

Illinois Water Inventory Program Development

NWPA July Meeting

July 26th 2016

Conor Healy



1. IWIP Overview

2. Online Tool Development

3. Next Steps

IWIP Overview – Program History

- Initiated in 1978 – Voluntary Program
- Survey needed a program to record annual point water withdrawals and water use information.
- Amendment to Water Use Act of 1983
 - 2010- Mandatory for Public Water Suppliers and Self-Supplied Industry water users
 - 2015- Mandatory for Irrigation water users

IWIP Overview - Facilities

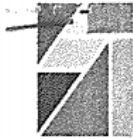
- IWIP collects annual point source data from three sectors
 1. Public Water Supply
 - Provides water for human consumption to at least 15 service connections, or 25 people
 - 2,300 currently reporting wells
 2. Self-Supplied Industrial-Commercial
 - Any well/intakes rated at 70 gallons per minute, not irrigation
 - Power generation facilities 98% of total SSI withdrawal
 - Remaining facilities everything from manufacturing to rock quarries
 - Very diverse
 - 871 reporting wells

IWIP Overview- Facilities cont.

3. Irrigation

- Historically inconsistent reporting
- 2015 first mandatory collection year
 - Focus on agricultural irrigation
 - Well registration before season
 - Well reporting after season

Overview – Historical Collection Methods



**ILLINOIS STATE
WATER SURVEY**
PRAIRIE RESEARCH INSTITUTE

Illinois Water Inventory Program

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Received 5-16-14
Mail File ✓
Entry 1 ✓ PR
Entry 2 _____
Printed _____
Verified _____

Please return form by 5/26/14

03790150 GENOA

Contact Person and Title:

We have records of the following wells and/or intakes for your facility. Please correct inaccuracies and add missing information on this form. Enter water level information on the last page, if available. If reported amounts are not in gallons, please indicate units of measurement.

2013 - TOTAL GALLONS PUMPED - WELLS/INTAKES

IF YOUR SYSTEM DOES NOT CONTAIN ANY WELLS OR INTAKES, SKIP THIS SECTION OF THE FORM AND CONTINUE

Well or Intake	Status	Tw	Rng	Sec	Depth	Total Annual Gallons Withdrawn
1	Sealed	42N	05E	19.6B	1500	_____, _____, _____, _____
2	Sealed	42N	05E	19.6B	730	_____, _____, _____, _____
3	In-Use	42N	05E	19.4B	732	_____, <u>16,267,000</u> , _____, _____
4	In-Use	42N	05E	20.7A	770	_____, <u>7,114,000</u> , _____, _____
5	In-Use	42N	05E	30.7G	106	_____, <u>145,203,000</u> , _____, _____
_____	_____	_____	_____	_____	_____	_____, _____, _____, _____
_____	_____	_____	_____	_____	_____	_____, _____, _____, _____
Total Gallons Delivered Directly to Water Treatment Plant Only :						_____, <u>145,203,000</u> , _____, _____

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Please note that any purchased amount needs to be reported in line 1, Total Finished Gallons Purchased, below. This amount is needed to understand the total water use for your facility.

1. Total Finished Self-Supplied Gallons for 2013: *	_____
Total Finished Purchased Gallons for 2013: *	_____
Grand Total Finished Gallons for 2013:	_____, <u>168,584,000</u>
2. Supplier(s) of Purchased Water:	_____
3. Population directly served (retail) within your city limits	_____, <u>5,193</u>
Population directly served (retail) outside your city limits:	_____, <u>686</u>
4. Number of residential service connections for your utility:	_____, <u>1,827</u>
Residential gallons:	_____, <u>118,221,000</u>
5. Number of commercial (non-manufacturing) service connections for your utility:	_____, <u>121</u>
Commercial gallons:	_____, <u>13,392,000</u>
6. Number of industrial (manufacturing) service connections for your utility:	_____, <u>11</u>
Industrial gallons:	_____, <u>21,585,000</u>
7. Do you sell water in bulk to another public water system or to individuals?:	Yes _____ No <input checked="" type="checkbox"/>
Systems and gallons sold to each system: (use additional pages if necessary)	System 1: _____ Amount Sold: _____
	System 2: _____ Amount Sold: _____
	System 3: _____ Amount Sold: _____
	System 4: _____ Amount Sold: _____

* Subtracting the amount of process water consumed at the water treatment plant (such as for back-flushing) from your total raw water will provide the amount of finished water.

