

**Item #11:**  
**Village Trustee Acuna**  
**A. IDNR Lake Michigan Water Allocation**

**STATE OF ILLINOIS  
DEPARTMENT OF NATURAL RESOURCES**

<b>IN THE MATTER OF</b>	)	
	)	
<b>LAKE MICHIGAN WATER</b>	)	<b>No. LMO-09-08</b>
<b>ALLOCATION PROCEEDING</b>	)	
<b>FOR THE VILLAGE OF LONG GROVE,</b>	)	
<b>LAKE COUNTY</b>	)	

**FINAL ADMINISTRATIVE DECISION ON AN APPLICATION  
BY THE VILLAGE OF LONG GROVE  
FOR A LAKE MICHIGAN WATER ALLOCATION**

By the Illinois Department of Natural Resources:

**I. Legal Authority**

This matter comes before the Illinois Department of Natural Resources, Office of Water Resources, ("Department") pursuant to its statutory authority under the Level of Lake Michigan Act, 615 ILCS 50, and its regulatory requirements set forth in its administrative rules for the Allocation of Water from Lake Michigan, 17 Ill.Admin.Code 3730.

**II. Procedural Background**

The Village of Long Grove ("Applicant") has filed with the Illinois Department of Natural Resources, Office of Water Resources, ("Department") an application for a Lake Michigan Water Allocation Permit. Pre-hearing conferences were held on October 1, 2009 and January 14, 2010.

A Public Hearing was held at the James R. Thompson Center in Chicago commencing at 10:00 a.m. on March 12, 2010. Public notice was effectuated pursuant to Section 3730.206 of the Department's Administrative Rules for Allocation of Water from Lake Michigan. Appearing on behalf of the Department were Daniel Injerd, Manager of the Department's Lake Michigan

Management Section, and James Casey, Civil Engineer in the Department's Lake Michigan Management Section. Appearing on behalf of the Applicant were Victor Filippini, Jr. of Holland & Knight LLP, Village Attorney, Maria Rodriguez, Village President, Robert Block, Village Superintendent, David Lothspeich, Village Manager, Joseph Chiczewski, Village Engineer, and Francis Tiefert, P.E. of Applied Technologies, consulting engineer for Applicant. No other party intervened in this proceeding.

The documentary evidence presented in support of the Applicant's Petition, as well as the oral testimony presented by the Applicant at the March 12, 2010 Public Hearing (including certain oral testimony presented at the LMO-09-01 Public Hearing, LMO-09-01 Tr. 30-43), make up the evidentiary record of this proceeding. Applicant filed a Notice of the subject Lake Michigan Water Allocation Proceeding and accompanying Affidavit of Service as Exhibit 1, the testimony of Village President Maria Rodriguez as Exhibit 2, including a Village Ordinance establishing a Route 83 Water Special Service Area as Exhibit 2-A, a letter of support for Applicant's Lake Michigan water application from the Urban Land Institute as Exhibit 2-B, and a Village Ordinance establishing Building and Plumbing Codes as Exhibit 2-C, the testimony of Frank Tiefert as Exhibit 3, including the professional qualifications of Mr. Tiefert as Exhibit 3-A, the professional qualifications of Applied Technologies as Exhibit 3-B, Applicant's original application for Lake Michigan water dated June 2009 as Exhibit 3-C, a revised Table 5-1 as Exhibit 3-D, and a revised application form as Exhibit 3-E, the testimony of Joseph Chiczewski as Exhibit 4, including the professional qualifications of Chiczewski as Exhibit 4-A, the professional qualifications of ESI Consultants as Exhibit 4-B, an amendment to Applicant's Village-wide water system study as Exhibit 4-C, and a map of the Briarcrest subdivision as Exhibit 4-D, Resolutions in support of Village's application adopted by various members of the Planning Group as Exhibits 5-A through 5-J respectively and a signed revised application form as Exhibit 6. Additionally, documentation showing the publication of the Pre-Hearing Conference Notice in the Chicago Tribune and Daily Herald were admitted, marked Exhibits A and B respectively. A court reporter's transcript was prepared memorializing the testimony of the Applicant at the March 12, 2010 Public Hearing. Finally, pursuant to Section 3730.211(a) (5) of the Department's Administrative Rules for Allocation of Water from Lake Michigan, the record of this proceeding was reopened by the Hearing Officer on December 9, 2010,

for the purpose of taking official notice of fact. (See Notice of Intent of Hearing Officer to Take Official Notice of Certain Facts.) No party objected to the taking of such official notice. This evidentiary record is that upon which the Department bases its findings and conclusions, and that upon which this Order is entered.

