

Collector Well Projects - Two Page Questionnaire

Thank you for taking the time to help us in this effort to educate interested parties about collector well projects throughout the United States. A copy of this report will be provided to you within a couple months time. Please include references to reports or other documents regarding your project in Question C.2.

A. General Project Information

1. Name of project?
Demonstration Well

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10. What was the primary reason for using collector well technology at this site?

- Environmental concerns
- Water demand too great for ordinary production well
- Water rights for a surface supply not available
- Research

Other: Microbial Removal

11. Number of collector wells and periods of use (seasonal, year-round)? Check boxes that apply.

| Well Name | Well Status | | Use | | Average Flow Production (gpm) |
|-----------|-------------------------------------|-------------------------------------|----------|-------------------------------------|-------------------------------|
| | Active | Proposed | Seasonal | Year-Round | |
| Demo | <input checked="" type="checkbox"/> | | | <input checked="" type="checkbox"/> | 17 mgd |
| Collector | | <input checked="" type="checkbox"/> | | <input checked="" type="checkbox"/> | 45 mgd |
| Forrest | | | | | |
| | | | | | |

12. Describe the characteristics of your collector wells.

| Well Name | Depth of Caisson | Diameter of Caisson | Depth of Laterals | Number of Laterals | Diameter of Laterals |
|-----------|------------------|---------------------|-------------------|--------------------|----------------------|
| Demo | 105' | 16" ID | 92' | 7 | 12" |
| | | | | | |
| | | | | | |
| | | | | | |

13. Have you observed decreased flow from your collector wells over time? If so, what do you think is the cause?

- River migration away from well (please report approximate distance river has migrated: _____ ft)
- Laterals clogging
- Increased pumping from wells nearby (lowered groundwater elevation)

Other: LEAKANCE of Riverbed has changed - clogging of Riverbed - see increased drawdown

14. What measures have you taken, if any, to increase yield of your wells?

- Well re-development
- Lateral replacement
- Added new laterals to existing system

Other: NONE

15. Do you have records indicating well yield with time?

- No records available
 Yes (please fill in the following table)

| | Date | Event | Yield (indicate units) |
|---|------------------|-------------------|------------------------|
| 0 | Before operation | Designed capacity | 15 mgd |
| 1 | | Well start-up | 24 mgd |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | Most recent data | 17 mgd. |

16. What is the cost of your raw water (how much does it cost per unit volume for you to produce untreated water)?

Not applicable -> mix with surface water and full treatment
 Number provided includes treatment costs
 No records available

2. Describe aquifer geology.

- Cobble Well Sorted
 Gravel Poorly Sorted
 Sand
 Silt/Clay
 Unknown
 Other (please list)

3. What is the closest distance to the nearest surface water body?

Feet or miles: 100'
 Unknown

4. What is the number of monitoring wells if any?

6 wells
 None
 Other
 Unknown

5. What is the frequency of groundwater level monitoring?
 minutes/days/months: quarterly

Unknown

B. Aquifer Characterization

1. Describe regional aquifer characteristics.

- Unconfined
 Semi-confined
 Confined
 Unknown
 Other (please list)

glacial-fluvial aquifer

C. Additional Questions

1. Do you have records indicating changes in yield upon re-development? How often do you re-develop your wells?

Have not needed to re-develop - diver video inspected @ 6 yrs and found laterals clear of tuberculation. Anticipate re-develop needed @ year 10-15

2. Are any reports, technical memos, or other documentation available from your project activities? If so, who do we contact for copies?

"Riverbank Filtration Improving SOURCE-WATER QUALITY"
 MWH
 "A PERSPECTIVE OF Riverbank Filtration" AWWA Journal 9/2002
 "Summary of Available Hydrogeologic Data from NE Portion of Alluvial Aquifer @ Lee Key" USGS