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Well Treatment, Water Levels, Conservation, and Discharge

During the last year, have any of your wells had treatment or rehabilitation work? (Examples would include surging, jetting, acidizing, shock chlorination, etc.)

Yes ___ No If yes, please list the well numbers and the type of treatment(s) in the following table.

Well No.	Treatment(s)

If your wells were pump-tested during the calendar year, please provide the following water level information.

Well No.	Airline length (ft.)*	Water Levels						
		Water level date	Nonpumping		Pumping			
			Hours off	Gauge reading (ft.)**	Hours on	Gauge reading (ft.)**	Depth to Water	Pumping Rate (gpm)
3	200 FT	9 JAN 2013	144	39 PSI	20 MIN	28 PSI	135	400
5	75	8 JAN 2013	3	26 PSI	3	21.5 PSI	25	850
3	200	1 APR 2013	720	42 PSI	2	28 PSI	135	400
5	75	4 APR 2013	48	29 PSI	2	23 PSI	22	850
3	200	4 SEPT 2013	4	42 PSI	45 MIN	29 PSI	133	400
5	75	4 SEPT 2013	3	28 PSI	7	22 PSI	24	850

*Same as pump setting

**If gauge reading is in pounds per square inch (psi), indicate that in the column. If the gauge is direct reading, indicate feet (ft).

During the last year, were water conservation practices requested or imposed? Yes ___ No

IWIP Overview- Historical Collection Methods

- Mailed annual questionnaires
 - Historically all mailed by hand
- 2nd mailing
- Phone call contact
 - Unresponsive facilities
 - Facilities who report questionable data
- Data entry/filed forms by hand

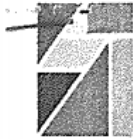
IWIP Overview- Current Collection Methods

- Combination of Mailed/E-mailed questionnaires
 - Allows for quicker contact
 - Issues with data formatting/user input restrictions
- Phone contact still needed
 - Facilities who report questionable data
 - Facilities who still prefer mail/fax
- Data Entry
 - User input still required for each field
 - Conversion to digital data is still an extra step

Online Reporting Tool Development

Online Reporting Tool – Immediate Goals

- Simple Tool for **Annual** Withdrawals and Water Use Information
- Launch as a “Beta”
- Option Available for 2016 IWIP Data Reporting Period



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_____	_____	_____	_____	_____	_____	_____, _____, _____, _____
Total Gallons Delivered Directly to Water Treatment Plant Only :						_____, <u>145,203,000</u> , _____, _____



Welcome to the ISWS Illinois Water Inventory Program Online Reporting Tool, zuser1

Facility Name: VILLAGE OF LOREM IPSUM - 09999999 Report Year: 2015

Pumpage Data

Please enter the raw gallons withdrawn from each well used in the last calendar year.

If any well data appears incorrect or needs updating (such as providing accurate lat/lon coordinates, if available), please use the comment field or contact IWIP at phone number 217-333-0239 or email isws-iwip@isws.illinois.edu.

IEPA ID	Type	Number	Local Name	Status	Twn	Rng	Sec	Depth (ft)	Raw Gallons Withdrawn	Comment/Note
90004	Intake	4		In-Use	33N	01E	99	250	<input type="text"/>	<input type="text"/>
90001	Well	1		In-Use	33N	01E	01	500	<input type="text"/>	<input type="text"/>
90002	Well	2		In-Use	33N	01E	99	119	<input type="text"/>	<input type="text"/>
90003	Well	3		In-Use	33N	01E	99	999	<input type="text"/>	<input type="text"/>
									Total Gallons (Press Enter key to calculate)	

Does your facility include any new or additional wells not listed above? Yes No

Please identify any new or additional wells along with any pumpage data from the reported year:

Next

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	System 3: _____ Amount Sold: _____
	System 4: _____ Amount Sold: _____

* Subtracting the amount of process water consumed at the water treatment plant (such as for back-flushing) from your total raw water will provide the amount of finished water.