### III. Issue Presented

The first issue presented in this proceeding is whether the Applicant can be allowed any Lake Michigan Water Allocation.

The second issue presented in this proceeding is whether the Applicant should be issued its particular requested Lake Michigan Water Allocation.

### IV. Evidentiary Record

There is sufficient Lake Michigan water available to meet the request of the Applicant and the requests of all of the applicants intending to create a Municipal Joint Action Water Agency (Lake County, Village of Antioch, Village of Fox Lake, Village of Hawthorne Woods, Village of Lake Villa, Village of Lake Zurich, Village of Lindenhurst, Village of Long Grove, Village of Volo and Village of Wauconda) consistent with Section 3 of the Level of Lake Michigan Act, 615 ILCS 50/3. (Notice of Intent of Hearing Officer to Take Official Notice of Certain Facts.)

Applicant has applied for a Lake Michigan Water Allocation Permit for purposes of providing water for the Applicant's proposed new municipal water system. (Ex. 3, p. 2-1; Ex. 4, pp. 1-4; Ex. 4-C, Ex. 1 and Ex. 2 maps) Applicant plans to pursue its new municipal water system in phases, the first of which to be completed by 2015 and the second to occur over time with total completion by 2030. (Tr. 30-36; Ex. 2-A; Ex. 4, pp. 1-4; Ex. 4-C) Applicant's proposed start date for a Lake Michigan Water Allocation is 2015 going out to the Department's current 2030 permitting horizon. (Tr. 26-27) Applicant is pursuing Lake Michigan water jointly as a part of the following group of northeastern Illinois local governments making up the Northern Lake County Lake Michigan Water Planning Group: the Village of Antioch, Village of Fox Lake, Lake County, Village of Lake Villa, Village of Lake Zurich, Village of Lindenhurst, Village of Long Grove, Village of Volo and the Village of Wauconda. (Ex. 2, p. 2; Ex. 3, p. 1-2; Ex. 3-C, pp. 3-1 – 3-3; Ex. 4, p. 4;

Exs. 5-A – 5-J)

Applicant's population is currently supplied by 1,800 private shallow aquifer wells (590,000 gallons per day usage) and 10 deep aquifer wells (250,000 gallons per day usage), with Applicant having plans to immediately develop a deep aquifer well for purposes of its new proposed water system. (Ex. 3, p. 7-1; Ex. 4, pp. 1-2) Applicant testified that it would cease pumpage from its deep aquifer wells upon receiving Lake Michigan water. (Tr. 38-39)

Applicant believes that it should be classified as a Category I-A applicant because its primary water needs are residential, commercial, or industrial, and because the long view makes clear that using Lake Michigan water is the most economical source of supply. (Ex. 2, p. 2) Applicant, at the same time, believes that its application would meet the criteria for a Category II-B Applicant because a Lake Michigan water allocation will reduce the amount of water withdrawn from the deep aquifer. (*id.*) Applicant provided a cost evaluation study for two alternative sources of water supply – Lake Michigan Water Alternative and Ground Water Alternative. (Ex. 3-C, Section 6) The Lake Michigan Water Alternative includes the Applicant's share of the cost of the multi-community water supply system and the costs for improvements to Applicant's local water distribution system. (*id.*) The Ground Water Alternative includes only local water distribution costs such as new wells, storage and a treatment plant to produce Lake Michigan quality equivalent water. (*id.*) For purposes of groundwater treatment, Applicant projected use of an iron filter for 100% of the water, a Reverse Osmosis membrane system to remove hardness and radium for 70% of the water and chlorine to disinfect all water. (*id.*) Applicant's cost evaluation first used present net worth to compare the two alternatives, concluding the total present net worth for the Lake Michigan Water Alternative to be \$41,125,000 and for the Ground Water Alternative to be \$42,115,000. (*id.*) Applicant's cost evaluation also used estimated water rates to compare the two alternatives, concluding the estimated water rate for the Lake Michigan Water Alternative to be \$10.42 per 1,000 gallons and for the Ground Water Alternative to be \$10.36 per 1,000 gallons. (*id.*) Regarding the costs used in the foregoing calculations, Peter Kolb, Lake County Director of Public Works, testified that, based on his knowledge of the ongoing negotiations between the Lake County Public Water District and the Northern Lake County Lake Michigan Water Planning Group, such cost amounts are appropriate. (LMO-09-01 Public Hearing Tr. 30-35) Applicant's consulting engineer stated that the differences

in the cost analyses were very small, considering the level of accuracy involved in this planning level estimate the costs of the two systems can be considered the same, and thus the cost analysis does not identify a preferred alternative. (Ex. 3-C, Section 6) Applicant's Village President testified that the cost-effectiveness of a ground water system and a Lake Michigan-supplied system were roughly equivalent. (Ex. 2, p. 8)

