

# ADWR Water-Level Data Survey

Final Responses, Jan. 2012

## Part I: Introduction

### #1 Select a category that best describes your industry:

Count	Category
0	Agriculture/Farming
0	Conservation
2	Education
5	Engineering/Construction/Drilling
6	Environmental Resource Management/Planning
2	Fish & Wildlife
0	Forestry
0	Land Development/Acquisition
0	Law
0	Media/Publishing
1	Mining
1	Natural Resources
35	Utilities (Power/Water/Wastewater)
15	Water Resource Management/Planning
5	Other

### #2 Select a category that best describes your organization/company:

Count	Category
17	Commercial/Private Business
0	Small Water Provider (serving < 250 AFY)
2	Large Water Provider (serving > 250 AFY)
0	Small Community Water System (serving < 1,850 people)
3	Large Community Water System (serving > 1,850 people)
27	City/Town Government
1	County Government
5	State Government
5	Federal Government
2	Educational Institution
2	Non-Profit Organization
1	Tribal Government
2	Irrigation District
5	Other

### #3 Select a category that best describes your role within your organization/company:

Count	Category
0	Irrigation District
0	Well Owner
0	Well Driller
1	Academic Researcher – Student
2	Academic Researcher – Staff/Faculty
0	Farmer or Rancher
0	Legal Professional
0	Business or Industrial Professional
1	Elected/Appointed Official
1	Real Estate Professional

0	Land Owner
29	Hydrologist, Geologist or Closely Related Professional
5	Operator
25	Water Manager, Water Planner or Water Resource Specialist
0	Technician
0	General Public
8	Other

**#4 Do You or your organization use ADWR's Groundwater Site Inventory (GWSI) database?:**

Count	Category
62	Yes
11	No
0	Unknown

**#5 Do you or your organization collect groundwater level data? If yes, please answer 5.a and 5.b:**

Count	Category
56	Yes
15	No
2	Unknown

**#5.a Do you or your organization currently submit groundwater level data electronically to ADWR?:**

Count	Category
11	Yes
53	No
5	Unknown

**#5.b If not, would you or your organization be willing to submit groundwater level data electronically to ADWR?:**

Count	Category
41	Yes
5	No
16	Unknown

**#6 Please provide your contact information:** *(contact information has been removed to respect the privacy of survey respondents)*

**#7 Would you like to be contacted as a follow-up to this survey and/or to discuss submitting your water level data electronically?:**

Count	Category
45	Yes
7	No
17	Not at this time

## Part 2: GWSI Data

### #8 Do you or your organization utilize ADWR's GWSI water level data?:

Count	Category
59	Yes
11	No
3	Unknown

### #9 How do you currently access the data? (Choose any that apply):

Count	Category
49	GWSI GIS Web <a href="https://gisweb.azwater.gov/waterresourcedata/GWSI.aspx">https://gisweb.azwater.gov/waterresourcedata/GWSI.aspx</a>
21	GWSI Data Download (WINZIP files) <a href="http://www.azwater.gov/azdwr/gis/">http://www.azwater.gov/azdwr/gis/</a>
8	Old GWSI CD-Rom (no longer available)
7	Other (please specify *): <ul style="list-style-type: none"> <li>• I contact ADWR staff to obtain more comprehensive data files from GWSI.</li> <li>• I get data from Teri Davis for the Drought Task Force</li> <li>• Would be interested in getting the data in ADEQ's format or as available</li> </ul>

### #10 How often do you use GWSI water level data?:

Count	Category
1	Daily
5	Weekly
27	Monthly
18	Yearly
16	Other

### #11 What do you generally use the water level data for? (Choose any that apply):

Count	Category
42	Water level change trend analysis
43	Depth-to-water
38	Water level elevation and groundwater flow direction
13	Compliance
28	Groundwater modeling
45	General hydrologic studies
15	Water Quality Analysis
6	Other (please specify *): <ul style="list-style-type: none"> <li>• Impacts and relationships to surface water resources used by fish and wildlife populations</li> <li>• general questions on water levels in or near Peoria</li> <li>• General information</li> <li>• for the drought status</li> <li>• Information on wells within our City planning area</li> <li>• Have used it to extract groundwater levels.</li> </ul>
26	Monitoring

