

# GROUNDWATER

The battle over  
"free" water  
in Wisconsin.



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**W**isconsin has become a legal battleground over the pumping of groundwater. And it looks like it will not end anytime soon. How did we get here?

Wisconsin is blessed with abundant water resources, from the world's largest freshwater lakes and the nation's biggest river to over 15,000 inland lakes, 84,000 river miles, and millions of wetland acres. Interconnecting all of these waters is a subterranean reservoir we call groundwater, which moves below the surface to replenish them. Groundwater is held in saturated soil and geologic materials that we call aquifers. We pump groundwater out of the aquifers for municipal water supplies, agriculture, and industry. In most cases the supply of groundwater sustains these uses but it is important to realize that any withdrawal of groundwater lowers the groundwater level, or water table, and in some cases streams, lakes, and wells can go dry. In situations where water uses conflict, users often seek legal recourse.

#### A brief summary of Wisconsin Water Withdrawal Law

Wisconsin, through the "public trust doctrine," recognizes the need to manage competing consumptive uses of surface waters. Part of the

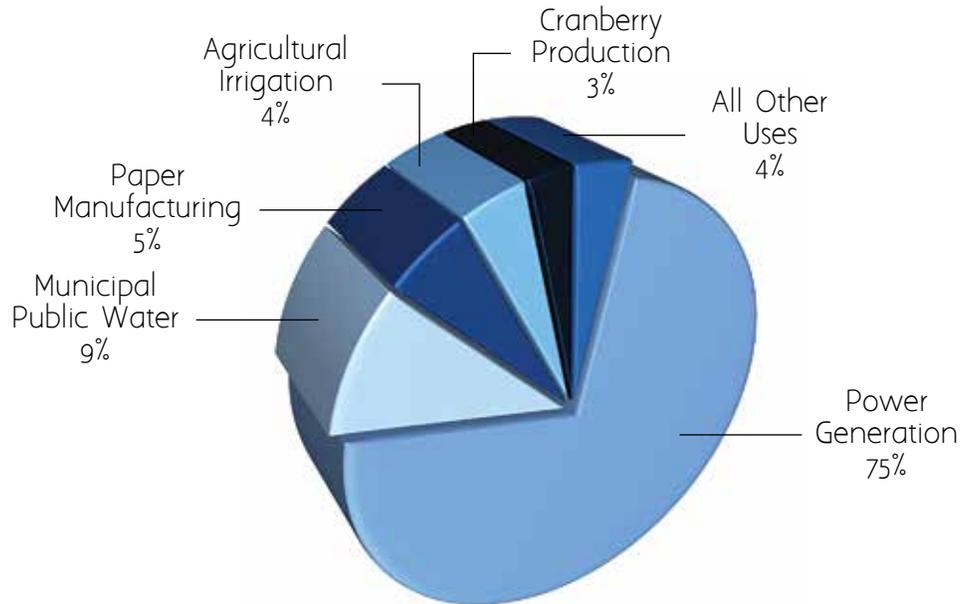
Wisconsin Constitution, the doctrine's simple principle is that the navigable waters (lakes, streams and rivers) are to be held in trust by the state for the benefit of the public. This means that withdrawals of water from navigable waters cannot dry them up. Nonetheless, riparian owners are granted "reasonable use" of the water, including water withdrawal. By its nature, the "reasonable use standard" offers *every* potential user equal consideration. However, the definition of "unreasonable use" is largely left to individual case law, and thus a series of court cases frame our approach to water withdrawal regulation.

Groundwater is not defined as a navigable water, and until 1974 could be withdrawn in essentially unlimited amounts, though a 1945 high-capacity well statute protected municipal well from excessive withdrawals. Currently a high-capacity well is defined as a well that withdraws at least 70 gallons of water per minute. In 1974, as a result of private well dewatering due to aquifer depletion, the *State vs. Michels Pipeline Constr., Inc.* decision ruled that groundwater was covered by a reasonable use standard, similar to surface water, and that withdrawals could not harm another user. In 1985, high-capacity wells with withdrawals greater than 2 million gallons per day received even greater restrictions. In



## 2014 Water Withdrawals by Use

Total Withdrawals = 1.952 Trillion Gallons



Source: Wisconsin Department of Natural Resources report "Wisconsin Water Use: 2014 Withdrawal Summary."