Applicant provided information on its projected future water demand. Applicant forecasts its 2010 population expected to be connected to its new water system to be 500 increasing to 1,079 in 2015 and increasing to Applicant's total population of 10,846 in 2030. (Ex. 3-D; Ex. 6, p. 6) Applicant's projected 2030 population figure is consistent with the current Chicago Metropolitan Agency for Planning forecast. (Tr. 38; Ex. 3-C, p. 5-1) Applicant projected its future water demand (residential, commercial, industrial and public uses) as a function of its future population by multiplying yearly population projections by average per capita per day water demand. (Ex. 3-C, p. 5-1) Applicant's per capita per day water demand was originally projected at 100 gallons per capita per day ("gpcpd"), based on an IEPA requirement for new water systems with no historic records. (*id.*) After further consideration, Applicant lowered its proposed daily water demand to begin at 90 gpcpd in 2010, decrease to 89 gpcpd in 2015 and further decrease to 85 gpcpd by 2030. (Ex. 3-D) Applicant also reduced the estimated population expected to be connected to the new water system in its early years. (*id.*) Using the foregoing per capita per day water demand approach, Applicant's revised projected water demand begins at 0.045 million gallons per day ("mgd") in 2010, increases to 0.096 mgd in 2015 and further increases to 0.920 mgd in 2030. (*id.*) The foregoing water demand projections are a reduction from Applicant's original projections. (See Ex. 3-C, p. 5-1)

As Applicant has no current water system, Applicant has no information regarding unaccounted for flow relative to the Department's 8% regulatory unaccounted for flow standard. Applicant provided an ordinance regarding its building code and plumbing code. (Ex. 2, p. 9-10; Ex. 2-C)

## V. Findings and Conclusions

The first issue presented is whether the Applicant can be allowed any Lake Michigan Water Allocation. The determination of this issue is based on whether Illinois' current total Lake Michigan

water diversion amounts allow for sufficient potential additional water diversion to grant Applicant's requested diversion amount. The record indicates that there is sufficient Lake Michigan water available to meet the request of the Applicant and the requests of all of the applicants intending to create a Municipal Joint Action Water Agency (Lake County, Village of Antioch, Village of Fox Lake, Village of Hawthorne Woods, Village of Lake Villa, Village of Lake Zurich, Village of Lindenhurst, Village of Long Grove, Village of Volo and Village of Wauconda) consistent with Section 3 of the Level of Lake Michigan Act, 615 ILCS 50/3. Therefore, the Department finds that Illinois' total current Lake Michigan water diversion amounts allow for sufficient potential additional water diversion to grant Applicant's requested diversion amount.

The second issue presented in this proceeding is whether the Applicant should be issued its particular requested Lake Michigan Water Allocation. The Department allocates Lake Michigan water pursuant to categories identified in Section 3730.303 of the Department's Lake Michigan Water Allocation Rules. Category IA is given the highest priority. To qualify for inclusion in Category IA, an applicant must demonstrate that Lake Michigan water is its most economical source of supply. Applicant has requested consideration as a Category IA applicant.

With respect to this issue, Applicant completed a cost evaluation for two alternative sources of water supply potentially available to it – Lake Michigan Water Alternative and Ground Water Alternative. The Department finds that the comparison of the Lake Michigan Water Alternative to the Ground Water Alternative is sufficient for determining the most economical source of supply. Pursuant to its cost evaluation study, Applicant concluded the total present net worth for the Lake Michigan Water Alternative to be \$41,125,000 and for the Ground Water Alternative to be \$42,115,000. Applicant concluded the estimated water rate for the Lake Michigan Water Alternative to be \$10.42 per 1,000 gallons and for the Ground Water Alternative to be \$10.36 per 1,000 gallons. The Department finds that Applicant's cost evaluation study is sufficient in methodology and in identifying reasonable costs for use therein. However, as a result of said study, Applicant determined that the cost-effectiveness of a ground water system and a Lake Michigan-supplied system were roughly equivalent. Accordingly, the Department concludes that Applicant has not sufficiently demonstrated that Lake Michigan is the most economical source of supply and, therefore, does not meet the requirements of Category IA.

