



**Water  
Supply  
Security  
Bills  
to  
Watch**

For this edition of the newsletter I want to list some of the bills that have been introduced this year in the 101<sup>st</sup> General Assembly. As some of you might know, a General Assembly runs for two years and the 100<sup>th</sup> GA finished up at the beginning of January. The start of a new GA signals a whole new beginning and any legislation that was not passed in the previous one means those bills that were introduced and not passed are wiped off the books and the new GA starts out with a clean slate. During the 100<sup>th</sup> GA, over 9,600 bills were introduced and to date, over 6,000 bills have been introduced in the opening days of the 101<sup>st</sup> GA. The deadline for introducing new bills for the first year of the 101<sup>st</sup> GA has passed in both the House and Senate and legislators are working on trying to pass the bills they have introduced. IRWA, and its contract lobbyist, review all bills that are introduced, list those that may have an effect on its members and track their progress.

In this issue of the TAB I will list a few of the more important bills that have been filed. For a complete listing of the bills being tracked, type the following web address into your favorite browser: <http://www.ilrwa.org/Legislative.htm>.

**The start of a new  
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any legislation ....**

**HB0305 – MUNICIPAL CONVENTION EXPENSES**

**IRWA Quick Take** – As introduced, this bill would bar any municipality from paying the expenses for someone to attend conferences/conventions. Since conferences are the main source of continuing education units for water and wastewater operators, IRWA is opposing this legislation.

**HB825 – MUNI CD-STORM WATER DISPOSAL**

**IRWA Quick Take** – As introduced, this bill would place into statute that storm water collection and disposal is part of a “sewerage system” and would allow municipalities to charge for this service. IRWA is supporting this legislation.

**HB2104 – DCEO-LOW INCOME WATER ASSIST**

**IRWA Quick Take** – This bill would create a low-income water bill assistance program similar to the one currently in place for heating and cooling within the Department of Commerce and Economic Opportunity. IRWA will remain neutral until information can be obtained on how this program is to be funded.

**HB2283 – OPEN MEETINGS POSTING RECORDS**

**IRWA Quick Take** – As introduced, this bill would require a unit of local government or school district with an operating

budget of \$1 million or more to maintain an internet website where certain data shall be available. IRWA believes this would place a burden on smaller systems that may not have the resources to comply with the legislation if passed and will oppose the bill.

**HB2392 – UTILITY-WATER/SEWER REFERENDUM**

**IRWA Quick Take** – As introduced, this bill would require that any political subdivision of the State would be required to pass a referendum prior to selling their water or wastewater system. IRWA will be supporting this bill as introduced.

**HB2484 – PROP TAX-WATER TREAT FACILITY**

**IRWA Quick Take** – IRWA is in support of this bill as it will streamline the process NFP water suppliers must go through to receive real estate tax exemption on water towers, pump stations, etc.

**HB3327 & 1270 – LEAD IN DRINKING WATER-PARKS**

**IRWA Quick Take** – This bill would require that each park district, municipal park and recreation agency, or special recreation agency shall test each source of potable water in a park that serves children under 6 years old for lead contamination. IRWA will be opposing this bill as it is another unfunded mandate.

**HB3445 & SB1532 – LEAD SERVICE LINE REPLACEMENT**

**IRWA Quick Take** – This a very complex bill that will require all community water supplies to identify and replace all lead service lines; create a plan, to be submitted to the Environmental Protection Agency for approval, to replace all lead service lines; and prepare a cost of service for a given calendar year. IRWA will be opposing this bill again this session.

Again, these are all proposed legislation and have not been signed into law. It is anticipated that in the upcoming weeks we will be asking our members to file witness slips either in favor of or in opposition of certain legislation. When we do so, we will provide you with the link and instructions on how to complete the witness slip. Please help us help you by acting upon the requests when sent out. Thank you in advance for your support and participation!