### #12 In what areas of the state are you most interested in having water level data?: (see Attachment A)

Count	Category
41	Basins
28	Counties

**#13 How do you search for well data? (Choose any that apply):**

Count	Category
16	Site ID
19	Local ID
42	Cadastral (Township & Range)
21	Basins or Sub-basins
36	Using the interactive map
7	Other (please specify *): <ul style="list-style-type: none"> <li>• ADWR Well Registration Number</li> <li>• Registry ID: 55-number</li> <li>• Don't</li> <li>• Our own interactive map interface</li> <li>• Landowner Name</li> <li>• Through GIS spatial selection tools</li> <li>• Registry ID</li> </ul>

**#14 Please select the frequency or time period of recorded water level measurements that you typically use? (Choose any that apply):**

Count	Category
11	Multi-Year
34	Annual
9	Semi-Annual
15	Quarterly
18	Monthly
9	Daily (Automated or Continuous)
31	Complete Period of Record
6	Other (please specify *): <ul style="list-style-type: none"> <li>• What ever is available</li> <li>• Frequency depends on the available records.</li> <li>• Never</li> <li>• Whatever is available and relevant to our questions.</li> <li>• Vaaries at each site some are daily and range to annual or semi- annual depending upon site/project</li> </ul>

**#15 What type of information is most important to you (i.e. water level measurements, well construction, well location, discharge measurements, etc.):**

#15
wl data
Water Level, well construction, location, logs, drawdown tests
water level measurements, well location, driller logs, geology logs, water quality
Water-level records of any frequency and period of record
All data available
water level measurements
water levels over time, well logs describing subsurface geology, well pumping information
All pertinent hydrological data, but well location is a must as a start and at least on the 55-well registry, many are mis-located.
Well Construction, Well location and Water Table Elevations
water level and water discharge

Groundwater level measurements, well construction detail, well logs - drillers logs, discharge rate, well drilling/construction date, etc.
water level measurements, well construction and use status, owner, well location, discharge measurements, wellhead elevation and elevation source
Water levels, well construction, location, water usage, ownership
Water level information , well location, well construction, lithology (drillers logs)
Well construction
water level, well construction, location
Water levels, well construction, total well depth
water level measurements, discharge measurements, well construction, water quality, well location
we would love to have easy access to water level measurements and well locations. Not sure what discharge measurements would be (out of the wells?). We have surface (SC River) discharge info but not clear where (or if) that data could be included in this database.
Water Level, Location, construction Well log Pump Test Data Pumping/Discharge Data
water level, well construction
water levels and well construction
water level measurements, well location, well elevation, age
All is useful.
water level measurements, well construction, well location, water quality measurements
water levels, well location, type of use
All available information for a well including well logs.
Water level is most important, but the additional information listed above (well construction, etc.) provides a great deal of help with the confidence level of using the data for a specific purpose.
The full GWSI
water level measurements
levels, aquifer unit, well construction details, quality
We use well locations, construction, and well types to assure reporting is complete.
well construction and documents on the well
All
Water Level
water level measurements, well construction, including perforated/screen intervals, water quality data
water levels, water quality well construction
Depth to water and groundwater elevationsWell construction (Screen interval)Pumping ratesMonthly groundwater withdrawalslithologic logs
well construction
well construction, geology, water level measurements, discharge rates, well location
water level measurements
all
Water levels, well construction, well location, discharge rate, land surface elevation, and drillers logs

1) location
2) water level
3) water quality
4) construction
all of the above
Water level Measurements, Well location, Depth of well, Discharge, Well Construction, Date well was completed
water level
Well depth, water level, well capacity, well sizing, conductivity
level measurements, location, discharge
water level data
Well Location, water level measurement, discharge measurement (pumping or inject in area which influences water level measurements - what and how bias) and well construction
Measurements & Locations
Water level measurements and well location
Discharge measurements
water level measurements
Well Location
Water Levels
Water level measurements
well location, well construction, water level, water quality
all
water level elevation, well construction details, precise and accurate well locations, discharge capacity, static and pumping depth to water (specific capacity)
Water level measurement, well construction detail, well location (cadastral, lat/long), discharge measurements, well owner information, annual pumpage, drillers log.
well location, well status, well construction, water level measurements, discharge measurements, water quality
Water levels, well construction, and location
well location, well construction, discharge measurements
water level measurements
water level measurements, depth, location, discharge measurements, owner, classifications.
Water level measurements, discharge measurements & well location

