Schedule:</p> <p>Advertise for Bids: _____ Bid Opening: _____ Begin Construction: _____ Complete Construction: _____</p> <p>8 Is this PNF for plan review waiver 3a? Yes No <small>(see R309 500-6(3a) to verify)</small> If Yes, you must have a previously approved Master Plan and Construction Standards. <input type="checkbox"/> <input type="checkbox"/></p> <p>Is this PNF for plan review waiver 3b? Yes No <small>(see R309 500-6(3b) to verify)</small> <input type="checkbox"/> <input type="checkbox"/></p> <p>If Yes, you must have a designated PE responsible for the system and previously approved Construction Standards. <input type="checkbox"/> <input type="checkbox"/></p> <p>Does this project meet any of the criteria to be exempt from the PWS modeling rule requirements? Yes No <small>(see R309 511-4(1)(a)(i) through (iv) to verify)</small> <input type="checkbox"/> <input type="checkbox"/> <small>If Yes, specify rule reference here: (for example, R309-511-4(1)(a)(i))</small></p> <p>9 Fire Suppression Authority (if system has fire hydrants)</p> <p>Name: _____ Address: _____ City, State, Zip: _____ Phone No: _____ Fax No: _____ E-Mail Address: _____ Req'd flow (gpm): _____ Duration (hrs): _____</p> <p>10 Funded by State or Federal Agency?</p> <p><input type="radio"/> Drinking Water Board (SRF or FSRF) Loan # _____ <input type="radio"/> Community Impact Board <input type="radio"/> None <input type="radio"/> Other (Specify) _____</p>
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Revised: August 2011 [PNF = Project Notification Form; PWS = Public Water System; DDW = Division of Drinking Water; ERC = Equivalent Residential Connection; PE = Professional Engineer; SRF = State Revolving Fund]



Presentation Topics

- I. Division of Drinking Water Overview
- II. Which Projects are Subject to Plan Review
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- V. **Hydraulic Modeling Requirements & Off Ramps**
- VI. Obtain Exception-to-Rule

Hydraulic Modeling Requirements

Rule R309-511

- Apply to **Community Water Systems** & **NTNC** systems with high water demands
- Rule Elements
 - ✓ Hydraulic model
 - ✓ Engineer's certification of model results
 - ✓ "Hydraulic Model Design Elements Report" (or "System Capacity and Expansion Report")
 - ✓ The water system management's acknowledgement of receipt of the model findings (for Community PWS)

Drinking Water Projects That Should Include Hydraulic Modeling

- Water system expansion
- New Construction that is expected to have hydraulic impact
- Master Plan

Hydraulic Modeling Off Ramps

R309-511-4(1)(a)

- i. No negative hydraulic impact
- ii. A part of a pre-approved master plan
- iii. Systems maintains a hydraulic model & designates a Professional Engineer who oversees the hydraulic analyses.
- iv. Real time data indicative of modeled hydraulic conditions

Getting Off Hydraulic Modeling Highway

How do these “off ramps” help?

- Identify the hydraulic modeling “off ramp” in **Project Notification Form**.
- Submittal of the hydraulic modeling report is not required.
- For some projects, PE’s certification of hydraulic model results needs to be included with plan submittal.

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Please provide the following information for all Drinking Water Projects by existing PWS's
Use with Plan Submittal (R309-500-6(1)) or when requesting Waiving of Plan Submittal (R309-500-6(3))

File No: _____
 Date Rec'd: _____

If this is a new PWS, please complete the Supplemental PNF available on our website: drinkingwater.utah.gov/blank_forms.htm
 Upon completion, Submit by Email, fax or mail to: State of Utah - Dept of Environmental Quality - Division of Drinking Water
 P.O. Box 144830 - Salt Lake City, Utah - 84114-4830 (801) 536-4200 Fax (801) 536-4211