Alternatively, per the Department's Lake Michigan Water Allocation Rules, Applicant may seek an allocation under Category IIB, which is given the second highest priority. To qualify for inclusion in Category IIB, an applicant must demonstrate that its Lake Michigan water would reduce regional use of the deep aquifer.

With respect to this issue, Applicant's population is currently supplied by 1,800 private shallow aquifer wells (590,000 gallons per day usage) and 10 deep aquifer wells (250,000 gallons per day usage), with Applicant having plans to immediately develop a deep aquifer well for purposes of its new proposed water system. Applicant testified that it would cease pumpage from its deep aquifer wells upon receiving Lake Michigan water. Removing Applicant's usage of said deep aquifer wells would reduce regional use of the deep aquifer. Therefore, the Department concludes that Applicant meets the requirements of Category IIB.

The next issue in the Department's analysis becomes determining the amount of an appropriate water allocation to Applicant. Applicant projected its future water demand as a function of its future population by multiplying yearly population projections by average per capita per day water demand. The Department finds that this is an acceptable methodology for determining future water demand. Applicant forecasts its 2010 water system population to be 500 increasing to 10,846 in 2030, which is consistent with the current Chicago Metropolitan Agency for Planning forecast. The Department finds Applicant's population projection acceptable.

Applicant next proposes that its per capita per day water demand begin at 90 gallons per capita per day ("gpcpd") in 2010 decreasing to 85 gpcpd by 2030. As Applicant has no history of past water usage to base its projected starting point upon and as the 2010 proposed 90 gpcpd starting point is lower than Applicant's original 100 gpcpd starting point, the Department finds that Applicant's proposed 90 gallons per capita per day starting point is acceptable at this time. Additionally, the Department finds that Applicant's projected decreases in per capita water demand are not unreasonable and may be used to determine Applicant's future water demand. Using the foregoing per capita per day water demand approach, Applicant's projected water demand begins at 0.045 million gallons per day ("mgd") in 2010, increases to 0.096 mgd in 2015 and further increases to 0.920 mgd in 2030. The Department agrees with Applicant's proposed per capita per day water demand 2010 starting point, Applicant's projected decreases in per capita water demand and,

therefore, also with Applicant's projected water demand based on same.

As per Department policy, if Applicant's water use projections are determined in the future to be inaccurate, the Department will adjust Applicant's water allocation amount to reflect circumstances as accurately as possible.

Finally, the Department finds that Applicant has or will appropriately enact necessary conservation ordinances and is or will be in compliance with the Department's regulatory requirement for unaccounted for flow.

Based upon the foregoing, the Department concludes that a Lake Michigan Water Allocation Permit should be issued in the amounts and under the conditions of the following Order.

**ORDER**

The Village of Long Grove is hereby issued a Lake Michigan Water Allocation Permit in the amounts as set forth below. All allocation quantities are shown in million gallons per day (mgd). As a Lake Michigan Water Allocation Permittee, the Village of Long Grove is required to comply with the Department's Administrative Rules for the Allocation of Water from Lake Michigan. The Village of Long Grove will specifically report to the Department regarding its compliance with the water conservation practices mandated by Section 3703.307 of the Rules within 90 days of this Order. The Village of Long Grove will also specifically complete all reporting requirements mandated by Section 3730.309 of the Rules.

<b><u>YEAR</u></b>	<b><u>ALLOCATION</u></b>
2015	0.096
2016	0.111
2017	0.129
2018	0.150
2019	0.175
2020	0.203
2021	0.237
2022	0.275
2023	0.320
2024	0.372
2025	0.433
2026	0.503
2027	0.585
2028	0.680
2029	0.791
2030	0.920

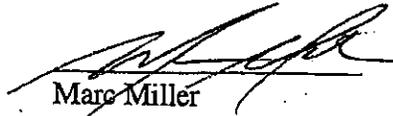
This Decision on an application by the Village of Long Grove for a Lake Michigan Water Allocation constitutes the Illinois Department of Natural Resources' final administrative decision within the meaning of the Administrative Review Act and shall be effective as of the date set forth below.

RECOMMENDED:

Robert G. Mool

Robert G. Mool  
Hearing Officer

APPROVED:



Marc Miller  
Director  
Illinois Department of Natural Resources

Dated this 14th day of January 2011.