**#16 Please provide any questions, comments or suggestions you may have concerning any aspect of ADWR's Basic Data collection program and the GWSI database:**

#16
NA
They've been doing a great job. But, they need more people.
The lack of accurate well location information is the biggest problem for the Havasu Basin area.
It may be beneficial to have more data, more sweeps, more often.
I think this is useful.
Give summary data yearly in published form for major county eg. Maricopa
See above; also would be great to have other surface flow info coordinated, e.g. from USGS gages at Tubac and border as well as discharge info from Nogales International Wastewater Treatment Plant, which is currently the bulk of the river's surface flow in the SCAMA.
We would like to have seasonal water level measurement with pumping/uses information for GW Model calibration.

Needs updated. Some of our City wells have 2010 information and others only have 2009.
need more accurate rural domestic water usage
I am concerned that high quality data collection will be reduced or discontinued.
You're doing a great job. The BD Unit is invaluable to science-based water management.
Need more indian reservation coverage, more collaboration with NNDWR
No suggestions right now.
It is about time ADWR consider input from professional geologists that are registered into GWSI. Even you own data is likely not as accurate
Many consultant such as myself have access to wells, but not the authorization to allow ADEQ or ADWR access. Creating a campaign that helps well owners understand the value of their participation and contribution of data and allay fears of enforcement resulting from that data may help drive participation in sharing data. Interface for sharing data needs to be really easy and quick to encourage participation as well.
Will the data we submit be used for enforcement action against the us?
Your Basic Data Program needs to be expanded to collect data from more sites more often. Enlisting the aid of others to collect data may ultimately result in a reduction in the integrity of the data collected. Basic Data also needs to regularly create HMS series maps with the data that is collected.
have all of the wells you are using in your water level and basic data collecting program been field verified and are the locational data at RTK quality or better?
How do we do testing to see if our groundwater is getting surface infiltration?
I would like downloadable GWSI data in GIS format
Would prefer that the format and field names for database files provided remain constant to facilitate data import procedures.
well location would be much more useful if it were more accurate. Many older wells are limited to locational accuracy of 10 acres at best.
The ability to do an advance search would be useful.

### Part 3: Required Data Collecting/Reporting

#17 What types of annual reports or other reports or information are you required to file with ADWR that includes the submittal of water level data? (Choose any that apply):

Count	Category
33	Annual Water Use – Schedule A
16	Well Driller Report And Well Log
10	Community Water System Plans
7	Other (please specify *): <ul style="list-style-type: none"> <li>• Notice of intents, well impact studies, pump installation reports</li> <li>• Designation of adequate water resources</li> <li>• Recovery Well</li> <li>• Hydrologic Monitoring Reports</li> <li>• varies - It depends on project/site and program.</li> <li>• None</li> </ul>
25	Underground Storage Facility

#18 What types of equipment do you use to make water level measurements? (Choose any that apply):

Count	Category
6	Electric sounder - Single Wire
8	Steel tape
6	Airline
4	Pressure Gauge
28	Electric sounder - Bi-wire electric tape (please specify *1)
23	Pressure Transducer (please specify *3)
2	Shaft Encoder
4	Other (please specify *4)
4	Electric sounder - Other (please specify *2)
1	Bubbler
0	Acoustic
2	Unknown

\*1 Please fill in the manufacturer if known for **Electric sounder - Bi-wire electric tape**:

solinst
Solinst
Solinst
Solinst, Slope Indicator
unknown
various - Powers, Solinst, Slope, Heron etc.
Solinst
Powers Electric Sounder
RST
varies
Solinst, Waterline, Soiltest, Heron
Sloinst
Numerous ones available for field work.
Unknwn
Fisher
Power, Solinst, Slope
Solinst