By: Jeff McCready, IRWA Wastewater Technician

1. The suspended solids of the raw wastewater entering the plant is 250 mg/l and the final effluent has a concentration of 50 mg/l. What is the percent % efficiency of the plant?
2. What is the volume of a pond that has an average surface area of 8,500 square feet and an operating depth of 4 feet?
3. How long (days) will it take to fill a lagoon 425 feet X 200 feet X 4 feet when you have a flow rate of 120,000 gpd?
4. A circular clarifier has a diameter of 90 feet and a depth of 15 feet with a flow of 6.2 MGD. What is the detention time in hours?
5. The influent flow to a trickling filter plant is 200,000 gpd. The trickling filter has a diameter of 90 feet and a media depth of 6 feet. If the BOD concentration being applied to the trickling filter is 250mg/l, what is the organic loading rate of the trickling filter per 100 cubic feet?
- 6.
6. Your lagoon is 400 feet wide, 700 feet long and 10 feet deep with a flow of .250 MGD. What is the detention time in your lagoon in days?
7. A trickling filter is 60 feet in diameter with a media depth of 5 feet. What is the application rate if the influent flow is .785 MGD?
8. The volatile acids concentration in anaerobic digester is 170 mg/l, the alkalinity is 3,000 mg/l. What is the volatile acids/alkalinity ratio?
9. A stick travels 30 feet in 20 seconds in a grit chamber. The flow velocity is:
10. An operator is required to feed 0.2 mg/l of polymer into a volume of 300,000 gallons each day. How many pounds of polymer will be needed for one week?  
(answers on next page)

**7th Annual Spring  
Administrative Conference**

*New Location!*

**Holiday Inn - Fairview Heights, IL**

*May 16 & 17, 2019*

**Agenda coming soon!  
Room block is open now. Call 618-212-1300 for reservations.**

**Answers**

1. % efficiency =  $\frac{\text{IN} - \text{OUT}}{\text{IN}} \times 100$        $\frac{250 - 50}{250} \times 100 = 80\%$
2. Vol. = Gallons      Gallons = avg. surface area, sq. ft. X depth X 7.5 gal/cu.ft.  
8,500 sq. ft. X 4 ft. X 7.5 gal/cu.ft. = **255,000 gal.**
3. Hydraulic loading (days) =  $\frac{\text{Vol (gals)}}{\text{Flow rate (gal/day)}}$   
 $\frac{(425 \text{ ft.} \times 200 \text{ ft.} \times 4 \text{ ft.} \times 7.5 \text{ gal/cu.ft.})}{120,000 \text{ gal/day}} = \mathbf{21.25 \text{ day}}$
4. Detention Time =  $\frac{\text{volume, gal}}{\text{Flow rate, gpd}}$   
 $\frac{(.785 \times 90 \times 90 \times 15 \times 7.48)}{6,200,000} = \frac{713,424}{258,333} = \mathbf{2.76 \text{ hour}}$
5. Organic Loading Rate =  $\frac{\text{BOD lbs/day}}{(\text{lbs/day}/100 \text{ cu. Ft.}) \times 100 \text{ cu. ft.}}$   
 $\frac{(250 \times .200 \times 8.34)}{100} = \frac{417}{100} = \mathbf{1.09 \text{ lbs/day BOD}}$   
 $\frac{(.785 \times 90 \times 90 \times 6)}{100} = \frac{381.51}{100} = 381.51$       **100 cu. Ft.**
6. Detention Time =  $\frac{\text{volume, gal}}{\text{Flow rate, gpd}}$   
 $\frac{(400 \times 700 \times 10 \times 7.48)}{250,000} = \mathbf{84 \text{ days}}$
7. Hydraulic loading =  $\frac{\text{Flow to Filter (gal/day)}}{\text{Sq. ft. of filter}}$   
 $60 \times 60 \times .785 = 2826 \text{ sq. ft.}$        $\frac{785,000 \text{ gal/day}}{2826 \text{ sq. ft.}} = \mathbf{277.8 \text{ gal/sq. ft./day}}$
8. Volatile acids/alkalinity ratio =  $\frac{\text{Volatile acids, mg/l}}{\text{Alkalinity, mg/l}}$   
 $\frac{170 \text{ mg/l}}{3,000 \text{ mg/l}} = \mathbf{.06 \text{ volatile acids/alkalinity ratio}}$
9. Velocity =  $\frac{\text{Distance}}{\text{Time}}$        $\frac{30 \text{ feet}}{20 \text{ seconds}} = \mathbf{1.5 \text{ ft./sec}}$
10. Lbs. = concentration(mg/l) X flow(MG) X 8.34 lbs/gal  
.2 mg/l X .300 X 8.34 = 0.5 lbs/day  
0.5 lbs. X 7 days/week = **3.5 lbs**

