

## FEATURE II

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# What is GO TO 2040?

*GO TO 2040 is a comprehensive plan for the future of a 7 county area surrounding Chicago. It provides a framework for all aspects of development in the region with the goal being to maintain the same quality of life that is now enjoyed by residents while still allowing for an increase in population of some 2 million people. The primary areas addressed are Livable Communities, Human Capital, Efficient Governance, Regional Mobility, and Context and Best Practice. It is a vast amount of information pulled together and used to create a framework for future sustainable, and environmentally responsible development. A large portion of the document is dedicated to the environment, including water use.*

*(<http://www.cmap.illinois.gov/2040/download-the-full-plan>)*

### **Why was it created and who created it?**

GO TO 2040 was created in response to the Regional Planning Act passed by the Illinois General Assembly in 2005. It specified that a planning body be formed by representatives of the 7 counties in the region surrounding Chicago. This planning body was tasked with creating “coordinated strategies that help the region’s 284 communities address transportation, housing, economic development, open space, the environment, and other quality-of-life issues.” The Chicago Metropolitan Agency for Planning (CMAP) is the result of this Act ([www.cmap.illinois.gov](http://www.cmap.illinois.gov)).

### **What is the structure of the Chicago Metropolitan Agency for Planning?**

CMAP is composed of a board, a legislative planning committee at the policy level, and a citizen’s advisory committee as well as a council of mayors at the advisory level. Much of the research is done by state funded University agencies.

### **Where can I see the data that this plan is based upon?**

[www.metropulsechicago.org](http://www.metropulsechicago.org) is an information clearing-house created by CMAP. It is a simple graphic tool that allows you to choose different inputs after which it creates a graph based upon your selections. It is an excellent site to see the high level data that creates the basis for the reports created by CMAP.

### **Is it law?**

GO TO 2040 was created because the general assembly mandated that it be created. The plan itself does not have the force of law. All of the precepts of the plan have been created with the idea that they can easily be adopted into law

by local municipalities. For example within the water portion of the plan a sample ordinance was created that provides a framework that can easily be adopted, or adapted to the situation within an individual municipality. A copy of the Model Water Use Conservation Ordinance can be found at [www.cmap.illinois.gov/water-2050](http://www.cmap.illinois.gov/water-2050).

It also provides recommendations to state lawmakers as to how to fund the programs involved, how to approach future planning, even ideas for creating better government. How the document becomes law is largely up to the individual counties and municipalities in the area.

### **Why does it matter to the golf industry?**

One of the main areas of concern within the plan is livable communities, and within that the environment. The planners have identified water, and open space as two crucial factors in maintaining our current standard of living. Golf courses are unique in their ability to directly confront many of the issues confronted by GO TO 2040. Golf courses can be part of storm water detention, permeable landscaping, urban forestry, and water and energy savings. As an industry that is often viewed as a major water user we need to be aware of any plan which has the potential to restrict access to water. The conversations created by a document like this one allow the golf industry to show the many ways that we can contribute to the area.

### **Should the local golf industry be concerned about this plan?**

There is surprisingly little mention of the golf industry within the plan. The plan spends a lot of time presenting data that has been gathered over the last 10 years on

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virtually all kinds of information pertaining to the 5 primary areas. The water use data alone is voluminous. Within the context of the water recommendations there are several conservation measures that could be a problem for the golf industry. These measures must become law before they become a problem.

There are a great many opportunities within the plan. There are sections on storm water management, and urban forestry in addition to the portions covering open lands and water use. One major section addresses the need for permeable landscapes. As good stewards of the resources entrusted to us, the golf industry is in a unique position to help solve many of the problems presented within GO TO 2040. Perhaps the strongest part of our industry is the educated workforce we provide. It is not always easy to find educated people in an urban area who are well versed in subjects like the ones mentioned here. The golf industry has a large number of these educated professionals who are well prepared to at least participate in the discussion if not help lead it.