Powers Water Well Sounders
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\*2 Please fill in the following for **Electric sounder - Other:**

Powers Electric Single Wire & Heron Single Wire
Solinst: thin wire dual conductor (not tape)
Sinco
Unknown

\*3 Please fill in the manufacturer if known for **Pressure Transducer:**

several different manufacturers
Druck, and In-Stiu
Varies by well. Monitoring Co/Insitu
Recently started using Dynotek
Geokon, Hobo
sonitrol
Solinst with some Insitu units
Schlumberger Diver
insitu
Geokon and In-Situ
Depends on site and consultant
Endres Hauser
Endress and Hauser, In-Situ LevelTroll
Druck- (only for vadose zone wells)

\*4 Please fill in the following for **Other:**

None
popper
Solinst Model 101 Polyethylene tape
Geotech Keck ET Long Water Level Meter

**#19 How have the well location, well elevation and measurement point been determined?** (Choose any that apply):

Count	Category
19	GPS, survey grade (+ or – 2cm)
10	Estimated from topo map
17	GPS, mapping grade (+ or – 2m)
2	Not determined
28	Conventional survey
4	Other (please specify *): <ul style="list-style-type: none"> <li>• Unknown</li> <li>• not sure, probably surveyed</li> <li>• For ones not surveyed we use Pima County's Geo-reference aerial survey data</li> <li>• Depends on site - Most are at minimum post processed GPS however some third party data may be less accurate. Some will be instrument grade survey data.</li> </ul>

**#20 What type of training is given to staff that collect water level data?:**

<b>#20</b>
much
Unknown

local hands on
hands on
Hydrologist, wellsite/field site operators, and Environmental staff collect water level data and are trained in the operation of well sounders or use of pressure transducers.
We have a protocol manual and training refresher each year
I collect water level data; no training to staff.
OJT-field instruction and SOPs.
How to use sounder, where measuring point is located, what to do if the readings are not clear.
Water levels measured by well technicians trained by Town Hydrologist
training on how to use sounder, ADEQ Certifications
Staff was trained by an experienced well technician.
Minimal training, however, there are only a few people that normally take the measurements.
Hands-on instruction in the field on the job.
OJT
extensive qu/qc from inhouse training manual and direct supervision
ASTM (D6000)Standards ReviewSupervised Field training for 40 hrs
in House training, technical training from manufacturer
standard
In house training.
Office presentation and supervised field application
Minimal Training
Don't know - not our area of responsibility.
gps
the overall would be the ADHS and other join sampling training provided to state agencies. This would be supplemented with other measurement and sampling training as applicable to the program and site/project.
None
Staff receives on-site training to collect water level data.
Writing it down into the log books for data recording
None
Formal academic, field supervision
Formal in-house training
On-site training and mentoring.

**#21 What standard operating procedures (SOPs) are followed to calibrate water level data collection equipment and collect water level data? (Choose any that apply):**

Count	Category
7	Published USGS (SOPs)
28	SOPs developed in house
7	Other (please specify *): <ul style="list-style-type: none"> <li>• Unknown</li> <li>• Manufacturer's instructions for transducers; none for steel tape</li> <li>• direct measure length and pressure</li> <li>• ASTM Standard D6000</li> <li>• Industry standard</li> <li>• AWWA, Manufacturer/Company Manual</li> </ul>

	<ul style="list-style-type: none"> <li>The length of the sounder was verify by a third party well testing agency. In the future the Town will be implementing a SOP consistent with USGS SOP.</li> </ul>
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**#22 Do you or your organization use a SCADA system to monitor real-time water level data? If yes, please answer 22.a:**

Count	Category
11	Yes
32	No
7	Unknown

**#22.a If yes, would you or your organization be willing to share the automated real-time water level data with ADWR?:**

