



EST. 1960

# Willowbrook

7760 Quincy Street  
Willowbrook, IL 60527-5594

Phone: (630) 323-8215 Fax: (630) 323-0787 [www.willowbrookil.org](http://www.willowbrookil.org)

## Mayor

Frank A. Trilla

## Village Clerk

Leroy R. Hansen

## Village Trustees

Dennis Baker

Sue Berglund

Umberto Davi

Terrence Kelly

Michael Mistele

Paul Oggerino

## Village Administrator

Tim Halik

## Chief of Police

Mark Shelton



Proud Member of the  
Illinois Route 66 Scenic Byway

## AGENDA

REGULAR MEETING OF THE MUNICIPAL SERVICES COMMITTEE TO BE HELD ON MONDAY, OCTOBER 14, 2013, AT 6:00 P.M. AT THE VILLAGE HALL, 7760 QUINCY STREET, IN THE VILLAGE OF WILLOWBROOK, DUPAGE COUNTY, ILLINOIS.

1. CALL TO ORDER
2. ROLL CALL
3. APPROVAL OF MINUTES – September 9, 2013 Regular Meeting of the Municipal Services Committee
4. DISCUSSION – Village Hall Fuel Tanks:  
Cathodic Protection Failure
5. DISCUSSION – Water Tank Coating Analysis Reports
6. DISCUSSION – HVAC Maintenance Contract Proposals
7. REPORT – Municipal Services Department:
  - a. September Monthly Permit Activity Report
  - b. August & September Water System Pumpage Reports
  - c. August & September Monthly Mosquito Abatement Reports
8. VISITOR'S BUSINESS  
(Public comment is limited to three minutes per person)
9. COMMUNICATIONS
10. ADJOURNMENT

MINUTES OF THE REGULAR MEETING OF THE MUNICIPAL SERVICES COMMITTEE OF THE VILLAGE OF WILLOWBROOK HELD ON MONDAY, SEPTEMBER 9, 2013 IN THE VILLAGE HALL, 7760 QUINCY STREET, IN THE VILLAGE OF WILLOWBROOK, DUPAGE COUNTY, ILLINOIS

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1. CALL TO ORDER

Chairman Mistele called the meeting to order at 6:01 PM.

2. ROLL CALL

Those present at roll call were Chairman Mike Mistele, Trustee Suzanne Berglund, and Administrator Tim Halik. Absent: None.

3. APPROVAL OF MINUTES

After review of the draft minutes from the August 12, 2013 Regular Meeting of the Municipal Services Committee, Chairman Mistele made a motion to approve the minutes as presented. Trustee Berglund seconded the motion. Motion carried.

4. DISCUSSION – Village-wide Fall Brush Collection Program

Administrator Halik advised the Committee that this past Spring, the Village's regular tree maintenance contractor, Mario's Tree Service, completed the Village-wide Spring brush collection program. The program included curb-side collection of piled brush throughout town. Afterwards, the brush was separately ground at the Village public works facility to produce a high-quality mulch for use within the parks, and to provide to residents. Halik advised that the program was completed on-time without incident. Staff again solicited a proposal from Mario's, this time to complete the 2013 Village-wide Fall Brush Collection Program. This program will consist of a curb-side chipping program, with the resulting chips hauled away, since we have no current need for them. Halik shared that Mario offered a proposal of \$105/hour/crew to perform this program. This represents the same hourly rate that Mario offered in 2012. Therefore, the estimated cost of the Fall program would be \$8,400 when including two crews working 40 hours each. Halik advised that there is \$10,650 remaining in the FY 2013/14 Budget for this program. Therefore, the Village should be able to complete both the Spring and Fall program this year for approximately \$2,250 under budget. Halik advised that staff would recommend that the proposal submitted by Mario's Tree Service and Landscaping in the amount of \$105.00/hr. per chipping crew be accepted to perform the Village-wide Fall Brush Collection Program. If the Committee concurs, a resolution accepting the proposal will be placed on the agenda for the September 23rd regular meeting of the Village Board. The Fall Brush Program would be scheduled to occur the week of October 14th thru the 18<sup>th</sup>, and postcard reminders would be mailed to residents. Chairman Mistele agreed and recommended that the item be placed on the consent agenda for the next Village Board meeting.

5. DISCUSSION – Proposed Local Amendments to the DuPage County Stormwater Ordinance

Administrator Halik advised the Committee that an update to the DuPage County Countywide Stormwater and Flood Plain Ordinance was completed and approved by the Stormwater Management Committee and the County Board with an effective date of April 23, 2013. The Stormwater Ordinance text amendments corrected scrivener's errors within

the April 24, 2012 edition and otherwise added clarification and addressed organizational and operational issues left unresolved by the last comprehensive text amendments. The text amendments further included revisions to the Post Construction Best Management Practices and Wetlands Articles in order to remain competitive in maintaining/attracting businesses while preserving the high standard of flood control and environmental protection for County residents. Halik advised that all DuPage County municipalities must now adopt the new Ordinance, along with any local amendments they wish to add. Local amendments may be more restrictive than the County Ordinance, but not less restrictive. Staff requested that the Village Consulting Engineer, Dan Lynch from Christopher B. Burke Engineering, Ltd., review the changes to the County Ordinance and draft necessary local amendments to adequately address local issues in the Willowbrook area. Halik stated that documents within the Committee packet include; A copy of DuPage County Ordinance amending the DuPage County Stormwater Ordinance, a memorandum from Dan Lynch at CBBEL providing a brief summary of the changes to the Ordinance, and draft local amendments to the Ordinance for Willowbrook's consideration. Halik shared that a copy of the new DuPage County Countywide Stormwater and Flood Plain Ordinance/April 2013 was not included within the packet, since it is 155 pages in length. However, Halik did bring a copy to the Committee meeting. Chairman Mistele asked Administrator Halik to summarize the list of proposed amendments. The Committee recommended approval of the proposed local amendments. Halik advised that the amendatory ordinance would be considered at the next Village Board meeting.

6. DISCUSSION – Water Distribution System Leak Survey

Administrator Halik advised the Committee that municipal water systems conduct leaks surveys of the water distribution system as part of ongoing water conservation efforts, to guard against loss of revenue, and to ensure that unaccounted for flow remains low within our annual water inventory report submitted to the state of Illinois. Although the Village's total unaccounted for flow to net annual pumpage remains low at 2.41%, based on our 2012 ISWS Inventory, staff would recommend that we complete a system-wide leak listening survey to identify any leaks that may exist within the water distribution system. Halik stated that this type of survey has not been performed in recent years and it would be worthwhile to complete, to ensure our unaccounted for flow remains low. Halik shared that M.E. Simpson Co., Inc. is the leading firm that completes this type of work in our area. Therefore, staff contacted M.E. Simpson to obtain a proposal to complete this work this Fall. M.E. Simpson can complete the project for a total fee of \$6,976. Halik stated that although the F.Y. 2013/14 Budget did not include funding for this specific project, there is funding available within the Water Fund to conduct a leak survey this Fall. The Committee concurred with staff's recommendation. Halik advised that this item will be considered by the Village Board at their next meeting.