**THE IRWA OFFICE WILL BE CLOSED ON THE FOLLOWING DAYS:**

Monday, May 27, 2019 - Memorial Day

Thursday, July 4, 2019 - Independence Day

Monday, September 2, 2019 - Labor Day

**Illinois Rural Water Association**  
**3305 Kennedy Road**  
**P.O. Box 49**  
**Taylorville, IL 62568**  
**217-287-2115**

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**QUALITY ON TAP**



**Staff Members**

- Executive Director**  
**Frank Dunmire** (dunmire@ilrwa.org)
- Deputy Director**  
**Don Craig** (craig@ilrwa.org)
- Membership Services Assistant**  
**Heather McLeod** (ilrwahm@ilrwa.org)
- Administrative/Program Assistant**  
**Denise Burke** (ilrwadb@ilrwa.org)
- Circuit Rider #1**  
**Evan Jones** (jones@ilrwa.org)
- Circuit Rider #2**  
**Roger Noe** (noe@ilrwa.org)
- Circuit Rider #3**  
**Chuck Woodworth** (ilrwacw@ilrwa.org)
- Wastewater Technician #1**  
**Jeff McCreedy** (mccreedy@ilrwa.org)
- Wastewater Technician #2**  
**John Bell** (ilrwajb@ilrwa.org)
- USDA Source Water Protection Specialist**  
**Mark Mitchell** (mitchell@ilrwa.org)
- State Funded EPA Technician**  
**Clark Cameron** (cameron@ilrwa.org)
- Energy Efficiency Circuit Rider**  
**Brandon Windell** (windell@ilrwa.org)
- EPA Training Specialist**  
**Dave McMillan** (mcmillan@ilrwa.org)

**Website: [www.ilrwa.org](http://www.ilrwa.org)**

**GPS/GIS MAPPING SERVICES**

Through the implementation of GPS & GIS technology, IRWA can effectively produce hard copy and digital maps. With this service available from IRWA, utilities can attain new and accurate maps to better manage their water, wastewater, and storm sewer assets.

The printed maps can be large-scale wall maps up to 36"x48" showing utility features with the desired layers (aerial photos, streets, topography, etc.).

The digital map files on a CD, can be viewed and printed with free software that IRWA will provide and install on a utility computer. The software allows you to view and click on a system feature (such as a valve, hydrant, meter pit, curb stop, manhole, lift station, treatment facility, etc.), and pull up attribute data about each...as well as several other capabilities such as printing, zooming, etc.

Also, IRWA has a working relationship, with DiamondMaps.com, to put your IRWA project maps, on their server, for mobile viewing with a smartphone or cellular capable tablet....including editing capability. This is at no extra charge to the system for the first year's subscription. Continuance of the Diamond Maps service after the first year, is at the utility's discretion.

Payment for GIS services, is a set charge per feature, with IRWA members receiving an automatic 30% discount, and even more of a reduction with bigger projects. More information is also posted on our website at: [www.ilrwa.org](http://www.ilrwa.org), or you may call our office at 217-287-2115.

