

## PWSAP Webinar Series: Groundwater Renewal Process

### Part 2 - Groundwater Project Renewals: Operational Monitoring and Operational Testing

#### Key Personnel:

Andrew Dehoff  
Todd Eaby  
Dave Haklar  
Bill Miller  
Mike Appleby  
Scott McFeaters

Executive Director  
Manager, Project Review  
PWSAP Coordinator  
Hydrogeologist  
Supervisor, Groundwater  
Hydrogeologist

YOUR RIVER  
OUR MISSION



SRBC.NET  
@SRBCNEWS

---

---

---

---

---

---

---

---

## Webinar Overview

- Part 1 -Groundwater Project Renewals: A Two-Step Process **Completed January 28, 2021**
- Part 2 – Groundwater Project Renewals:  
Operational Monitoring and Operational Testing
  - February 25, 2021
- Part 3 – Groundwater Project Renewals: Water Level Monitoring
  - March 25, 2021 – **On Deck!**

YOUR RIVER  
OUR MISSION



SRBC.NET  
@SRBCNEWS

---

---

---

---

---

---

---

---

## New Fact Sheets

<p><b>GROUNDWATER PROJECT RENEWAL PROCESS</b></p> <p>January 2021</p> <p>This fact sheet is the first of a series of fact sheets intended to assist project sponsors with the Commission's groundwater project renewal process. Each fact sheet can be used and reviewed on its own, but the combination of fact sheets provides a greater understanding of the Commission renewal process. Please reference the Groundwater Project Renewal Process and Water Level Monitoring fact sheets for additional information.</p>	<ul style="list-style-type: none"> <li>• One per webinar topic</li> <li>• Available on our website</li> </ul>
<p><b>OPERATIONAL MONITORING and OPERATIONAL TESTING</b></p> <p>February 2021</p> <p>This fact sheet is the second of a series of fact sheets intended to assist project sponsors with the Commission's groundwater project renewal process. Each fact sheet can be used and reviewed on its own, but the combination of fact sheets provides a greater understanding of the Commission renewal process. Please reference the Groundwater Project Renewal Process and Water Level Monitoring fact sheets for additional information.</p>	<ul style="list-style-type: none"> <li>• Copy included with your invite</li> </ul>
<p><b>WATER LEVEL MONITORING</b></p> <p>February 2021</p> <p>This fact sheet is the third of a series of fact sheets intended to assist project sponsors with the Commission's groundwater project renewal process. Each fact sheet can be used and reviewed on its own, but the combination of fact sheets provides a greater understanding of the Commission renewal process. Please reference the Groundwater Project Renewal Process and Operational Monitoring fact sheets for additional information.</p>	<ul style="list-style-type: none"> <li>• Check our website for the latest version, as we expect these to change and be updated</li> </ul>

YOUR RIVER  
OUR MISSION



SRBC.NET  
@SRBCNEWS

---

---

---

---

---

---

---

---

## What Has Gone Before

- Two-Step Process to answer the Three Questions
  - Aquifer Testing Plan or Waiver Request
- Application Deadline - 6-Months before expiration
  - Waiver/ Plan Does not Count
  - Contact us about "Releasing" the application
- Meet aquifer testing requirement once
  - Projects with previously approved tests have met 806.12
  - May go straight to application!

YOUR RIVER  
OUR MISSION

50 SRBC

SRBC.NET  
@SRBCNEWS

---

---

---

---

---

---

---

---

## What to Expect Today

- Steps to identify data gaps
- Operational Monitoring and Operational Testing
  - What are they?
  - What is the difference?
  - Which to choose?
- Examples from Voluntary Action Plans

YOUR RIVER  
OUR MISSION

50 SRBC

SRBC.NET  
@SRBCNEWS

---

---

---

---

---

---

---

---

## Standards for Water Withdrawals

Renewal Application must satisfy 18 CFR § 806.23:

1. Is the requested withdrawal rate sustainable?
2. Are there any adverse impacts to other users?
3. Are there any adverse impacts to the environment?

Does data exist or do you have a Data Gap?