<p>1 Name of PWS (owner of system as recorded with DDW)</p> <p>System Name: _____ System Number: _____ Address: _____ City, State, Zip: _____ Present No. of ERC's system is obligated to serve: _____ Present No. of ERC's physically connected to system: _____ Population Served: _____ No. of ERC's this project will add to system: _____</p> <p>2 Addressee for Official Correspondence (Mayor, Public Works Director, etc...)</p> <p>Name: _____ Title: _____ Address: _____ City, State, Zip: _____ Phone No: _____ E-Mail Address: _____</p> <p>3 PE designated as Direct Responsible Engineer for Entire System (if applicable)</p> <p>Company Name: _____ Name: _____ Address: _____ City, State, Zip: _____ Phone No: _____ E-Mail Address: _____</p> <p>4 PE responsible for design of this Project (if not same as item 3)</p> <p>Name: _____ Address: _____ City, State, Zip: _____ Phone No: _____ Fax No: _____ E-Mail Address: _____</p> <p>5 Name of Construction Inspector(s) and frequency of inspection</p> <p>Name: _____ Full Time: _____ Part Time: _____</p>	<p>6 Description of Project (in sufficient detail for DDW to identify)</p> <div style="border: 1px solid black; height: 100px; width: 100%;"></div> <p>7 Anticipated Construction Schedule:</p> <p>Advertise for Bids: _____ Bid Opening: _____ Begin Construction: _____ Complete Construction: _____</p> <p>8 Is this PNF for plan review waiver 3a? (see R309 500-6(3a) to verify) Yes <input type="checkbox"/> No <input type="checkbox"/> If Yes, you must have a previously approved Master Plan and Construction Standards.</p> <p>Is this PNF for plan review waiver 3b? (see R309 500-6(3b) to verify) Yes <input type="checkbox"/> No <input type="checkbox"/> If Yes, you must have a designated PE responsible for the system and previously approved Construction Standards.</p> <p>Does this project meet any of the criteria to be exempt from the hydraulic modeling rule requirements? (see R309 511-4(1)(a)(i) through (iv) to verify) Yes <input type="checkbox"/> No <input type="checkbox"/> If Yes, specify rule reference here: _____ (for example, R309-511-4(i) 500(5))</p> <p>9 Fire Suppression Authority (if system has fire hydrants)</p> <p>Name: _____ Address: _____ City, State, Zip: _____ Phone No: _____ Fax No: _____ E-Mail Address: _____ Req'd flow (gpm): _____ Duration (hrs): _____</p> <p>10 Funded by State or Federal Agency?</p> <p><input type="radio"/> Drinking Water Board (SRF or FSRF) Loan # _____ <input type="radio"/> Community Impact Board <input type="radio"/> None <input type="radio"/> Other (Specify) _____</p>
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Hydraulic Modeling Off Ramp

R309-511-4(1)(a)(i)

No negative hydraulic impact

- (A) New sources without adding any new connections
- (B) Treatment/Chlorination/Fluoridation
- (C) Tank repair or re-coating
- (D) Water main addition without new connections
- (E) Transmission line addition without new connections
- (F) Pump stations upstream of distribution system
- (G) Projects involving minimal hydraulic impact

Hydraulic Modeling Off Ramp

R309-511-4(1)(a)(ii)

Waterline projects as a part of a pre-approved master plan

- Master Plan supported by hydraulic analyses
 - Master Plan meeting R309-110 “master plan” definition
 - Master Plan submitted to DDW for review/approval
- If the water system desires to qualify for plan submittal waivers, obtain approval for both master plan & construction standards and specifications.

Hydraulic Modeling Off Ramp

R309-511-4(1)(a)(ii)

Systems maintains a hydraulic model and has designated a P.E. who oversees the hydraulic analyses.

- Water system notifies DDW in writing
 - ✓ has and maintains a hydraulic model
 - ✓ identifies the model method and version
 - ✓ identifies the name of the professional engineer (and affiliation if applicable).