2003, well permits required the protection of certain springs and trout streams, as well as outstanding and exceptional resource waters. Despite the increasing regulation of groundwater withdrawals, conflicts over use continued.

### Who is pumping and what is the impact?

In Wisconsin, roughly 43% of all groundwater withdrawals are for municipal water supplies. About 35% is attributed to agricultural irrigation, mostly within Wisconsin's Central Sands covering 8 counties in Central Wisconsin, and 6% is for industrial uses. The remaining uses include aquaculture, public water supply, golf courses, livestock, mining, and a host of others (see

chart on p. 27). Most Wisconsin municipalities, with Milwaukee as a notable exception, pump groundwater for their drinking water supplies and all have impacts on groundwater levels. Some, like Green Bay and now Waukesha, have dewatered their aquifers to the point that they were forced to seek an alternative surface water supply. Green Bay gets its water from Lake Michigan and Waukesha is seeking to do so as well.

Agriculture in the Central Sands depends on irrigation of the naturally very dry sandy soils of the region to produce crops profitably. In the 1960's, less than 100 high-capacity wells served agriculture in the Central Sands. Now more than 2,300 high-capacity wells are permitted (see

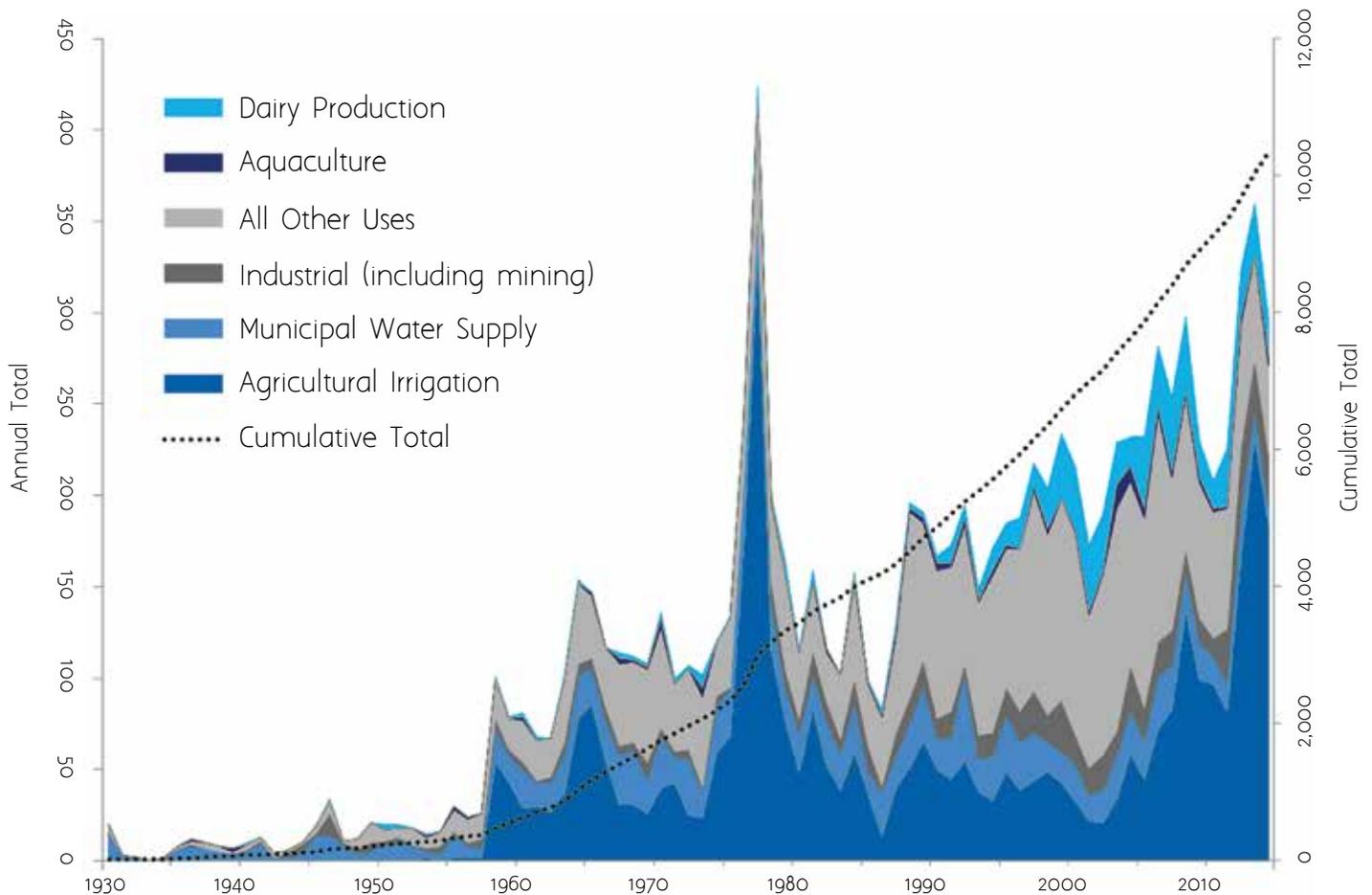
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related graph on page 26). Long-term monitoring of groundwater in the region shows long-term declines of groundwater levels since the 1960s despite long-term increases in precipitation. Groundwater models indicate that the 1 to 5 foot drop in groundwater levels seen in the region would dry up streams and lakes. Those models have largely been confirmed through direct observation. It should be noted that some lakes and streams are sensitive to decreases in water levels of several feet while high-capacity wells, which are pumping from much deeper in the aquifer (often over 100 feet deep), are largely unaffected.