7. DISCUSSION – Architectural Space Planning Services – Williams Architects

Administrator Halik advised that Williams Architects was originally commissioned by the Village in 2002 to conduct a Space Needs Study, which formed the basis of the Village's Municipal Facilities Master Plan adopted by the Board in January 2004. Williams Architects also designed our public works facility, which was completed in 2009 and subsequently received a Project of the Year Award from the Chicago Metro Chapter of the American Public Works Association. Halik reminded the Committee that the results of the feasibility analysis revealed that re-creating the previously envisioned municipal facilities campus concept around the existing Village Hall building could satisfy our long-term space needs. Since acquisition of the 835 Midway property, staff has met with Mark Bushhouse from Williams Architects to begin developing a plan to move the Village Hall functions to the newly acquired building, and to renovate the existing municipal facility for police use. Based on our discussions, along with recommendations from Mr. Bushhouse, a proposal

was submitted by Williams Architects for professional services relating to this scope of work. Halik stated that the proposal includes updating the previous Village Space Needs Study and the development of conceptual building /site alteration designs for consideration, including projected budgetary costs based on those conceptual designs. This scope of work would be provided for a fee of \$12,500. Once conceptual designs are agreed upon, the development of construction plans for project bidding purposes would be completed separately at additional expense. Halik advised that sufficient funds are included in the FY 2013/14 budget, within the L.A.F.E.R fund, for this expenditure. Chairman Mistele agreed and further recommended that as we begin the space needs update process we should re-consider the police booking room area program. Chairman Mistele stated that he believes there are too many cells now, and he recalled that Mark Bushhouse had more cells programmed as a need. Chairman Mistele also recommended that we focus on high security areas, including sally ports. Chairman Mistele also requested that he have an opportunity to review the updated space needs plan prior to its acceptance. Lastly, Chairman Mistele suggested that we consider the location of the main entrance to the new Village campus, particularly whether it should be on Midway Drive or Quincy Street. Halik stated that he will incorporate all Chairman Mistele's comments as we move forward in this planning project.

8. REPORT – Municipal Services Department

- a. Administrator Halik reviewed the monthly permit activity report for August showing that we have taken in about \$18,000 in permit revenue for the month. Halik advised that in the four months into fiscal year 2013/14, we have taken in about 71% of our anticipated FY2013/14 budgeted revenue.
- b. Administrator Halik shared the July 2013 Mosquito Status Report from Clarke. The report shows that on only one occasion, July 17<sup>th</sup>, did the trap counts exceed the annoyance level of thirty females per count. Halik further indicated that the low overnight temperatures we've been experiencing as of late greatly diminishes mosquito activity.

9. VISITOR'S BUSINESS

(none)

10. COMMUNICATIONS

(none)

11. ADJOURNMENT

Motion to adjourn was made by Chairman Mistele and seconded by Trustee Berglund. The meeting was adjourned at 6:22 PM.

(Minutes transcribed by: Tim Halik, 9/30/13)

**MUNICIPAL SERVICES COMMITTEE MEETING**

**AGENDA ITEM SUMMARY SHEET**

**AGENDA ITEM DESCRIPTION**

**DISCUSSION – VILLAGE HALL FUEL TANKS:  
CATHODIC PROTECTION FAILURE**

**COMMITTEE REVIEW**

- Finance/Administration
- Municipal Services
- Public Safety

**Meeting Date:**

October 14, 2013

- Discussion
- Seeking Feedback
- Regular Report
- Approval of Staff Recommendation (for consideration by Village Board at a later date)
- Approval of Staff Recommendation (for immediate consideration by Village Board)
- Report/documents requested by Committee

**BACKGROUND**

The fuel pumps at the Village Hall include two (2) underground storage tanks (USTs): a 2,000 gallon regular fuel tank, and a 2,000 diesel fuel tank. Both tanks are fiberglass reinforced plastic clad steel tanks. The steel tanks are protected from corrosion by an impressed current type cathodic protection system. This system includes sacrificial anodes which are placed underground. The anodes are designed to corrode before the corrosive process attacks the steel tanks. Each year, in accordance with the Illinois Office of the State Fire Marshall (OSFM) requirements, the protection system must be tested for proper operation. The test results are also sent to IRMA in order to maintain our supplemental insurance policy on the USTs.

On September 18, 2013, our UST contractor, Protanic, Inc., performed their annual testing inspection of the underground fuel tanks on the Village Hall property. The tests on both tanks failed. It is unknown at this time whether there is an underground break in the cabling, whether the sacrificial anodes are severely corroded and needing replacement, or whether another component, called a rectifier, is damaged. Per law, the OSFM was notified of the failed test results. They have given us sixty (60) days to make the necessary repairs and certify through testing that the system is working properly, or the tanks must be taken out of service.

**REQUEST FOR FEEDBACK**

Staff asked our regular UST contractor to provide a repair proposal (attached). The proposal includes the excavation of the system to make the anticipated repairs and replacement of up to three (3) anodes for a cost of \$8,900. If after excavation it is discovered that the needed repairs are more extensive, there may be extra charges. In order to ensure a competitive price was obtained from Protanic for this repair, we also solicited a proposal from a second contractor for the same scope of work. The second proposal was higher.

**STAFF RECOMMENDATION**

Staff would recommend that the proposal obtained from Protanic, Inc. to excavate and repair the system be accepted. Once the repairs are made, and the system is retested to certify its proper operation, we must notify the OSFM in order to remove the current violation on record. Although this work was not anticipated and budgeted for this year, there are funds available in the General Fund for this expenditure.