PROOF OF SERVICE

I hereby certify that the foregoing DECISION was served by mailing a copy, postage prepaid, to the following on this, the 19<sup>th</sup> day of January, 2011, to:

Dan Injerd and Jim Casey  
Illinois Department of Natural Resources  
Office of Water Resources  
Michael Blandic Bldg.  
160 N. LaSalle St., Ste. S-700  
Chicago, IL 60601

Victor Filippini, Jr.  
Holland & Knight LLP  
131 South Dearborn Street  
Chicago, IL 60603

Robert G. Mool  
Robert G. Mool  
Illinois Department of Natural Resources

2. Summary of events since the last meeting in July:

Lindenhurst, Volo and Lake County adopted the updated Memorandum of Understanding (MOU). Both Volo and Lake County have sent in their money.

There were comments on the MOU from both Lake County Public Water District and Wauconda. These comments are being incorporated. Lindenhurst, Volo and the County may need to re-adopt the MOU so that all parties are in agreement on its terms. The version that should be the final MOU will be circulated to all members.

Many of the communities are waiting to receive their allocations from the IDNR before adopting the MOU. This can be addressed by including in the resolution language that it is subject to receipt of allocations.

3. Things may happen quickly when the allocations are received, and the Group needs to be positioned to proceed. Membership needs to be clearly defined. Receipt of the adopted MOU and funding will define who is in the group going forward. If a non-member wants to be involved in meetings after that point, they should let the group know so that a decision can be made.
4. Financial support of the group is planned at \$50,000 per member, which is payable in installments of 50%, 25% and 25%. The payment dates in the MOU will need to be revised.
5. A notice from the IDNR was received by each of the members. The deadline for a response to the notice is December 23, 2010. The content of the notice seems to be largely procedural, to assure that the record for each of the applications is complete. Barbara Adams passed out a suggested response and related law and regulations. Comments were provided by various attendees and a new version was circulated after the meeting. Victor Filippini noted that he believed that board action was not necessary for a response, and that the attorneys for each member could submit a response to the notice.
6. A sample press release was handed out and comments were received. A new version incorporating the comments will be circulated. The intent is to be prepared for the allocation announcements. Each water allocation applicant should have a designee for comments to the press.
7. Peter Kolb and Dan Injerd were part of a panel discussion on the impact of water on land development at a meeting of Lambda-Alpha (the land economics honor society).
8. Peter Kolb attended a recent Urban Land Institute meeting. The Urban Land Institute indicated that this Lake Michigan water project is one of 10 projects that they are supporting. They are willing to assist in any presentations to the Village boards as an independent entity.
9. Phil Perna summarized recent Central Lake County Joint Action Water Agency (CLCJAWA) considerations. The executive committee established a sub-committee to consider their ability to supply water to our North-West Lake County group. They hired CDM to study the issue.

CDM presented a draft report to the executive committee on November 29<sup>th</sup>. Copies of the report are not available for public review at this time because the report is in draft form and has not yet been endorsed by the CLCJAWA Board of Directors. The draft report notes that the CLCJAWA Lake Bluff water plant has a special use zoning that limits its expansion to serve the North-West group. However, CLCJAWA has an opportunity to purchase the North Chicago water plant. The North Chicago plant can be upgraded to provide the necessary capacity. The estimated cost to upgrade the North Chicago plant and construct 54 miles of water transmission mains to the North-West group is \$285 million.

The CLCJAWA discussions did not address financing for an expansion to serve the North-West group. They also did not discuss membership issues. The next step is for the CLCJAWA board to decide if they will continue to explore this opportunity.

The CLCJAWA cost structure presently includes a rate of \$2.40/1,000 gallons, and a \$3,000 connection fee.

10. Peter Kolb reported a preliminary conversation with Mayor Robert Sabonjian, Waukegan. The City of Waukegan may be interested in providing water to the North-West group. Per group discussion, Peter will let Waukegan know that the group is interested in knowing more and that Waukegan should fund and present a study, similar to the CLCJAWA study. Peter will share demand figures and possible connection points with Waukegan.
11. It was suggested that the North-West group should have one or two spokespersons. Mayor Susan Lahr, Lindenhurst, and Mayor Mark Knigge, Wauconda, were suggested.
12. The next Planning Group meeting is planned for 10:00 AM, Thursday, February 3, 2011, at the Lake County Public Works Office.