### Recent Groundwater Legal & Legislative Battles

Until 2011, the Wisconsin Department of Natural Resources (DNR) permitted individual high-capacity wells taking into account their *individual impact* on surrounding wells and the statutorily specified surface waters. But in 2011, the *Lake Koshong Management District* Supreme Court decision held that DNR should consider the impact not only of the proposed high-capacity well on a navigable water (the Public Trust Doctrine) but should include the *cumulative impact* of other high-capacity wells that might already be impacting

## Construction Dates of Currently Active High Capacity Wells



Source: Wisconsin Department of Natural Resources



## 2014 Goundwater Withdrawals

224 Billion Gallons Statewide

Source: Wisconsin Department of Natural Resources



the navigable water. The implications of this decision were significant because it dramatically increased the possibility that a proposed high-capacity well permit application could be modified or denied if a determination was made that existing groundwater withdrawals exceeded the amount of water needed to ensure the public trust. Further, addressing cumulative impacts of well withdrawals means that an assessment needs to be done regarding existing wells. If it is determined that existing well withdrawals impact navigable waters, their existing permit capacity could be questioned.

In response, agricultural interests promoted several bills in the last session of the Wisconsin Legislature to protect existing high-capacity wells from future review as to their withdrawal impact, essentially creating perpetual well permit capacity, regardless of future conditions. These bills failed to advance to the Governor's desk for a signature. The conflicting legal opinions and legislative efforts has created an uncertain environment for DNR to determine appropriate well permits at a time when record numbers of well permit applications are being received.

On May 10, 2016 Wisconsin Attorney General Brad Schimel delivered an opinion at the request

of Wisconsin Assembly Speaker Robin Vos. The opinion states that DNR, when considering a permit application for a high capacity well may not consider the groundwater pumping impacts of surrounding wells due to the legislative change in 2011 limited the scope of DNR high-capacity well permit restrictions to only those specified in state statute. Further, the Public Trust Doctrine is to be administered by the Legislature rather than DNR. This opinion, as of this writing, has effectively halted DNR's permitting process for high-capacity wells until DNR's legal staff can determine the limits of their authority.

### The future

There is no reason to believe that the increase in well permitting and pumping will stop. Since the water is "free" to pump, there is currently no incentive to manage groundwater as a shared resource. The costs are externalized to drying lakes, streams, and in some cases other wells. Most observers predict that suits will be filed regarding the AG's decision and that ultimately the State Supreme Court will be asked to resolve more conflicts over groundwater pumping.