**Protanic, Inc. Professional Tank Investigation Corp.**

658 N. Progress Drive, P.O. Box 80265, Saukville, WI 53080

Phone 1-262-268-1150 FAX 1-262-268-1170

[www.protaninc.com](http://www.protaninc.com)

**REPAIR REQUEST**

September 27, 2013

Village of Willowbrook  
Attn: Anthony Witt  
7760 Quincy Street  
Willowbrook, IL 60527

Re: **Cathodic Protection Failure**  
September 18, 2013  
Village of Willowbrook  
7760 Quincy Street  
Willowbrook, Illinois

Dear Mr. Witt,

While performing testing procedures at the above mentioned location, the Protanic test technician reported the following:

1. The cathodic protection inspection readings recorded for the Regular and Diesel Fuel are below the minimum requirements of a negative polarization of at least  $-0.850$  millivolts
2. A cathodic protection upgrade is necessary as soon as possible in order to ensure cathodic protection and the meeting of compliance requirements.
3. Please contact our office at your earliest convenience for a quote on your cathodic protection upgrade.

Sincerely,



Frank Grebas  
Vice President

FG/mmh

**Protanic Inc**  
 Phone: 262-268-1150  
 Fax: 262-268-1170  
 P.O. Box 80265  
 Saukville, WI 53080



**Quote**  
 No.: **2259**  
 Date: **9/30/2013**

Prepared for:

Prepared by: Andrew Bublitz  
 Account No.: 2331

Village of Willowbrook  
 7760 Quincy St.  
 Willowbrook, IL 60527 U.S.A.

Quantity	Item ID	Description	UOM	Sell	Total
<p><b>Per your request this is the proposal for the Cathodic Repair at Village of Willowbrook.</b>  <b>We are proposing to trace the cabling looking for breaks and repairing them, and if necessary replacing up to three (3) Anodes.</b>  <b>The proposal does not include the Rectifier which if it is damaged, would be extra. If we fix the cable breaks and the system comes on, we will discuss with you whether we should replace any anodes not knowing the age of the system.</b></p>					
1.00	Contractor CP - Repair	Permitting	HR	\$464.00	\$464.00
1.00	Contractor CP - Repair	Anodes and Backfill	HR	\$2,436.00	\$2,436.00
1.00	Contractor CP - Repair	Miscellaneous Materials (Wire, Splice Kit)	HR	\$348.00	\$348.00
1.00	Contractor CP - Repair	Construction & Drilling	HR	\$1,798.00	\$1,798.00
1.00	Contractor CP - Repair	Technicians	HR	\$3,352.00	\$3,352.00
1.00	Contractor CP - Repair	Mobilization	HR	\$502.00	\$502.00

**Your Price: \$8,900.00**

**Total: \$8,900.00**

Prices are firm until 10/14/2013 Terms:

**Quoted by:** Andrew Bublitz, andrewb@protaninc.com

**Date:** 9/30/2013

Terms: 50% due with signed Quote. Remaining balance due day construction starts.

**Accepted by:** \_\_\_\_\_

**Date:** \_\_\_\_\_



OFFICE OF THE STATE FIRE MARSHAL  
Division of Petroleum & Chemical Safety  
www.sfm.illinois.gov

**Bruce Billman**  
Storage Tank Safety Specialist

Illinois State Fire Marshal  
Petroleum and Chemical Safety  
1035 Stevenson Drive  
Springfield IL 62703

Facility #	2003593
Date	9/23/2013
Notification Form Received	Y N

1035 Stevenson Drive  
Springfield, IL 62703-4259  
Office: (217) 785-1020

TDD: (217) 785-0969  
Cell: (217) 494-4918  
Email: Bruce.Billman@illinois.gov

**STATUS OF VIOLATION (UST)**  
Status: Active

**OWNER OF TANKS**

Village of Willowbrook  
Name  
7760 Quincy Rd  
Street Address  
Willowbrook IL 60527  
City State Zip  
Bryon Vana 630-920-2237  
Contact Person Phone

**FACILITY**

Village of Willowbrook  
Name  
7760 Quincy Rd  
Street Address  
Willowbrook IL 60527 Du Page  
City State Zip County  
Anthony Witt 630-920-2237  
Contact Person Phone

Violations of 41 Ill. Adm Code 174, 175, 176 and 177 of the Office of the Illinois State Fire Marshal and 40 CFR Parts 280 of the Federal Register requirements are hereby called to your attention. The violations found and corrections to be made have been identified below or stated in the remarks section. Any repairs, modifications or alterations to the tank system must be performed in compliance with OSFM rules and by a contractor licensed by this office. You are allowed a 60-day window to come into compliance effective from the date of this notice. If compliance is not made by **11/22/2013**, your underground storage tanks system will be **RED TAGGED**. You are prohibited from having product placed into the UST system when a **RED TAG** exists. Contact the Storage Tank Safety Specialist below when said violations are corrected and if you have any questions.

**RED TAGS WILL NOT BE REMOVED UNTIL ALL DEFICIENCIES HAVE BEEN CORRECTED.**

**TANK SYSTEM INFORMATION**

Tank	Capacity	Product	Status
1	2,000	Gasoline	Currently in use
2	2,000	Diesel Fuel	Currently in use

**SECTION A. TANK RELEASE DETECTION**

**SECTION B. PIPING RELEASE DETECTION**

**SECTION C. SPILL PREVENTION**

**SECTION D. OVERFILL PREVENTION**

**SECTION E. TANK CORROSION PROTECTION**

Tank ID# 1 2

**Violation Text:**

Annual tank impressed current system appears not to be operational.

**Remarks:**

Protanic failed tank impressed current 9/18/13, repair or replace.

**SECTION F. PIPING CORROSION PROTECTION**

**SECTION G. DISPENSERS AND HOSES**

**SECTION H. MISCELLANEOUS**

marks:

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(Note: If any equipment fails or is identified as deficient during testing, it must be repaired or replaced to comply with this violation.)

Signature unobtainable

Signature refused

9/

*Tony Witt*

X *Bruce L. Billman*

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Signed by: BRUCE L BILLMAN

**Signed by BRUCE L BILLMAN** View details  
on Monday, September 23, 2013 11:57 AM (Central  
Time)

Storage Tank Safety Specialist (Signature)

Phone: 217-494-4918

Tony Witt

Supv.