### **What is Water 2050 Northeastern Illinois Regional Water Demand/Supply Plan?**

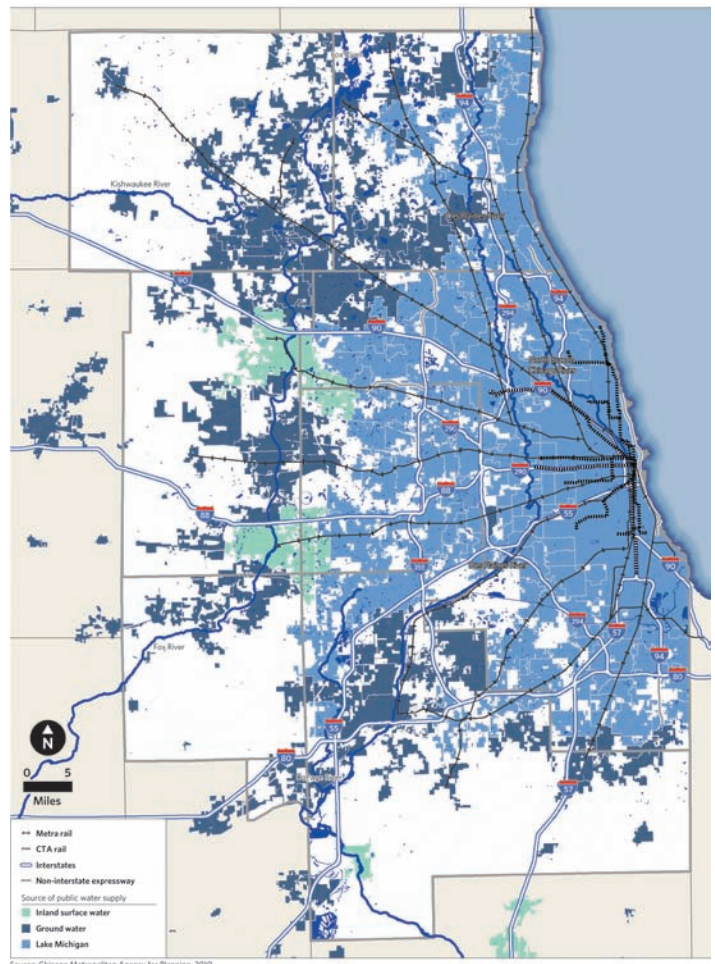
As a part of the GO TO 2040 plan CMAP, through a Rod Blagojevich executive order, asked a large group of stakeholders to create a regional water plan which incorporates known data, areas of concern, suggested municipal law, and conservation strategies. This plan is 204 pages of very detailed coverage of water supply and use. It incorporates 4 main chapters, A Framework for Water Supply Planning and Management, Land and Water, Demand Management and Other Strategies, and Water Management in the 21<sup>st</sup> Century. One difference between Water 2050 and GO TO 2040 is that Water 2050 is concerned with and 11 county area as opposed to the 7 county area in GO TO 2040.

(<http://www.cmap.illinois.gov/water-2050>)

### **What are they trying to achieve with the Water 2050 plan?**

The stated goals of the Northeastern Illinois Regional Water Supply Planning Group (RWSPG) are to:

1. Ensure water demand and supply result in equitable availability through drought and non-drought conditions alike.
2. Protect the quality of ground- and surface-water supplies.
3. Provide sufficient water availability to sustain aquatic ecosystems and economic development.
4. Inform the people of northeastern Illinois about the importance of water-resource stewardship.
5. Manage withdrawals from water sources to protect long-term productive yields.
6. Foster intergovernmental communication for water conservation and planning.
7. Meet data collection needs so as to continue informed and effective water supply planning.
8. Improve integration of land use and water use planning and management.



*Graph of region with municipal water source shown*

### **Who are these stakeholders?**

There are 32 members of the group that crafted Water 2050. There are 2 representatives from 7 different categories including, Academia (public interest), Agriculture, Business-Industry-Power, Conservation and Resource Management, Environmental Advocacy, Real Estate and Development, and Wastewater-Non Municipal Water Supplier. The remainders are County government representatives, and Mayoral association representatives. Conspicuously absent is any group that could be considered able or willing to represent the golf industry.

### **What are the major concerns found by the writers of this plan?**

As with all water sources quality and quantity are a concern, with storm water being the third major water concern. The presence of Lake Michigan has always given surrounding communities a sense of complacency about water. There is a legal limit to the amount of water that can be extracted from Lake Michigan, however. The more pressing concerns center around areas that are dependent on deep bedrock aquifers, and the use of surface waters other than Lake Michigan as a supply. One of the major assertions of the plan is that water use surveys have shown that these deep aquifers are presently being depleted at a rate greater than the re-charge rate. The western counties have among the highest population growth rates, and are generally outside of the area

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served by Lake Michigan water. There is concern that water supply will eventually begin to stunt growth in these regions.