Hydraulic Modeling Applicability

Existing deficiencies versus new development

A new construction project may be allowed as long as the new construction project:

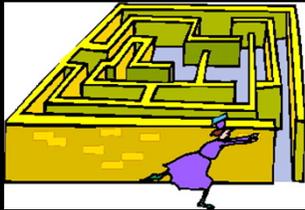
- ✓ is located in a hydraulically separated area, and
- ✓ does not adversely impact the existing deficiencies or does not create new deficiencies within the water system.

Engineer's Certification

- Certifies that:
 - ✓ The minimum model requirements were met.
 - ✓ The appropriate demand requirements as specified by Rule were used in the model.
 - ✓ The model shows that minimum pressures can be maintained during high demand conditions in both the new expansion and existing areas.
 - ✓ The model was adequately calibrated.
- Identifies the modeling method and software name and version

Information Available

- Two Report Templates
 - Hydraulic Model Design Elements Report
 - Hydraulic Model Design Elements & System Capacity and Expansion Report (Master Plan)
- Hydraulic Modeling Checklist
- Engineer's Certification Language



Presentation Topics

- I. Division of Drinking Water Overview
- II. Which Projects are Subject to Plan Review
- III. Plan Review Process
- IV. Plan Submittal Waiver
- V. Hydraulic Modeling Requirements & Off Ramps
- VI. **Exception-to-Rule**

Request for Exception-to-Rule

Submit a written request to Executive Secretary with:

1. Citation of specific rule
 - Applies to 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. Justification

Exception to Spring Fencing Requirement



Exception to Spring Fencing Requirement

1. Request exception to R309-515-7(7)(e).
2. Sunshine Spring (WS001) can't meet the rule because of steep terrain & snow load.
3. Propose to conduct monthly inspection of spring collection area and diversion channel during operating months.
4. Justifications include (1) no cattle grazing activity, (2) source protection ordinance exists, (3) PWS owns and has control of the spring area; etc.

Exception to Water/Sewer Lines Minimum Separation Requirements

1. Exception to R309-550-7(1).
2. Can't meet the rule at Center St./200 E because of existing 24" sewer main & narrow road
3. Propose to install flowable fill between sewer and water lines & use fusible PVC for waterline within 50 ft of both sides of the crossing.
4. Justifications include (1) minimizing risk by eliminating joints & (2) no known high ground water table in the area.

Where can I find the Rules?

<http://drinkingwater.utah.gov/>

Facility Construction, Design & Operation
R309-500 through R309-550

Utah
Department of Environmental Quality
Division of Drinking Water

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Backflow Technicians | Certified Operators | Consumers | Consultants | Water Suppliers

Welcome to the Division of Drinking Water

Substantive Change to Proposed Rule R309-110-4 and R309-520

On November 4, 2010, the Drinking Water Board authorized the Division staff to initiate the rulemaking process to revise R309-110-4 (Definitions) and R309-520 (Disinfection Rule) to include emerging disinfection treatment technologies and to add specificity in construction standards. We received valuable comments from renowned experts and water treatment professionals during the public comment periods. Modifications to these proposed rule amendments are necessary as a result of the comments we received.

On March 3, 2011, the Drinking Water Board authorized the Division staff to refile the proposed rule changes, with the modifications as a result of public comments, with the Division of Administrative Rules for publication in the April 1, 2011 Utah Bulletin. This will start a new 30-day formal comment period. If the Division staff, after this new comment

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Salt Lake City, Utah

Where can I find Plan Review Information?

<http://drinkingwater.utah.gov/>

Utah
Department of Environmental Quality
Division of Drinking Water

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DDW Home > Programs

Drinking Water Programs

- Backflow Technician Certification
- Capacity Development
- Construction Assistance Programs
- Consumer Confidence Reports
- Monitoring and Reporting
- Operator Certification
- **Plan Review**
- Sanitary Surveys
- Source Protection

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Drinking Water Board

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Questions?

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