Count	Category
4	Yes
3	No
9	Unknown

**#23 Are all wells that you report on registered with ADWR?:**

Count	Category
44	Yes
3	No
6	Unknown

**#24 Are any wells you report on already inventoried into the GWSI database (i.e., they have a GWSI site ID)?:**

Count	Category
28	Yes
7	No
17	Unknown

**#25 Are you required to report water level information to any other government agency?:**

Count	Category
20	Yes*
26	No
7	Unknown

**\*If Yes, please name agency(s):**

ADEQ
ADEQ
ADEQ
ADEQ
ADEQ
For Superfund efforts we must submit quarterly to the EPA coordinator for PGA sites.
ADEQ
ADEQ Water Quality Division, Aquifer Protection Program
US EPA and ADEQ
ADEQ
ADEQ, USFS, Apache County Board of Supervisors, local governments
ADEQ

Depending on the site and other state, federal and international agencies there may be requirements or data sharing agreements in place.
ADEQ and Maricopa County
ADEQ EPA
ADEQ for APP
Arizona Department of Environmental Quality

**#26 ADWR is currently evaluating new methods, forms and data formats that will make the online submittal of annual report data easier and more efficient for water-right or permit holders. Please provide any questions, comments or concerns that may help improve this activity:**

#26
Been waiting for this a long time. Go for it!
Online submittal would be great. If you would carry out a meaningful discussion with the water providers, all our jobs would be easier. We use a one page report to manage our resources. Once the annual report is finished, it is rarely used by this water provider.
in support of online reporting
The Water Withdrawal Report pdf file that Water Providers have to download from ADWR is not a writable pdf. It would be useful if the pdfs were writable.
Schedule W should populate Schedule A on the electronic version of Annual Water Report. Other pages should cross-populate where manual re-entry of data is required. This will assure there are not errors with entry.
Provide web-service interface in addition to any human interface forms.
<a href="http://www.azdeq.gov/environ/waste/sps/download/guidance_v3.4.pdf">http://www.azdeq.gov/environ/waste/sps/download/guidance_v3.4.pdf</a> I would be interested in any feedback on the electronic data deliverable format and process that ADEQ uses.
none. this form is easier to fill out then the paper form
The Water Withdrawal Report would be easier if it was in a writable form.
All information for annual reports is entered into an Access database. If forms could be standardized and allow for electronic entry and submittal, numbers could be automatically pulled from database and then verified for accuracy prior to submitting to ADWR.
Currently the Town wells can be found in the well registry, not GWSI. At this time, none of the information reported on the annual reports can be found in the registry other than the initial registration information. It would be nice to see the information updated if it is being submitted by agencies.

## Part 4: Voluntary Data Collecting/Reporting

**If you collect water level data that is not currently reported to ADWR, please respond to questions #27 - 37.**

**#27 What types of equipment do you use to make water level measurements? (Choose any that apply):**

Count	Category
7	Electric sounder - Single Wire
9	Steel tape
8	Airline
3	Pressure Gauge
32	Electric sounder - Bi-wire electric tape (please specify *1)
30	Pressure Transducer (please specify *3)
1	Shaft Encoder
4	Other (please specify *4)
8	Electric sounder - Other (please specify *2)
2	Bubbler
1	Acoustic
3	Unknown

**\*1 Please fill in the manufacturer if known for Electric sounder - Bi-wire electric tape:**

Solinst interface meter, rental tape for deep wells
solinst
Solinst
Solinst
Solinst, Slope Indicator
various - Powers, Solinst, Slope, Heron etc.
Solinst
Powers Electric Sounder
Powers
RST
Solinst
solinst
Rent from TerraTech Equipment; not sure of manufacturer
Solinst
Fisher
Solinst
Power, Solinst, Slope
Solinst

**\*2 Please fill in the following for Electric sounder - Other:**

Solinst
Sinco
Powers Well Sounder
Powers

\*3 Please fill in the manufacturer if known for **Pressure Transducer**:

Insitu
Global Water
several different manufacturers
Druck, In-Situ
various - In-Situ, etc.
Varies: Some are Monitoring Co./Insitu
Dynotek
Hobo, Geokon
solinst
solinst and some insitu units
Schlumberger Diver
insitu
Geokon and In-Situ
In Situ
Endress and Hauser, In-Situ LevelTroll
Solinst, In-Situ