The areas of highest concern according to these authors are three municipalities in the area, first the Algonquin, Carpentersville, East Dundee, Lake in the Hills, Crystal Lake area, secondly the Fox River Corridor including South Elgin, St. Charles, Geneva, Batavia, and Woodstock, and lastly the Plano area.

### How does it address water use?

The planners are keenly aware of the interconnectedness of the elements of climate, water use, water conservation, land use, and design. They address plans for water conservation from all angles. For instance if shallow aquifers are pumped down water quality decreases, and in most cases surface water quantities diminish as well because they feed the shallow aquifers. This decrease in stream flow in turn diminishes the environmental quality of the surface water and has an impact on organisms within that environment, as well as human use of the resource. To correct these problems all of the factors must be addressed. The Water 2050 plan attempts to address them all.

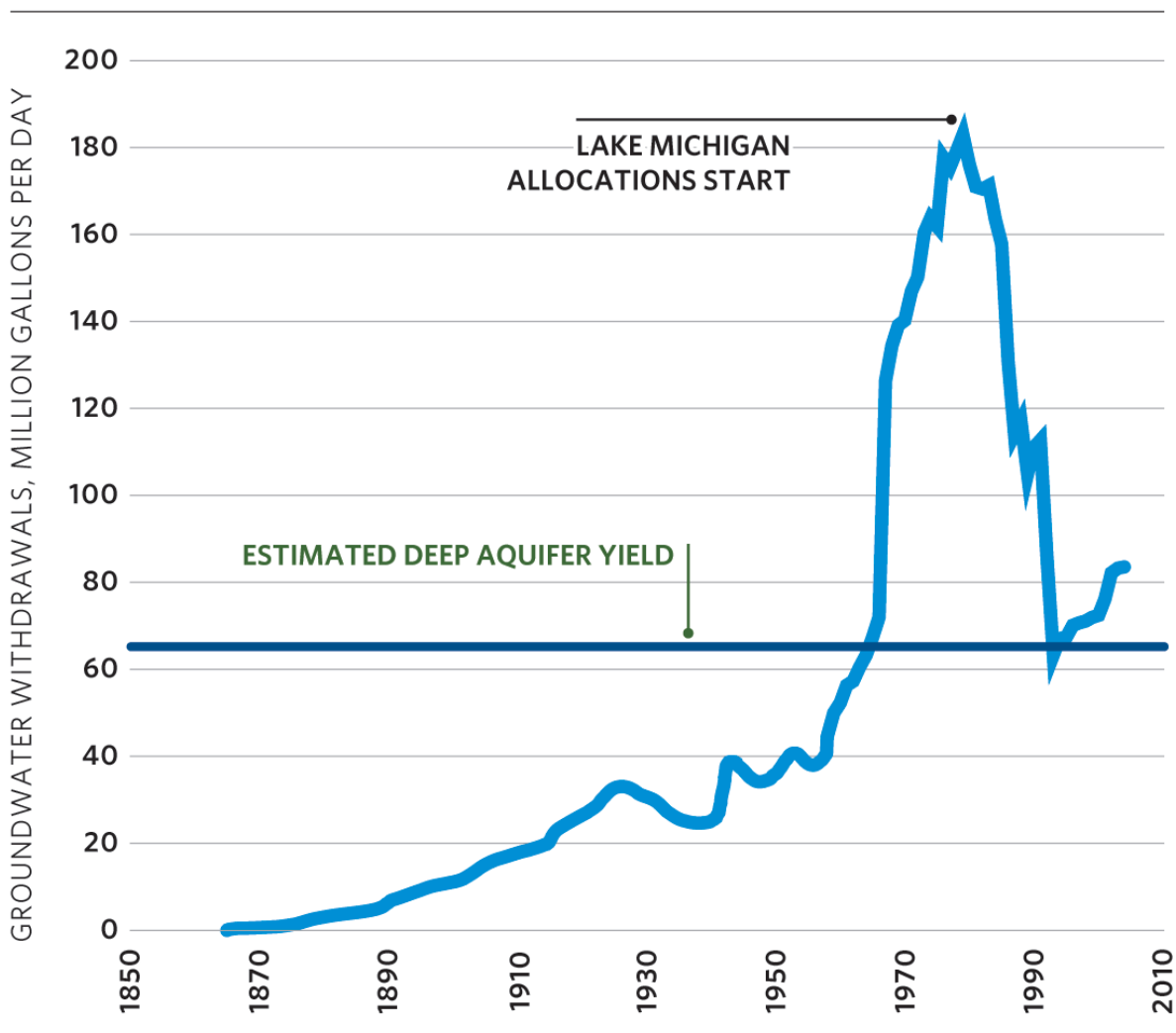
The planners attack water use primarily by conservation.

