

DNR

Indiana Department of Natural Resources

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To Owners and Operators of Significant Water Withdrawal Facilities: -

As an owner or operator of a Significant Water Withdrawal Facility, you are required to submit to the Division of Water an annual report of water withdrawn by your facility. Enclosed is a 2007 Annual Water Use Report Form for each of your facilities. Please review the following instructions carefully, including those on the back of this letter, before completing the Report Form(s).

On the page titled "WATER WITHDRAWAL REGISTRATION AND REPORTING SYSTEM"

- A. Correct any outdated information about the water use purpose, the facility, and the sources.
- B. Provide information about new sources (ground water wells or surface water intakes). A box at the bottom of the report page has details. New information may be given in a narrative attachment.

On the page titled "ANNUAL WATER USE REPORT FORM . . ."

- C. Complete items 1 through 5 (Withdrawal Record, Method of Measurement, and Operation Time)—
 - (1) Put a check next to the units you use to report amounts withdrawn—Thousand Gallons or Million Gallons. DO NOT report withdrawals in gallons (i.e., to the nearest single gallon recorded by a meter). The **Additional Instructions** on the back of this letter describe the correct way to report amounts.
 - (2) Report **monthly** withdrawals from ground water sources (wells) during 2007, if applicable.
 - (3) Report **monthly** withdrawals from surface water sources (intakes) during 2007, if applicable.
 - (4) Put a check next to the method you use to determine amounts withdrawn. Fill in numbers if requested for your method.
 - (5) Report pump operation time, in hours OR days. The **Additional Instructions** on the back of this letter describe the correct way to report time.
- D. Complete items 6 and 7 (Statement of Affirmation)—
 - (6) If the registration information on the other side of the report form and the owner information above the withdrawal record are correct as printed, put a check next to YES. If you corrected or added registration or owner information, put a check next to NO.
 - (7) **Print** the name of the person signing, then **sign and date** the report form.
- E. Mail the report to the Division of Water in the enclosed envelope. **The deadline for submitting reports is March 31, 2008. You must submit a report even if your facility did not pump any water during 2007.**

Thank you for your cooperation.

Enclosure(s)

ADDITIONAL INSTRUCTIONS

Reporting the Amount Withdrawn (Items 1, 2, and 3 on the Annual Water Use Report Form)

For every amount you will be reporting, ROUND THE NUMBER OF GALLONS TO THE NEAREST THOUSAND (1,000).

Amounts from 001 to 499 should be rounded down (for example—5,250 is rounded to 5,000).

Amounts from 500 to 999 should be rounded up (for example—5,675 is rounded to 6,000).

Then choose one of the two following procedures—whichever is appropriate for your data:

(1) If **most** of your monthly amounts are **between 1,000 and 1,000,000 (one million) gallons**—

- PUT A CHECK next to “Thousand Gallons” on Line 1 of the Water Withdrawal Record.
- Remove the three zeroes from every amount and write the remaining digits in the appropriate row and column (for example—8,000 is written as 8, and 796,000 is written as 796).

NOTE: An amount greater than one million, such as 1,350,000, takes the form 1,350.

(2) If **most** of your monthly amounts are **more than 1,000,000 (one million) gallons**—

- PUT A CHECK next to “Million Gallons” on Line 1 of the Water Withdrawal Record.
- Remove the three zeroes from every amount and replace the remaining comma with a decimal point (for example—3,864,000 becomes 3.864, and 15,420,000 becomes 15.420).
- Round these amounts to the nearest tenth (for example, 3.864 becomes 3.9, and 15.420 becomes 15.4) and write each rounded amount in the appropriate row and column.

NOTE: An amount less than one million, such as 870,000, takes the form 0.9.

REPORT ALL OF YOUR AMOUNTS IN THE SAME UNITS.

Either report all amounts as “Thousand Gallons” (even if some are 1,000 or more) OR report all amounts as “Million Gallons” (even if some are 0.9 or less).

Reporting the Total Yearly Operation Time (Item 5 on the Annual Water Use Report Form)

Report the total yearly operation time of your pump in **hours** OR **days**. Choose the time unit that is appropriate for your facility and your method of determining water withdrawals.

If you use more than one pump and you record operation times separately for each pump, report the time **ONLY FOR THE PUMP THAT RAN LONGEST**.