Exit interview given to

Title

# UST Corrosion Control Survey Form

## SITE INFORMATION

Customer		Data Entry Date:	
Location:	Village of Willowbrook	Site ID Number:	2-003593
Address:	7760 Quincy St.	County:	DuPage
City:	Willowbrook	State:	IL Zip: 60527 Country:

### TESTER INFORMATION

### OWNER INFORMATION

Name:		Owner:	
Company: Protanic Inc		Address:	
Address: 658 N Progress Dr.		City:	
City:	Saukville	State:	WI
Zip:	53080	Telephone:	262-268-1150

### SURVEY TYPE:

<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Re-Survey	<input type="checkbox"/> Post-Repair/Modification	<input type="checkbox"/> Post-Installation
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### TYPE OF SYSTEM:

NACE INTERNATIONAL CERTIFICATION NUMBER:		<input checked="" type="checkbox"/> IMPRESSED CURRENT		<input type="checkbox"/> GALVANIC	
STATE OR OTHER TYPE CERTIFICATION NAME:					
CERTIFICATION NUMBER:		8196612			
OTHER:		ICC			

CP CRITERION APPLIED:	<input type="checkbox"/> -0.850 volts "ON" (Galvanic)	<input type="checkbox"/> 100 mV Polarization (Impressed)	<input checked="" type="checkbox"/> -0.850 volts "INSTANT-OFF" (Impressed)
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### TESTER'S EVALUATION (MARK ONLY ONE)

<input type="checkbox"/> PASS	All protected structures at this site pass the cathodic protection survey and it is judged that adequate cathodic protection has been provided to the UST system
<input checked="" type="checkbox"/> FAIL	One or more protected structures at this site fail the cathodic protection survey and it is judged that adequate cathodic protection has not been provided to the UST system
<input type="checkbox"/> INCONCLUSIVE	If the remote and the local do not both indicate the same test result on all protected structures (both pass or both fail) inconclusive is indicated and the survey must be evaluated and/or conducted by a corrosion expert

CP TESTER:	Dale G. Wetke	DATE SURVEY PERFORMED:	9-18-13
CP TESTER'S SIGNATURE:	<i>Dale Wetke</i>		

### CORROSION EXPERT'S EVALUATION (MARK ONLY ONE)

The survey must be conducted and/or evaluated by a corrosion expert when: a) supplemental anodes or other changes in the cathodic protection system are made, b) stray current may be affecting buried metallic structures or c) an inconclusive result was indicated.

<input type="checkbox"/> PASS	All protected structures at this site pass the cathodic protection survey and it is judged that adequate cathodic protection has been provided to the UST system
<input type="checkbox"/> FAIL	One or more protected structures at this site fail the cathodic protection survey and it is judged that adequate cathodic protection has not been provided to the UST system

COMMENTS:

CORROSION EXPERT'S NAME:	SIGNATURE:
COMPANY NAME:	ADDRESS:
CITY:	STATE:
ZIP:	TELEPHONE:

NACE INTERNATIONAL CERTIFICATION:	DATE SURVEY REVIEWED:
NACE INTERNATIONAL CERTIFICATION NUMBER:	

### ACTION REQUIRED AS A RESULT OF THIS EVALUATION (MARK ONLY ONE)

<input type="checkbox"/> NONE	Cathodic protection is adequate. Test again within regulatory window or by (Date):
<input type="checkbox"/> RETEST	Additional testing is required to determine if cathodic protection is adequate by (Date):
<input checked="" type="checkbox"/> REPAIR & RETEST	Cathodic protection is not adequate. Repair/modification is necessary by (Date):

**Protanic, Inc.**

**Cathodic Protection System—Field Data**

**Date: 09-18-13 Page: 1 of 2**

**Owner: Village of Willowbrook**

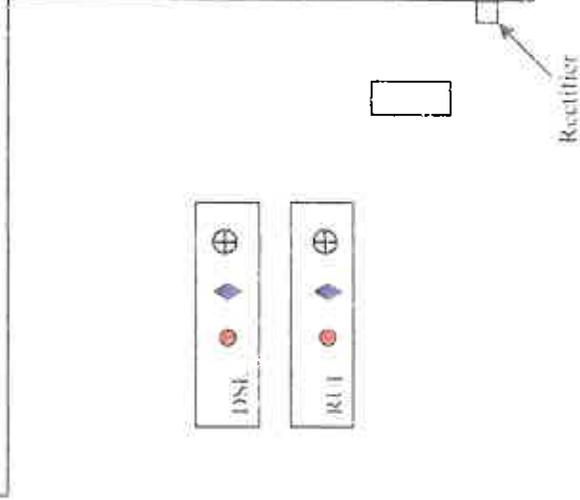
**Address: 7760 Quincy Street Willowbrook, IL 60527**

**Structures: 2 X Tanks**

**Technician: Dale Uttke**

Site Survey

Village of Willowbrook  
Willowbrook, IL



-  FILL
-  MANWAY
-  FUTURE



# Protanic, Inc. Professional Tank Investigation Corp.

658 N. Progress Drive, P.O. Box 80265, Saukville, WI 53080

Phone: 262-268-1150 FAX: 262-268-1170

[www.protaninc.com](http://www.protaninc.com)

September 27, 2013

Customer Name and Address	Facility ID Facility Name and Address	Test Date
Village of Willowbrook	#2003593	September 18, 2013
Attn: Anthony Witt	Village of Willowbrook	
7760 Quincy Street	7760 Quincy Street	
Willowbrook, IL 60527	Willowbrook, IL 60527	

Sensor Inspection/Certification								
Sensor Location	Type	Sensor in proper position when ARRIVED?	Sensor in Alarm when ARRIVED?	Functionality Test Result (Pass/Fail)	Sensor in proper position when LEFT site?	Sensor in Alarm when LEFT site?	Water present below sensor?	Positive shutdown of sub motor? (Yes/No)
T1 Diesel Fuel Sump	Bell	YES	NO	PASS	YES	NO	NO	NO
T2 Regular Unleaded Sump	Bell	YES	NO	PASS	YES	NO	NO	NO

**Comments**

All sensors operating per manufacture specifications.

Every pressurized piping line installed after February 1, 2008 shall be equipped with interstitial monitoring sensors at all piping sumps, dispenser sumps, and piping junction sumps. As of September 1, 2010, these sensors must immediately shut off the submersible pump supplying that line upon detection of a release.

**Parts**

Technician Signature: Dale Uttke

**MUNICIPAL SERVICES COMMITTEE MEETING  
AGENDA ITEM SUMMARY SHEET**

**AGENDA ITEM DESCRIPTION**

**DISCUSSION – WATER TANK COATING ANALYSIS REPORTS**

**COMMITTEE REVIEW**

- Finance/Administration  
 Municipal Services  
 Public Safety

Meeting Date:  
 October 14, 2013

- Discussion Only       Approval of Staff Recommendation (for consideration by Village Board at a later date)  
 Seeking Feedback       Approval of Staff Recommendation (for immediate consideration by Village Board)  
 Regular Report       Report/documents requested by Committee

**BACKGROUND**

On June 10, 2013, the Village Board adopted Resolution No. 13-R-30 accepting a proposal from Stand Associates to perform an engineering analysis of the protective coatings on all three (3) of the Village's above grade water tower structures. These three water tanks were last sandblasted and re-coated in 1999, 2001 and 2002 and are experiencing varying degrees of wear. Although we are aware that the tanks will need to be re-coated again in the near future, and we are building a reserve in the Water Capital Fund for the project, the findings of the engineering analysis will determine when the tanks should re-coated and what the estimated costs will be.