Photo source: Google Images

YOUR RIVER  
OUR MISSION

50 SRBC

SRBC.NET  
@SRBCNEWS

---

---

---

---

---

---

---

---

## Four Common Data Gaps

### 1. Groundwater Availability Analysis (GWAA):

- Define a **reasonable** GW contribution area
- Identify an appropriate 1-in-10 year recharge rate
- Estimate other GW users
- GWAA – not an exact science, but helps identify an issue

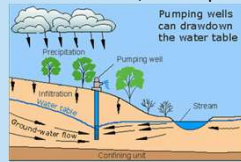


Photo source: Google Images

YOUR RIVER  
OUR MISSION

50 SRBC

SRBC.NET  
@SRBCNEWS

## Four Common Data Gaps

### 2. Historical Aquifer Testing:

- Is there a previous SRBC approved test?
- Any previous test can be considered
- Common problems –
  - single well test
  - short duration
  - well not in final form



Photo source: Google Images

YOUR RIVER  
OUR MISSION

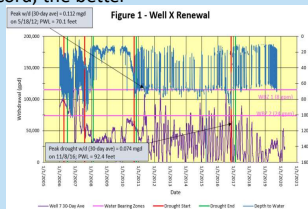
50 SRBC

SRBC.NET  
@SRBCNEWS

## Four Common Data Gaps

### 3. Historical Operations Data:

- Withdrawal data **AND** water levels
- The longer the data record, the better
- Common problems –
  - No water level data
  - Static vs. Pumping
  - W/d lower than approved rate



YOUR RIVER  
OUR MISSION

50 SRBC

SRBC.NET  
@SRBCNEWS

## Four Common Data Gaps

### 4. Environmental Resources

- a) Setting
- b) Sensitive resources
- c) Common env. resource data gaps:
  - SW Monitoring
  - Sensitive Resources
- d) Are operational changes proposed?



YOUR RIVER  
OUR MISSION

50 SRBC

SRBC.NET @SRBCNEWS

## Operational Monitoring vs. Testing



Operational monitoring is completed at or near the current withdrawal rates and can include expanded monitoring of nearby wells or surface water features.



Operational testing can include strategic changes in pumping rate and additional monitoring locations of nearby features to collect data to address specific data gaps.

### Factors that influence Monitoring vs. Testing:

- a) Nature of the data gaps
- b) Time available
- c) Historical testing/ available operational data

YOUR RIVER  
OUR MISSION

50 SRBC

SRBC.NET @SRBCNEWS

## Monitoring and Testing Considerations

### 1. Data Gap: Impact to the Environment

- a) Regulatory requirements
- b) Temporary
- c) Installation by hand
- d) Limit instream disturbances



YOUR RIVER  
OUR MISSION

50 SRBC

SRBC.NET @SRBCNEWS

## Monitoring and Testing Considerations

### 2. Data Gap: Impacts to Other Users

- a) Adjacent public and private wells
- b) Well Inventory
- c) Water level data

### 3. Data Gap: Impacts to Sustainability

- a) Production Well
- b) Drawdown and Recovery Data
- c) Water level data



## Action Plans

- Recommended, not required
  - Summarize findings of the reviews completed above
  - Identify data gaps and provide plan to fill them
  - Can be the start of your waiver
- For Non-PWSAP projects, Action Plans can be completed by consultant
- Commission prepares a Voluntary Action Plan for eligible PWSAP projects
  - Voluntary to participate and may stop at any time (renewal is not optional!)
  - Several possible outcomes: Testing needed;

## Voluntary Action Plans (PWSAP)

- Commission prepared for eligible projects
- Voluntary to participate and may stop at any time
  - Renewal is not optional!
- Several possible outcomes
  - Supplemental data needed
  - Full aquifer test needed
  - Accept SRBC review and move straight to application

### VAP Example – Site A, Well A1

Potential Data Gap	Status for Well	Satisfactory (No Gap)	Not Satisfactory (Possible Gap)
Status of 806.12	Tested, but not pre-approved		✓
GW Availability	Good availability	✓	
Operational Data	Good record of water level & withdrawal data during drought	✓	
Historical Testing	Short term test, limited monitoring		✓
Sensitive Environ. Resources	No sensitive resources	✓	

**Key – Good operations data during a drought**

YOUR RIVER  
OUR MISSION



50 SRBC



SRBC.NET  
@SRBCNEWS

### VAP Example – Site A, Well A2

Potential Data Gap	Status for Well	Satisfactory (No Gap)	Not Satisfactory (Possible Gap)
Status of 806.12	Tested, with SRBC pre-approval	✓	
GW Availability	Good availability	✓	
Operational Data	Good record of data, but not at previously approved withdrawal rate		✓
Historical Testing	Good 72 hr test@ approved rate, good monitoring	✓	
Sensitive Environ. Resources	No sensitive resources	✓	

**Key – Previously approved test**

YOUR RIVER  
OUR MISSION



50 SRBC



SRBC.NET  
@SRBCNEWS

### Site A – VAP Options

#### Well A1:

- Waiver would typically be required
- If renew at Previous Rate: **SRBC VAP = waiver**
- If want > Previous Rate: Testing needed