For Help with the Annual Water Use Report Form

Please call the DNR Division of Water and tell the receptionist that you have a question about the Water Use Program. This program is managed by the Water Rights & Use Section. The Division's toll-free office phone is (877) 928-3755; the local number for the Water Use Program is (317) 234-1087.

**Natural Resources Commission
Information Bulletin #40**

Methods of Measuring the Amount of Water Withdrawn by a Significant Water Withdrawal Facility

SUBJECT: The purpose of this Information Bulletin is to describe methodologies approved by the natural resources commission to calculate the amount of water withdrawn annually from a "significant water withdrawal facility" as defined at IC 14-8-2-257.

Rate of Flow Metering Devices

Rate of flow meters are used to quantify fluids that pass in a continuous stream rather than in isolated or separately counted quantities. These meters are dependant upon some property of the fluid other than, or in addition to, volume or mass. They are designed to use a change in the property or properties associated with the rate of flow, and they usually include a device that manually or automatically records a measurable change. The rate of flow multiplied by the time of operation equals the amount of water withdrawn for that period of time, so the time of operation must also be tabulated. There are several principles that can be used in recording the rate of flow:

- a. *Differential (Variable) Pressure Type Meters* - These systems involve the pressure differential at two points in full flowing systems. When flow varies, the pressure difference measured by such devices also varies and both functions can be correlated with reasonable accuracies through various types of accessory instrumentation. *Examples include venturi meters, flow nozzles, orifice meters, pilot tubes, and annubars.*
- b. *Steady Pressure (i.e., Steady Head) Type Meters* - These systems discharge into the atmosphere. *Examples include irrigation nozzles that are available with reasonably accurate flow vs. pressure calibrations.*
- c. *Overflow (Head Area) Type Meters* - These systems measure variation in levels of gravity flow (i.e., non-pumped) systems. As flow varies in a channel, the depth upstream of a restriction in partially filled conduits varies and these functions can be correlated with reasonable accuracies. The key element needed in this type of system is water depth that can be measured with accessory instrumentation or simply with a depth gage. *Examples of such restrictions are weirs and flumes.*
- d. *Current Type Meters* - These systems utilize a wheel or propeller, which rotates when immersed in flowing water, and a device to determine the number of revolutions of the wheel or propeller. The number of revolutions is then related to fluid velocity. The method can be utilized where water withdrawals travel through a pipe or an open channel.

Time of Pump Operation

Water withdrawals can be measured based upon the time each pump supplying a water withdrawal facility is operated multiplied by the capability of the respective pump. The time of operation can be recorded manually in a written log or by means of an automatic time meter. The cost of installing a time meter on a pump is relatively low, and being aware of the pump design discharge, pump efficiency, and time of pump operation allow for a fairly accurate record of water withdrawals. Pumping rates can also be determined for specified periods of time from a manufacturer's calibration graph by correlating volume flows with electrical loads and with discharge pressures.

Past Performance Comparison

Some industries have a direct relationship between the amount of water withdrawn and the quantity of product manufactured or handled. In order to measure water withdrawals using a past performance comparison, the owner of a significant water withdrawal facility must provide the division of water with adequate supporting data to establish the relationship between water withdrawals and the amount of production.

NPDES Data

Many businesses and industries monitor the amount of water that is discharged to the State's rivers or streams as a part of their NPDES permit. When water use is non-consumptive and no additional inflow occurs, the amount of discharge water closely reflects the amount of water withdrawn. Ascertaining individual water withdrawals for facilities having more than one well or intake can be difficult, but this method may be acceptable in some cases. In order to measure water withdrawals using NPDES data, the owner of a significant water withdrawal facility must provide the division of water with supporting data to verify that the discharge is reflective of the amount of water withdrawal.

Direct Measurement of Amount Applied

A system using "rain gage" type of equipment can be installed to measure the amount of water applied to a given area (typically in agricultural applications). The water applied multiplied by the number of acres irrigated equals the amount of water withdrawn (e.g. 1 acre-inch equals 27,154 gallons). The gaging system must be carefully monitored in order to differentiate between water applied by irrigation and that contributed by precipitation. In order to measure water withdrawals using direct measurement, the owner of a significant water withdrawal facility must obtain prior approval from the division of water.