Prior to beginning the field portion of the analysis, a preconstruction meeting was held. In addition, the consultant was able to obtain files from Tnemec (i.e., the paint manufacturer) providing details on the exact coating products that were specified for each tanks when they were last re-coated. The final reports and associated cover letter (attached) was received on September 10, 2013.

**REQUEST FOR FEEDBACK**

The reports have analyzed the condition of the current tank coating and have also identified miscellaneous items need repair. After thorough review, the consultant has recommended that the tanks be re-coated within the next five (5) years. Based on a five year implementation schedule with conservative cost estimates, the following budgeted amounts would be needed:

STRUCTURE	ITEM/SCHEDULE/COST	TOTAL COST PER TANK
Executive Tank (500,000 gallon spheroid)	Engineering Design – FY 2014/15:      \$19,000	\$468,000
	Rehabilitation – FY 2015/16:      \$430,000	
	Engineering Construction – FY 2015/16:      \$19,000	
Standpipe (3,000,000 gallon)	<u>Exterior:</u>	\$946,000
	Engineering Design – FY 2015/16:      \$19,000	
	Rehabilitation – FY 2016/17:      \$572,000	
	Engineering Construction – FY 2016/17:      \$14,000	
	<u>Interior:</u>	
	Rehabilitation – FY 2017/18:      \$328,000	
67 <sup>th</sup> Street Tank (500,000 gallon spheroid)	Engineering Construction – FY 2017/18:      \$13,000	\$478,000
	Engineering Design – FY 2017/18:      \$19,000	
	Rehabilitation – FY 2018/19:      \$440,000	
	Engineering Construction – FY 2018/19:      \$19,000	

The costs within the above implementation schedule are also depicted per fiscal year on the attached cover letter.

**STAFF RECOMMENDATION**

This information will be presented and discussed further during the FY 2014/15 Budget consideration process.



Strand Associates, Inc.  
 1170 South Halsted Road  
 Cicero, IL 60151  
 (P) 815-744-4200  
 (F) 815-744-4215



September 9, 2013

Mr. Timothy J. Halik, Village Administrator  
 Village of Willowbrook  
 7760 Quincy Street  
 Willowbrook, IL 60527

Re: Observation and Evaluation of Village Water Storage Facility Coatings for the  
 67th Street Elevated Tank, Executive Elevated Tank, and Standpipe

Dear Tim,

Enclosed are two copies each of the final reports of the observation and evaluation of the coatings on the above-referenced water storage facilities owned by the Village of Willowbrook.

We hope you find the reports satisfactory.

We recommend the following implementation schedule for rehabilitation of the three water storage facilities. The budgeted amounts allow for conservative estimates.

Item	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY 18-19
Executive Tank Rehabilitation		\$430,000			
Standpipe -Exterior Rehabilitation			\$572,000		
Standpipe -Interior Rehabilitation				\$328,000	
67th Street Tank Rehabilitation					\$440,000
Engineering Design	\$19,000	\$19,000		\$19,000	
Engineering Construction		\$19,000	\$14,000	\$13,000	\$19,000
<b>TOTALS</b>	<b>\$19,000</b>	<b>\$468,000</b>	<b>\$586,000</b>	<b>\$360,000</b>	<b>\$459,000</b>

Please feel free to call (815) 744-4200 with questions.

Sincerely,

STRAND ASSOCIATES, INC.®

Chris J. Ulm, P.E.

Anand Sridhar

Enclosures: Report

Professional

Engineering

Services

Executive  
Elevated Tank  
Observation

Report

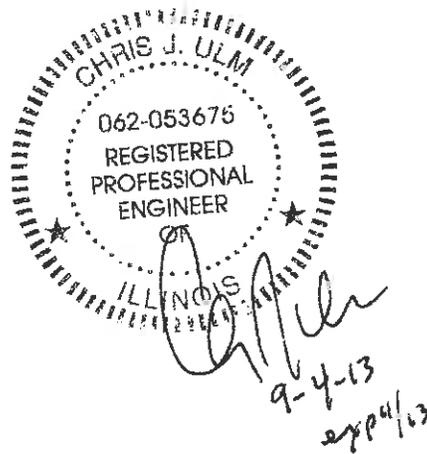
Village of  
Willowbrook, IL  
August 2013



# Report for Village of Willowbrook, Illinois

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## Executive Elevated Tank Observation Report



Prepared by:

STRAND ASSOCIATES, INC.®  
IDFPR No. 184-001273  
1170 South Houbolt Road  
Joliet, IL 60431  
[www.strand.com](http://www.strand.com)  
August 2013



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**BACKGROUND INFORMATION**

Inspector: Steve Kluesner  
 Anand Sridhar

Observation Date: August 15, 2013

Location: 7760 South Quincy Street  
 Willowbrook, IL 60527

Nameplate Data: Horton Waterspheroid,  
 Constructed by Chicago  
 Bridge and Iron Company  
 (CB&I)  
 Na-Con, Inc. in 1975  
 Contract No. 74-2762U  
 Height to Bottom = 115 feet

Capacity: 500,000 gallons

“WILLOWBROOK” is written in block lettering with single-line shadowing on one side of the tank. There is a blue-green willow tree logo on the tank.