\*4 Please fill in the following for **Other**:

we use a flow meter, steel measurement post and tape measure to get cross-section discharge of surface flow in upper SC River
popper
Solinst 101 Polyethylene tape
various models of electric water level and interface meters (Solinst, Heron)

**#28 How have the well location, well elevation and measurement point been determined?** (Choose any that apply):

Count	Category
26	GPS, survey grade (+ or – 2cm)
12	Estimated from topo map
22	GPS, mapping grade (+ or – 2m)
0	Not determined
31	Conventional survey
5	Other (please specify *): <ul style="list-style-type: none"> <li>• GIS mapping</li> <li>• unknown</li> <li>• see previous in Part 3</li> <li>• Navajo Nation records/database</li> </ul>

**#29 What type of training is given to staff that collect water level data?:**

#29
On the job training
complete
local hands on
on the job
Hydrologist, wellsite / field site operators, and Environmental staff collect water level data and are trained in teh use of wel sounders or pressure transducers.

Ditto from above
OJT- field instruction, SOPs
same as before
Trained by Town Hydrologist/Geologist
on-site, from original AZ Dept of Envir Qual training
At the moment, consultants perform all the field work. This coming year, we will train in-house staff to conduct the field survey.
Degree in geology, hydrology, engineering
Field training by senior hydrogeologist
Minimal training, but only a few personnel perform the soundings.
Same as for mandatory reporting--in field hands-on equipment.
OJT
in the field training
New hire field supervision, SOPs
For myself - 16 years of groundwater level measurements throughout State, plus groundwater quality collection.
ASTM standard reviewSupervised field training for 40 hrs
in house manufacturer and technical training
standard
In house training.
experienced pre-trained staff and supervisory staff of for untrained personel
Office presentation and supervised field application
data is collected by field technicians or hydrogeologist with estblished experience collecting groundwater data
minimal
Unknown.
see required data collection section.
None
writing everything down into the log books for data recording and records
formal academic, professional supervision
Formal in-house training.
Just beginning regular water level collection program. Will be training staff once the program development is complete.
Shadowing
initial hands-on training

**#30 What standard operating procedures (SOPs) are followed to calibrate water level data collection equipment and collect water level data? (Choose any that apply):**

Count	Category
7	Published USGS (SOPs)
33	SOPs developed in house
3	Other (please specify *): <ul style="list-style-type: none"> <li>• AZ Dept of Envir Quality protocol set up for RiverWatch volunteers</li> <li>• direct length and pressure measurements</li> <li>• AWWA, Manufacturer/Company Manual</li> </ul>

**#31 Do you or your organization use a SCADA system to monitor real-time water level data? If yes, please answer**

**22.a:**

Count	Category
10	Yes
30	No
8	Unknown

**#31.a If yes, would you or your organization be willing to share automated real-time water level data with ADWR?:**

Count	Category
5	Yes
3	No
10	Unknown

**#32 Are all wells that you report on registered with ADWR?:**

Count	Category
38	Yes
6	No
6	Unknown

**#33 Are any wells you report on already inventoried into the GWSI database (i.e., they have a GWSI site ID)?:**

Count	Category
23	Yes
7	No
19	Unknown

**#34 Are you required to report water level information to any other government agency?:**

Count	Category
17	Yes*
25	No
6	Unknown

**\*If Yes, please name agency(s):**

ADEQ
ADEQ
ADEQ
adeq
ADWR
ADEQ
ADEQ
ADEQ
ADEQ
ADEQ
ADEQ Water Quality Division, Aquifer Protection Program
ADEQ
US EPA and ADEQ
ADEQ
ADEQ, USFS, Apache County, local governments
various ADEQ cleanup programs depending on site



ADEQ and Maricopa County
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**#35 Would you or your organization be willing to submit groundwater level data to ADWR that would be available to the general public?:**