### What conservation measures are promoted by Water 2050?

There are a multitude of measures proposed. The majority is consumer oriented and includes more efficient water using appliances, and plumbing fixtures. Most of the water consumed in the area is by consumers, so a strong effort to reach the public makes good sense.

The planners start with public education on water conservation through efficient water using appliances. Full cost pricing of water, and escalating pricing with increased use are two ways pricing can be used to encourage conservation. They also advocate creating "Zero Water Footprint" development, which means designing buildings that either harvest or recycle an amount of water equal to what they use.

From an irrigation standpoint they advocate rain switches for all watering systems, as well as mandated irrigation maintenance to keep water from being wasted through leakage, and/or poor sprinkler adjustment. The goal is to create a system that is sustainable for the long term and will not allow water to become a factor that limits growth, or the quality of living in the area.



Source: Illinois State Water Survey

Graph of aquifer withdrawals vs. recharge

## **I have a well, nothing for me to worry about. Right?**

The Water Use Act of 1983 (WUA) created a system to monitor groundwater withdrawals and anticipate and mitigate shortages. Within this piece of legislation is a provision requiring landowners to notify the local Soil and Water Conservation District if a well is being constructed that is capable of withdrawing more than 100,000 gallons per 24 hour period (a "high capacity well"). Existing wells must register with the same local authorities. Lastly, the water use from such wells is to be reported to the Illinois State Water Survey Water Inventory Program. Users who use wells for Agricultural Irrigation have a 5 year exemption from January 1, 2010.

The Water 2050 plan calls for increased monitoring, and legislation already exists that will mandate such reporting in the near future.

## **How does the golf industry appear in the plan?**

It is encouraging that one of two references to the golf industry is made during the discussion of water reuse. Maple Meadows and Oak Meadows are specifically mentioned as opportunities to utilize waste water for golf course irrigation. The Addison water treatment plant is close to these golf courses and wastewater could be used to irrigate a large turf area with minimal infrastructure investment. A map representing potential irrigation demand for wastewater that is shown in the plan is basically a map of golf courses in the area. The planners clearly see golf courses as a potential opportunity.

## **What kind of data are they basing these recommendations on?**

There is a large amount of data available on water use in the region. Most of that data is collected by the Illinois State Water Survey which also encompasses the center for groundwater science. There are several other agencies involved as well. For a thorough listing of these agencies please reference the article "Water on the Web" in *On Course* August 2010.

## **How about sharing some other highlights of the study?**

The present rate of use is plus or minus 1480.3 million gallons of water used in the 7 county region. Of that amount the primary use for water is power generation with 74% of that water being used by power plants, 21% for the public supply, 3% to self supplied Industrial and commercial, 1% to self supplied domestic, and 1% to irrigation and agriculture. This emphasizes one overarching point of both GOTO 2040 and Water 2050, that power and water are inextricably linked. To move, clean, apply, and treat water it takes power, and the statistic above certainly shows that to make power takes water, lots of it. Energy conservation efforts automatically save water.

Of that water 69% comes from Lake Michigan, 17% from groundwater, and 14% from surface waters.

Eastern Lake County, Cook County, and much of Dupage County are supplied by Lake Michigan water. Kane County, Will County, McHenry County, and Kendall Counties are heavily reliant on surface waters and aquifers.

26% of the water presently diverted from Lake Michigan is used to create the flow of the Chicago River, and is lost to the Mississippi River. This water counts against the total diversion limit.

There is plenty of water available in Lake Michigan under the legal limit available to the state to supply the outlying counties with water; the problem is getting the water to where it is needed.

Weather is a huge factor in all of this. In 2005 for example the drought caused an increase in water demand of 8% across all sectors excluding thermoelectric power plants.

By improving plumbing fixtures, updating toilets, and employing conservation measures the commission estimates the region could save 20 gallons of water per person per day.

A complete breakdown of water use for golf irrigation is included in the document "Regional Water

Demand Scenarios for Northeastern Illinois: 2005-2050". It can be found at [www.cmap.illinois.gov/water-2050](http://www.cmap.illinois.gov/water-2050). **-OC**



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