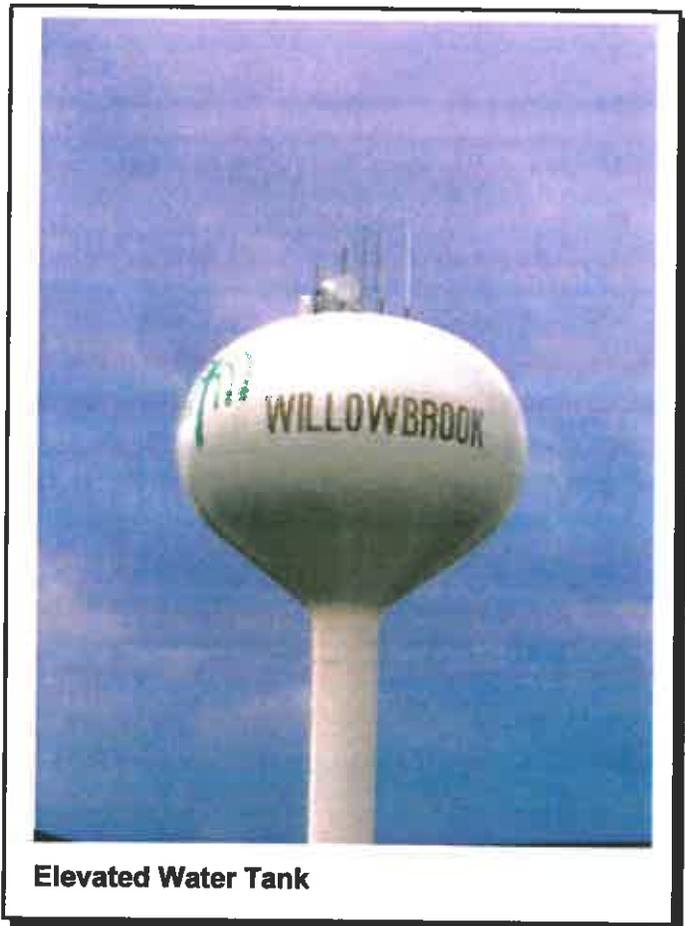
The tank was less than one-half full at the time of observation. This was determined by pressure gauges (showing 53 pounds per square inch) in the control valve vault on-site and from observations of the interior wet.

Photographs of the structure and surrounding area were taken.

**SITE INFORMATION**

**A. Access to Site**

The main entrance is located on the same site as the Police Department and Village Hall (7760 Quincy Street). The tank is located at the southwest corner of the site, and the base cone on the north and east sides of the tank is located approximately 5 feet from the parking lot. There is no gate at the entrance.



**Elevated Water Tank**



**South Elevation**

## B. Surrounding Structures

The tower is surrounded on the north and east by parking lots used by the Police Department and Village Hall. The north parking lot has concrete pavement that transitions to asphalt in the east parking lot.

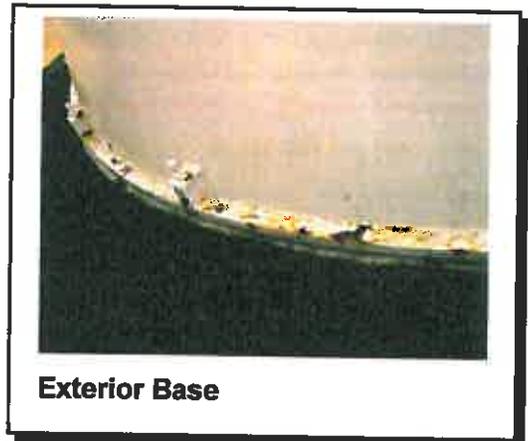
West of the tower is a grassy area where a stainless steel enclosure housing electrical power distribution components is located. Approximately 30 feet west of the tower is another parking lot that appears to be used by an industrial business. There is also an electrical enclosure (24 inches wide by 72 inches high by 72 inches long on a concrete base) located approximately 10 feet west of the tank.

The south side of the tower is grass-covered and contains two manholes, a fire hydrant, and coniferous trees located approximately 15 feet from the base of the cone, and a detention pond (currently dry).

## FOUNDATION

Overall, the foundation is weathered but appears to be in good condition. There are no indications of differential foundation settlement. No soil is eroded nor is there visible undermining of the foundation. The concrete ring wall extends 2 to 3 inches outward from the grout surface.

The tower rests on a concrete foundation. The elevation of the top of the foundation varies from 3 to 4 inches above grade in the north to at grade on the east, west, and south portions. The concrete foundation exhibits minor spalling. The grout at the base appears to be in overall good condition with a few instances of minor spalling.



Most of the 18 anchor bolts exhibit corrosion. The bolts are 1 3/4-inch diameter with 4 3/4-inch by 6 1/4-inch chairs.

There are no indications of underground pipe leaks or visible saturation. There is a 4-foot 2-inch by 6-foot 2-inch pit cut next to the water tower foundation on the southwest corner for drainage of the overflow. The pit is filled with large stones.

## VALVE VAULT AND CONTROL ROOM

The valve vault is inside the pedestal within a control room. The control room is constructed of wood with an 81-inch-tall by 31-inch-wide opening secured by a door. The control room is 11 1/2 feet 6 inches by 12 feet 1 inch. Inside the control room are the Police Department communication and control equipment and the back-up servers for the Village Hall. The control room is climate-controlled with air conditioning. There are four fluorescent tube lights and 14

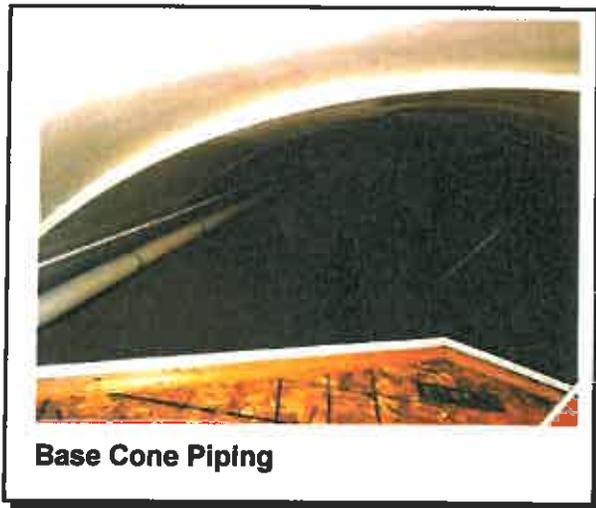


outlets. The water main pipe appears to be 12-inch diameter and enters the tower and vault from the south side. There is a fire extinguisher located outside the control room.

The actual valve vault pit located in the control room is 5 feet by 5 feet by 5 feet 8 inches deep. The valve vault pit houses a sump pump and expansion joint. The expansion joint appears to be in good condition. The base of the vault appears to be dry in some areas and damp in others. There is no visible condensation or standing water. The vault is secured by a steel/aluminum grating that was difficult to remove. There was no control valve observed on the piping. The pressure gauge on the riser pipe is a USA pressure gauge that read 54 psi. A WIKA cable communicates this reading to the supervisory control and data acquisition panel.

## PIPING

The riser pipe is 12 inches in diameter and of either cast or ductile iron that transitions to steel in the valve vault. It is covered with 1-inch-thick insulation. The insulation appears in poor condition. The paint inside the insulation, where visible, also appears to be in poor condition.



The 2-inch Schedule 40 PVC sump pump piping exits the control room through the north wall and through the north side of the pedestal.

The power conduits enter the pedestal through two ports at the west corner for Police Department and Village Hall communication. The power conduit for the tank control enters the north side of the pedestal.

