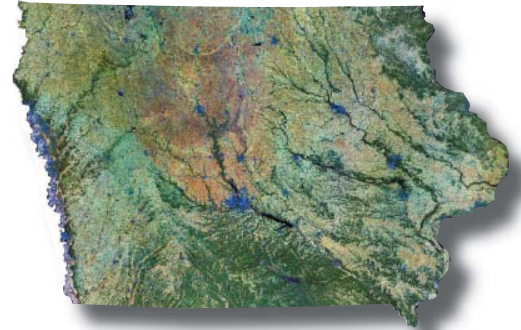




# Our Common Ground

Iowa Department of Natural Resources

Iowa Geological Survey  
Resource Information Fact Sheet 2005-2



## “By the way, you’ll need water.”

**What’s in a well?** Water, of course – groundwater to be exact. Wells are designed to extract groundwater from an aquifer. An aquifer is any earth material that yields adequate quantities of groundwater to a well or spring.

**What is a well worth to you?** Eighty percent of Iowans drink water from wells. In Iowa, drinking water wells range in depth from less than 20 feet to over 3000 feet. Since so many of us obtain our drinking water from wells, a good understanding of the groundwater resource is necessary. Wells also serve livestock, crop irrigation, commercial, industrial, municipal, and public needs. In fact, the U.S. Geological Survey (USGS) estimates that about half the groundwater used in Iowa in 2000 was for non-drinking water purposes (see Figure 1 on reverse side).

A “**well forecast**” is an evaluation of the groundwater quantity and quality for any location in Iowa. A well forecast identifies the depth necessary to drill

to reach various aquifers. It provides information on the anticipated water quality from the various aquifers. A well forecast utilizes all available information about the geology of the site as well as information about the groundwater.

No matter how simple or complex, well forecasts are free. If you need a well forecast, contact the Iowa Department of Natural Resources – Iowa Geological Survey (IGS).

### **Who needs well information?**

Whether it’s geology, well construction, well location, or water quality, many people request and use specific well data.

- **Well contractors** may need to know where to set casing for a new well. For information in their area of interest, they can utilize the IGS Geosam database ([gsbdata.igsb.uiowa.edu/geosam](http://gsbdata.igsb.uiowa.edu/geosam)) for geologic, well construction, and water production information, including strip logs and drillers’ logs.
- **Groundwater professionals** may need to know if there are wells

within a certain distance of a leaking underground storage tank or other contaminant sources. They can request a search of well databases. IGS maintains or accesses ten well databases: municipal wells, non-municipal public wells, permitted private wells, registered abandoned wells, public water supply intakes, water use permits, agricultural drainage wells, wells registered for testing (Grants to Counties), the private well tracking system, and Geosam.

- **A public water supply** may need an alternative groundwater source. Officials can rely upon hydrogeologic data from Geosam and IGS staff expertise in developing their water supply. Survey geologists prepare well forecasts and provide advice upon request.
- **Consulting engineers**, business and industry, public water suppliers, and individuals request well information for a variety of reasons. For example, a well may need to be repaired. In this case, the

original casing and screen information is crucial to make appropriate decisions on repair or replacement of well components.

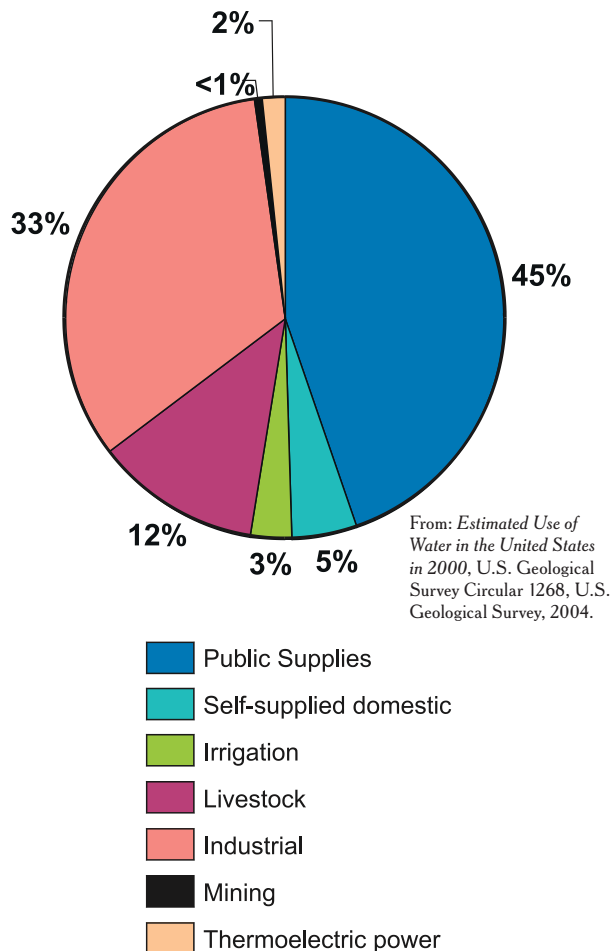
- **Homeowners** and real estate agents often request information about wells upon the sale of property. Several well databases are available which may help to answer their specific questions. For example, the Iowa Department of Natural Resources' Grants to Counties database may provide information on nitrate values for wells in the vicinity that are in the same aquifer.

- **Anyone** who wants to know about well-water quality can contact IGS staff who can access water quality information from wells and regional summaries of water quality by aquifer, most of which have been published.

### The Iowa Geological Survey

strives to provide decision makers with the best possible information. Whether they are private citizens, businesses, or elected officials, all Iowans have a stake in the protection of our valuable water resources.

For a general discussion of groundwater in Iowa, read *Iowa's Groundwater Basics*, an 83-page, full-color book from the Iowa Department of Natural Resources, Iowa Geological Survey (free, \$2.00 shipping & handling).



**Figure 1.** Estimated groundwater withdrawals in Iowa in 2000.



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