Count	Category
27	Yes
3	No
19	Unknown

**#36 Do you have any security concerns associated with providing water level or well information to ADWR?:**

Count	Category
12	Yes*
23	No
13	Unknown

**\*If Yes, please provide feedback:**

#36
Some parameters of allowed well drawdown are not well defined and supplying copious amounts of data may be problematic.
Providing additional well information for municipal production wells (drinking water wells) will require a review by our Security Supervisor
Concern is only with data collected by SCADA where real time access would occur
Information is collected for clients who may not wish to share.
Would have to research this issue.
Some tribal well data is associated with various settlements or studies, or is collected, maintained, and distributed by tribal entities (e.g., Navajo, Hopi, Tohono O'odham (San Xavier District) requiring permission for use/distribution
Confidential data
We do not want the precise locations of our wells readily available to the public as this presents a risk to our supplies. Cadastral coordinates are close enough for wide open records (e.g. non-password protected websites).
There is too much uncertainties on how this data will be used by others.
It will depend on the specific project as to what data can be provided. Our clients must give approval or permission to provide data.
We will need to discuss this in more detail at a later date.

**"No" answers with feedback:**

#36
Not for the recharge facility monitoring wells. The drinking water wells my be a security concern though.

**"Unknown" answers with feedback:**

#36
This would have to be reviewed by our City Manager.
What happens if this data is used against an entity regarding harm claims i.e. mounding or other issues?
some information is confidential until cleared by the client

**#37 Please provide any additional questions, comments or concerns you may have about any aspect of a voluntary water level data sharing program, regardless of whether you may potentially have data to share, or not:**

<b>#37</b>
Accepting these data from numerous sources could be a huge time-sink for ADWR. I can imagine needing 1 or more full time people to check incoming data and communicate data quality requirements to outside agencies/groups/individuals.
see earlier comments re incorporating surface streamflow and effluent discharge data
There is a concern voluntary water level data will be used against the water provider as enforcement actions or future water management restrictions
We do not want the information available to random curious individuals.
As consultants, the data we collect belongs to our clients. Client approval would be required to share info on a non-mandatory basis.
I think a lot of parties that are measuring water levels do not realize that over time.... instruments like sounders and pressure transducers stretch and can really throw water level measurements off. Recently, we determined a 5 foot stretch on a new pressure transducer. This is very troubling.
Will the information be used to take enforcement action against the entity providing the data?
contact me and we can see about data sharing. I am interested in getting an electronic data deliverable for your water level and water quality data and likewise can facilitate the same from data that ( <i>we have</i> ) captured in our database. ( <i>contact information has been removed for privacy</i> )
electronic forms are easier to fill out than the hard copy forms
Additional GWSI index wells in areas with high concentration of exempt wells.
I would worry about the reliability of the data with multiple entities collecting and entering the data. ADWR should set up an easy process for reporting suspect data.

## Part 5: General Feedback

### #38 Please provide comments and/or suggestions on the development of cooperative funding agreements for local and statewide water level collection and data sharing programs:

#38
Data collection for the sake of data collection is not the most proactive part of data collection which is the the associated analysis developed from the data collection. What type of proactive analysis with ADWR accomplish with any new or improved daat collection or reporting? Will there be an AMA strategic analysis and strategic plan? Will this information be used for regional planning efforts say with teh CAGR, physical availability determinations, overdraft etc? The majority of water pr
Ok with in-kind contribution, no funding for local program. We already cooperate locally in sharing annual water level data among adjacent water providers
look for grants?
We have problem w/ budget to conduct a long term GW data collection. We would like to have an IGA with ADWR, AZGS or USGS to cost share data collection on Butler, McMullen and Harquahala basins.
A general meting with the water providers would be helpful provided ADWR is sincerely interested in a cooperative effort. Over the past years, ADWR has not be interest in cooperative efforts with the users.
Our organization does not having funding available.
None
ADWR has many important tasks. As a hydrogeologist, I feel that data collection is critical to understanding and managing groundwater resources throughout Arizona and that dependable data collection should not be reduced or compromised. ADWR is the primary source for groundwater level data in Arizona (of course, USGS is an important source as well). Please support and retain ADWR's capacity as the State's groundwater data collection agency.
More data sharing/cooperation with tribal entities who collect, maintain, and distribute water level and aquifer parameter data
Our city's budgets are also tight. We prefer to share data rather than contributing cash for it to be collected.
ADWR requirfes data collection via the drought program via most cities and water companies. That infromation must be included into GWSI
I think that this is a great idea. There are a lot of water data collection occurring from water supply/irrigation wells, monitor wells etc. To be able this information available on a basin wide scale would be very useful.
I dont' have anything adminsitratively to contribute to this effort, but I enthusiastically support the effort and commend the interest. I would be willing to provide guided assistance for subsequent efforts to gain support for this campaign.
It sounds like a great program to me and I would be willing to participate.
none