There is a condensate pipe of 1-inch steel that transitions to 1.5-inch PVC, which then transitions to a 1-inch penetration at the southwest corner of the pedestal.

The overflow pipe has a diameter of 6 inches and currently appears to be in good condition. The pipe is screened with a No. 4 mesh, which is attached by a flap gate. The screen appears in good condition. The flap gate is mildly corroded but appears in good operating condition. The screen overhangs a 19-inch air break before a riprap splash pad.

## ACCESSORIES

### A. Electrical Service

The lighting panel is located on the north side of the interior dry base cone. The underground cable from the east side of the tank penetrates into the base cone, continues around the interior perimeter of the tank, and enters the north side of the control room. The electrical service enters the north side of the tank, and the lighting and cathodic protection panels are located on the north wall of the base cone.

There are two power conduit and communication wires that enter on the west side of the pedestal that then enter the west side of the control room.

### B. Cathodic Protection

The cathodic protection panel is located on the north side of the tank. The panel is a made by Corpro and is a TASC VIII Cathodic Protection Rectifier. The model is a TASCA 20-5I and the Serial Number is C-010906. It is a hanging-type system.

### C. Communication Additions

The Police Department and Village Hall currently have communication wire and equipment mounted on top of the tank. There are no cellular providers using the tank.

## LADDERS

### A. Lower Ladder

The lower ladder from the base to the lower platform has a rod-style safety climb system. The climbing rail appears to be in good condition. The ladder is 16 inches wide and the square rungs are spaced 12 inches apart. The ladder in the base cone has a safety cage. The safety climbing device stops at the bottom of the condensate platform.

### B. Shaft Ladder

The shaft ladder has a rod-style safety climb system but does not have a cage. The shaft ladder terminates at the upper catwalk platform. The ladder is 16 inches wide with square rungs spaced 12 inches apart. The ladder appears to be in good condition. Cables are routed along the ladder and are more than 4 inches away from the ladder side rails.

### C. Access Tube Ladder

The ladder in the access tube has a rod-style safety climb system but does not have a safety cage. The ladder is 16 inches wide with square rungs spaced 12 inches apart. The ladder appears to be in good condition. Cables are routed along the ladder and are within 4 inches of the ladder side rails.

**D. Interior Wet Ladder**

The ladder in the water containment portion of the tank is 16 inches wide with square rungs spaced 12 inches apart. The ladder has a rod-style safety climb system. The ladder in the interior wet appears to be in fair condition. There is significant rust visible and some metal loss on the top rungs.

**DOORS, HATCHES, AND PLATFORMS****A. Doors**

The exterior door is a 1/4-inch steel plate that is 31 inches wide by 60 inches tall. There is a padlock hasp to secure the door. The top of the door is arched. The door is secured with a keyed padlock. The door appears to be in good condition.

**B. Platform Hatches**

There is a 30-inch-diameter hatch located in both the condensate platform and upper catwalk. Each hatch includes a 4-inch curb with a hinged lid that has a 2-inch overlap.

**C. Shaft Hatch**

There is a 20-inch-diameter painters' access hatch at the top of the shaft, accessible from the upper catwalk. The painters' hatch does not have a curb or an overlapping lid. The lid is retained by a chain and bolt.

**D. Access Tube**

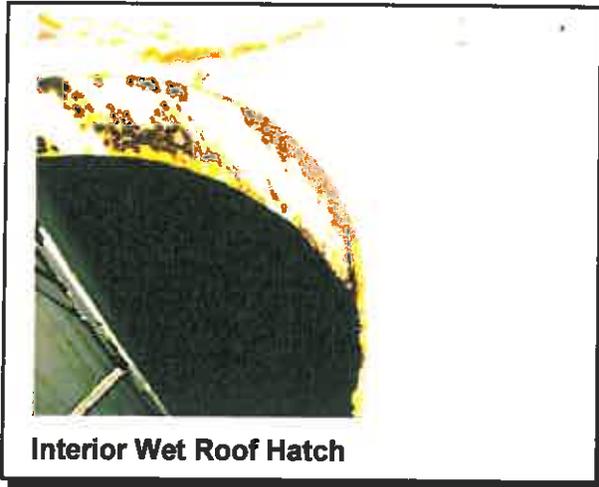
The access tube is 42 inches in diameter. The access tube appears generally in good condition. There is minor rusting at fittings and appurtenances. There is an oval water containment hatch located at the base of the access tube near the upper catwalk. The hatch is approximately 24 inches by 18 inches. The hatch is secured with bolted-on brackets. Cables are routed over the hatch.

There is a 30-inch-diameter access tube hatch at the top of the tank. The hatch extends out from the access tube with a 4-inch curb and lid with 2-inch overlap.

**E. Roof Hatches**

There are two hatches on the roof for access into the water containment portion of the tank. There is one 30-inch-diameter interior wet access hatch with 4-inch curb and 2-inch overlapping cover. The lid was not secured. Supports from communication equipment on the tank roof limits the swing of the cover to less than 90 degrees. There is some significant metal loss noted on the interior wet curb.

There is a 24-inch-diameter bolt-down painters' access hatch on top of the tank. There is a gasket located between the flange and bolt-down plate. The gasket appears to be in poor condition and the lid is warped.



**Interior Wet Roof Hatch**



**Bolted Flange Roof Hatch**

#### F. Tank Vent

There is an approximate 1-inch air gap between the access tube and the tank roof. There is an approximate 6-inch curb from the tank roof. The air gap is not screened. The top of the access tube overhangs over the air gap for protection.

#### G. Condensate Platform

The condensate platform paint system appears to be failing and there are several significant areas of rust. The fill pipe insulation is failing and pipe itself also appears to be rusting. Conduit supports and weld seams in this area exhibit areas of rust as well.

Black electric cables and white conduits penetrate the condensate platform behind the fill pipe. They are protected by a 4-inch curb welded to the floor on all sides. The cables are attached by wire ties.

Cellular cable penetrations are protected by a 4-inch-tall curb on the floor of the platform. The curb is welded to the floor on all sides, and damage to the coating has not been repaired.



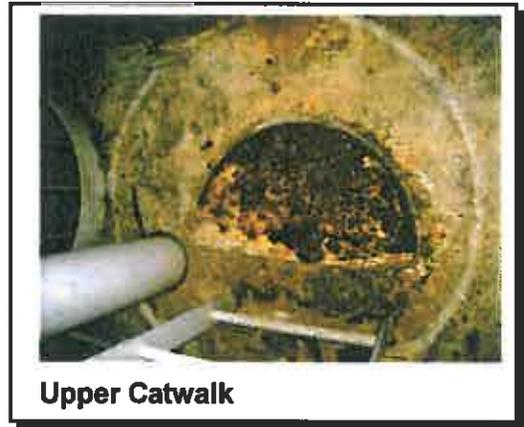
**Condensate Platform**

The light immediately above the condensate platform is not operational.