#### Well A2:

- No Waiver Needed
- If renew at Previous Rate: Proceed to application
- If want > Previous Rate: Testing needed

YOUR RIVER  
OUR MISSION



50 SRBC



SRBC.NET  
@SRBCNEWS

## VAP Example – Site B, Well B

Potential Data Gap	Status for Well	Satisfactory (No Gap)	Not Satisfactory (Possible Gap)
Status of 806.12	Tested, but not pre-approved		✓
GW Availability	Good availability	✓	
Operational Data	Limited withdrawal data, no water level data		✓
Historical Testing	Good 72 hr test @ higher rate, limited monitoring		✓
Sensitive Environ. Resources	No sensitive species; regulated wetlands beyond AOI, nearby river		✓

**Keys – Good test, good setting, have potential gaps**

YOUR RIVER  
OUR MISSION



50 SRBC



SRBC.NET  
@SRBCNEWS

## Site B – VAP Recommendations

### Well B:

- Waiver is Needed
- If renew up to the previously tested rate:
  - ✓ complete operational/short term testing
  - ✓ confirm no other users
  - ✓ prepare and submit a waiver request
  - ✓ **Can't use SRBC VAP as waiver**
- If want > previously tested rate: testing needed

YOUR RIVER  
OUR MISSION



50 SRBC



SRBC.NET  
@SRBCNEWS

## VAP Example – Site C, Well C

Potential Data Gap	Status for Well	Satisfactory (No Gap)	Not Satisfactory (Possible Gap)
Status of 806.12	Tested, but not pre-approved		✓
GW Availability	Questionable availability		✓
Operational Data	Withdrawal data during drought @ 80% of approved		✓
Historical Testing	86 hr test, multi rate, limited monitoring		✓
Sensitive Environ. Resources	Potential RTE species; wetland < 100', headwaters to wild trout stream		✓

**Key – Have lots of potential gaps**

YOUR RIVER  
OUR MISSION



50 SRBC



SRBC.NET  
@SRBCNEWS

## Site C – VAP Recommendations

### Well C:

- Waiver is Needed
- If renew at previously approved rate:
  - ✓ complete operational testing w/monitoring
  - ✓ confirm no impacts to SW/wetlands
  - ✓ confirm sufficient recharge area
  - ✓ prepare and submit a waiver request
  - ✓ **Can't use SRBC VAP as waiver**
- If want > previously approved rate: testing needed

YOUR RIVER  
OUR MISSION

50 SRBC

SRBC.NET  
@SRBCNEWS

---

---

---

---

---

---

---

---

## Additional Resources

### General Project Review Questions

- Todd Eaby, [teaby@srbc.net](mailto:teaby@srbc.net)

### Groundwater Projects

- Mike Appleby [mappleby@srbc.net](mailto:mappleby@srbc.net)
- Bill Miller [wmiller@srbc.net](mailto:wmiller@srbc.net)

### PWSAP

- Scott McFeaters [smcfeaters@srbc.net](mailto:smcfeaters@srbc.net)
- Dave Haklar [dhaklar@srbc.net](mailto:dhaklar@srbc.net)
- Mike Appleby [mappleby@srbc.net](mailto:mappleby@srbc.net)

#### Other important references:

- ☒ Water Level Monitoring Fact Sheet
- ☒ Operational Monitoring and Operational Testing Fact Sheet
- ☒ Online Application Instructions
- ☒ Online Waiver/Plan Templates
- ☒ Online Application Functional Template
- ☒ Aquifer Test Guidance

#### Questions & Additional Information

If you have any questions or would like to request a free pre-application consultation, please contact the Commission's Manager of Project Review at 717-238-0423.

YOUR RIVER  
OUR MISSION

50 SRBC

SRBC.NET  
@SRBCNEWS

---

---

---

---

---

---

---

---

## Up Next

- Part 3 – Groundwater Project Renewals: Water Level Monitoring
  - Thursday, March 25th, 2021 (1-2 pm)
- Next Series – Aquifer Testing Plan Waivers?
  - April 2021?
  - We are seeking input on future webinar topics

YOUR RIVER  
OUR MISSION

50 SRBC

SRBC.NET  
@SRBCNEWS

---

---

---

---

---

---

---

---



## Summary

- Start data evaluation early – give yourself time to collect data at your pace
- VAP (PWSAP) may provide SRBC waiver option
- Utilize what you have and supplement during normal operations
- The nine scariest words in the English language  
(Ronald Reagan)

YOUR RIVER  
OUR MISSION

50 SRBC

SRBC.NET  
@SRBCNEWS

---

---

---

---

---

---

---