### #39 If you have any further questions or comments about any part of this survey or water level data collection activities in general, please provide them here:

#39
I think the WL data collection activity should be a top priority of the ADWR. This data base is key to understanding water resources in the state. Use of WL data from other sources could potentially add important information to the data base. But a system of ranking data quality from other sources may be needed.
Possibly cross train other ADWR field staff to also collect water level data while collecting other field data.
I have a little concern for the potential of the addition of potentially erroneous data that can then be used to paint an inaccurate picture by anyone, government, private parties, etc...
None

I am a little concerned about the quality of the data that may be submitted to support ADWR activities. I fully support community support and volunteerism, but not at the expense of reliable data. Thank you for the opportunity to comment.

I watched a presentation recently presented by ADWR that included data sets that were decades old and you could actually see economic influences in the data sets, such as data gaps during periods of funding cuts dating back several decades (reflected in staff shortages and inability to collect field data). I think a demonstration of these data gaps, their triggers, and their consequences would be a great way to communicate the need for our agencies to work together so we can utilize our administrative resources more efficiently and strengthen/broaden our data resources and quality.

thank you

Need water level and well info for Big Chino subbasin, which isn't even on your list!

Questions 22a and 31a: We are not able to share real-time SCADA system data at this time, but we are willing to discuss for the future.

<b>Attachment A:</b>		<b>Groundwater Basins</b>
<b>Count</b>	<b>Basin Name</b>	
22	PHOENIX AMA	
18	SALT RIVER	
18	TUCSON AMA	
13	LITTLE COLORADO RIVER PLATEAU	
13	PINAL AMA	
13	PRESCOTT AMA	
13	VERDE RIVER	
12	COCONINO PLATEAU	
12	UPPER SAN PEDRO	
10	AGUA FRIA	
10	HARQUAHALA INA	
10	LOWER SAN PEDRO	
10	SAFFORD	
10	SANTA CRUZ AMA	
9	GILA BEND	
8	SAN SIMON WASH	
8	TONTO CREEK	
8	UPPER HASSAYAMPA	
8	YUMA	
7	BILL WILLIAMS	
7	CIENEGA CREEK	
7	LOWER GILA	
7	MCMULLEN VALLEY	
6	BIG SANDY	
6	BUTLER VALLEY	
6	DETRITAL VALLEY	
6	JOSEPH CITY INA	
6	LAKE HAVASU	
6	RANEGRAS PLAIN	
6	SACRAMENTO VALLEY	
6	TIGER WASH	
6	WILLCOX	
5	ARAVAIPA CANYON	
5	BONITA CREEK	
5	DUNCAN VALLEY	
5	HUALAPAI VALLEY	
5	KANAB PLATEAU	
5	MORENCI	
5	VIRGIN RIVER	
4	DONNELLY WASH	
4	DOUGLAS	
4	DOUGLAS INA	
4	DRIPPING SPRINGS WASH	
4	GRAND WASH	
4	LAKE MOHAVE	
4	MEADVIEW	
4	PARIA	
4	PARKER	
4	PEACH SPRINGS	
4	SAN BERNARDINO VALLEY	
4	SAN RAFAEL	
4	SHIVWITS PLATEAU	
4	WESTERN MEXICAN DRAINAGE	

<b>Attachment A:</b>		<b>Counties</b>
<b>Count</b>		<b>County</b>
16		MARICOPA
13		PIMA
9		MOHAVE
9		PINAL
8		SANTA CRUZ
7		COCHISE
6		COCONINO
6		GILA
6		GRAHAM
6		GREENLEE
6		YAVAPAI
6		YUMA
5		APACHE
5		LA PAZ
5		NAVAJO