Quantity Metering Devices

Quantity metering devices function by having water pass in successive and completely isolated amounts, measured either by weight or volume, by alternatively filling or emptying containers of known or fixed quantities. The simplest of these devices is a holding tank or a reservoir with a known volume. When the tank or reservoir is filled from a significant water withdrawal system, the water must be accounted for by a logging method that applies to either partially filled or full flowing systems. Examples of weighing meters include weighing tanks and tilting traps. Volumetric meters include holding tanks and reservoirs, reciprocating piston, rotary piston, and nutating disk.

Other Methods

In order to use a method other than those approved in this Information Bulletin to measure the amount of water withdrawn by a significant water withdrawal facility, the owner of the facility must provide the division of water with the following:

1. An explanation or description of the proposed method; and
2. Supporting data sufficient to satisfy the division of water that the method provides for an accurate representation of the amount of water withdrawn.

ANNUAL WATER USE REPORT FORM FOR A
SIGNIFICANT WATER WITHDRAWAL FACILITY
FORM # : 21915R

Please complete items (1) through (7)
Facility Registration Number : 23-00001-PS

INDIANA DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WATER
402 WEST WASHINGTON ST., ROOM W264
INDIANAPOLIS, INDIANA 46204
TELEPHONE (317) 232-4160
Water Withdrawal Report for Year Ending December 31, 2008

OWNER OF WATER WITHDRAWAL FACILITY

City of Veedersburg
100 South Main Street
Veedersburg IN 47987
Phone no.: (765) 294-2728

Contact : Paul L Keeling
City of Veedersburg
100 South Main Street
Veedersburg IN 47987
Phone no.: (765) 294-2728

(1) Units Used in Reporting Amounts Withdrawn (Check One) : Thousand Gallons _____ Million Gallons _____

WATER WITHDRAWAL RECORD

WELL#	MONTHLY REPORT FOR GROUND WATER SOURCES												TOTAL
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
1													
2													
3													
4													
TOTAL													
(3) Monthly Report for Surface Water Sources													
INTAKE#	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
TOTAL													

METHOD OF MEASUREMENT

(4) Are withdrawal amounts based on flow meter readings? Check one ==> Yes ___ No ___
If 'No', please check and complete one of the lines:
Hours operated: Hour meter _____ Manual record _____
Acres inches: # of acres _____, # inches _____
NPDES data: Consumptive use _____ %
Other _____

STATEMENT OF AFFIRMATION

(6) Is your registration information still correct? Check one ==> Yes ___ No ___ If 'No', please correct where appropriate.
(7) I hereby affirm under the penalties of perjury, that the information submitted herewith is to the best of my knowledge and belief, true, accurate, and complete.
Owner or Agent

TOTAL YEARLY OPERATION TIME

(5) Complete ONLY one: No. of Hours _____ -OR- No. of Days _____

Printed Name _____
Signature _____ Date _____

Registration Information

STATE OF INDIANA
 DEPARTMENT OF NATURAL RESOURCES
 DIVISION OF WATER
 WATER WITHDRAWAL REGISTRATION AND REPORTING SYSTEM

Regno: 23-00001-PS
 County: Fountain
 Topographic Map: Veedersburg
 Standard Industrial Classification (SIC): 4941

Basin: Middle Wabash
 Township: 19N
 Range: 7W
 Section: 6

Water Use Purpose(s):
 Public Water Supply-GW
 Drinking Water/Sanitary Facilities-GW

Sources(s):
 Ground Water
 Ground Water

Facility Information:
 Total Capability: 2.563 MGD

Number of Wells: 4
 Number of Intakes: None

Withdrawal Capability: 1780 GPM
 Withdrawal Capability: None

Ground Water Source Information:

Number	Capacity, GPM	Depth, FT	Diameter, IN	Aquifer Utilized
1	600	36	16	SG
2	280	43	10	SG
3	300	43	10	SG
4	600	46	16	SG

Surface Water Source Information:
 No Surface Water Sources

NOTE: If a well or intake has been added to your facility, please include the following information in addition to the water use amounts.

WELL	INTAKE
1) Capacity	1) Capacity
2) Depth	2) Source Name
3) Diameter	3) Location
4) Aquifer Utilized	
5) Location	

(Include a map for the locations)