Facility Name: TEST - 14990501 Report Year: 2015

Population and Service Connections

Number of Residential Service Connections:

Residential Gallons Metered/Billed:

Number of Commercial Service Connections:

Commercial Gallons Metered/Billed:

Number of Industrial Service Connections:

Industrial Gallons Metered/Billed:

Population directly served within city limits:

Population directly served outside city limits:

Total Precipitation for the Past Year (inches):

Did your facility experience a large change in the amount of water usage in the last year due to water main breaks, line flushing, broken meters, new construction or conservation practices?: Yes No

Please briefly detail/estimate any notable events impacting water usage or leave other feedback to share:

Comments

Facility Name: TEST - 14990501 Report Year: 2015

Did your facility purchase water from any public water systems in the last year? Yes No

PWS Facility Purchases

SWS ID	PWS Name	Gallons Purchased
09999999	VILLAGE OF LOREM IPSUM	<input type="text"/>

Additional PWS Water Purchases

PWS Name - fips code:	Gallons Purchased:
Select PWS	<input type="text"/>
Select PWS	<input type="text"/>
ABS WATER COOP - 001	<input type="text"/>
ADAMS COUNTY PWD 1 - 001	<input type="text"/>
ALEXANDER WATER DISTRICT - 137	<input type="text"/>
ALSEY-GLASGOW WATER COMM - 171	<input type="text"/>
APPLE CREEK WATER COOPERATIVE - 137	<input type="text"/>
BARRY - 149	<input type="text"/>
BATCHTOWN - 013	<input type="text"/>
BAYLIS - 149	<input type="text"/>
BLUFF VIEW MHP - 001	<input type="text"/>
BLUFFS - 171	<input type="text"/>
BRUSSELS - 013	<input type="text"/>
CALHOUN COUNTY RURAL WATER DISTRICT - 013	<input type="text"/>
CAMP POINT - 001	<input type="text"/>
CARROLLTON - 061	<input type="text"/>
CHAPIN - 137	<input type="text"/>
CLAYTON - 001	<input type="text"/>
CLAYTON-CAMP POINT WATER COMMISSION - 001	<input type="text"/>
COATSBURG - 001	<input type="text"/>
COLUMBUS - 001	<input type="text"/>

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Well No.	Treatment(s)

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*Same as pump setting

**If gauge reading is in pounds per square inch (psi), indicate that in the column. If the gauge is direct reading, indicate feet (ft).

During the last year, were water conservation practices requested or imposed? Yes ___ No

Does your facility record more frequent water level or other water usage data (monthly, daily, etc) such as from a transponder or SCADA system that you would be willing to share in a more convenient format such as a spreadsheet or other digital format? Yes No

IEPA ID	Type	Number	Local Name	Status	Twn	Rng	Sec	Depth (ft)	Measurement Type	Date	Airline Length (ft)	Hours Off (Best Est)	Gauge Reading (ft)	Depth To Water (ft)	Comment/Note
90001	Well	1		In-Use	33N	01E	01	500	Airline - Standard Gauge						
90002	Well	2		In-Use	33N	01E	99	119	Airline - Standard Gauge						
90003	Well	3		In-Use	33N	01E	99	999	Airline - Standard Gauge						

Surface Intake Water Level Data

If intake water levels were taken during the calendar year, please provide surface water level measurement information below.

IEPA ID	Type	Number	Local Name	Status	Twn	Rng	Sec	Depth (ft)	Date	Gauge Height (ft)	Zero Point (ft)	Stream Flow (cfs)	Measurement Duration (hr)	Datum Ref	Comment/Note
90004	Intake	4		In-Use	33N	01E	99	250						NGVD-29	

Previous

Next

Online Reporting Tool – Long Term Goals

- Replace 80% of the paper questionnaires
- Eliminate manual data digitization
- Move to large-scale monthly reporting
- Allow for quicker turn around, more data analysis, better data
 - Users will view historical data
 - Move towards monthly reporting

Want to Become A Beta Tester?

- Signup Sheet
 - Contact information
 - Including Valid Email Address

Access to IWIP Data?

- Annual publications available through ISWS
- Customized datasets available by request

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Questions/Suggestions?