#### H. Upper Catwalk

The upper catwalk is in fair condition. The paint system appears to be failing and exhibits significant rust.

The railing at the upper catwalk is 42 inches high to the top rail. A midrail and a 4-inch toe plate are also provided.



Upper Catwalk

#### MISCELLANEOUS

- A. There are ten cathodic protection cover plates of approximately 4-inch diameter on the tank roof. All platelets appear to be secured tightly to the tank roof.
- B. Incandescent light bulbs are in the following locations: one light at the top of the access tube, one light at the top side of the upper platform, one light at the top of the stem just below the top platform, and one light (not working) at the condensate platform. There is one halogen light and one incandescent light at the base of the pedestal.

#### PAINT HISTORY

It was reported that the tank was last painted in 2001. The specifications for the work completed in 2001 included the following.

##### A. Exterior

The tank exterior was surface-prepared to Steel Structures Painting Council (SSPC) SSPC-SP6 and primed with a zinc-rich primer, Tnemec Series 91 H2O Hydro-Zinc. An epoxy intermediate coat of Tnemec Series 66 Hi-Build Epoxoline was applied, followed by a urethane finish color coat of Tnemec Series 73 Endura-Shield. A full clear coat of Tnemec Series 76 Endura-Clear was applied over the finish color coat. All surface preparation and painting work were completed within a containment shroud.

##### B. Interior Dry

The tank interior dry was surface-prepared to SSPC-SP6 and primed with Tnemec Series 65 Poxi-Prime. A full epoxy finish coat of Tnemec Series 20 Pota-Pox was applied over the primer.

##### C. Interior Wet

The tank interior wet was surface-prepared to SSPC-SP10 and primed with a zinc-rich primer, Tnemec Series 91 H2O Hydro-Zinc. Two coats of epoxy, Tnemec Series 20 Pota-Pox, were applied over the primer.

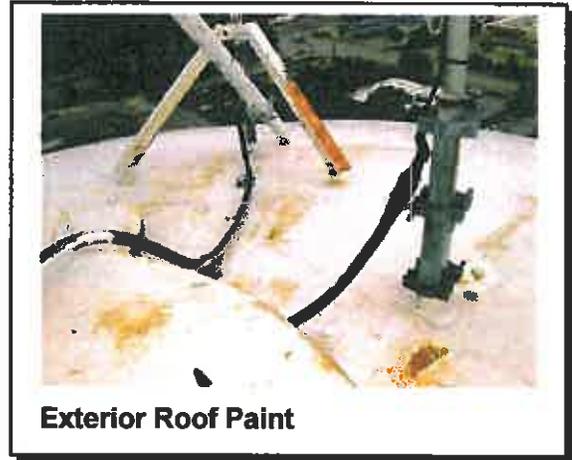
## PAINT CONDITION

### A. Exterior

The clear coat on the exterior of the tank appears in poor condition. In some places, it has failed entirely and it is spotty in others. The adhesion of the clear coat also appears in poor condition.

The remaining coatings on the base cone, stem, and middle and lower portions of the spheroid appear in good condition. The coatings on the exterior base cone average between 9 and 13 mil thickness, except at the southeast side of the base cone, which only averaged 5 to 6 mils. The coatings on the bottom flange of the base cone appear to have significant failings and rust.

The top of the tank appears in poor condition. The clear coat and the remaining coatings have failed in multiple locations and significant rusting is present. The top of the tank averages 4 to 7 mils of coating thickness. The adhesion of coating on the roof appears fair to poor.



### B. Interior Dry

The interior dry generally averaged between 7 and 11 mils thick. The interior dry at the base cone averaged around 7 mils but had a range of 5 to 15 mils. The adhesion is generally good. Rusting is mostly limited to platforms and around penetrations at the top of the access tube.

The interior dry appears to be in poor condition at the condensate platform and upper catwalk. The fittings, supports, and seams immediately above the platform and catwalk also appeared in poor condition. Rust is prevalent in these areas.

The overflow pipe appears to be in fair condition with minor rusting at some of the weld seams and coating thicknesses as low as 3 mils in some areas. The fill pipe's coating system and insulation have failed.

The ladder appears to be in average condition. Sporadic rusting along the ladder is common.

### C. Interior Wet

The interior wet portion of the tank was only accessed from the top. The sidewall coatings appear to be in good condition. The coatings on the tank ceiling appear in good condition overall with an average coating thickness of 9 to 11 mils adjacent to the access hatch. The coatings around the manway, lid, and ladder appear in



poor condition. There appears to be some minor rusting along the beams. The spaces between the ceiling and roof beams are caulked. The caulk appears to be in good condition.

#### D. Paint Samples

Samples of the existing paint on the exterior were collected and saved should the Village want an outside laboratory to analyze them.

### RECOMMENDATIONS

This section presents the recommended improvements to upgrade and maintain the Executive Water Storage Tank. The elevated tank appears in fair to good condition overall. Not all recommendations need to be implemented; however, they are listed for your information.

#### A. Repair or Replace Exterior Coatings

Based on the condition and of the exterior coatings and previous work completed, two options have been developed for repair. Option 1 is recommended for implementation.

Option 1. Abrasive-blast to the nearest weld seam all metal at the top portion of the tank roof that exhibits failed coatings in accordance with SSPC-SP6 Commercial Blast. Spot prepare all other areas with coating delamination to SSPC-SP6. Brush blast the remainder of the exterior of the tank to SSPC-SP7 to entirely remove the clear coat. Prepare tank exterior inside shrouding to prevent damage to nearby structures. The shroud is not strictly necessary but is desired.

Prime the exterior roof with epoxy and apply a urethane intermediate coat. Follow the intermediate coat with one finish color coat of fluoropolymer.

Prime all spot-prepared areas with epoxy and apply a full tie coat of epoxy over the remaining exterior portions of the tank. Apply one intermediate coat of urethane followed by one finish color coat of fluoropolymer.

This coating system should protect the tank and provide good color and gloss retention for 15 to 20 years.

Option 2 Abrasive-blast the entire exterior to a SSPC-SP6 Commercial Blast. A shroud is recommended. Prime the exterior with a zinc-rich primer and apply a urethane intermediate coat. Follow the intermediate coat with one finish color coat of fluoropolymer. This coating system is expected to maintain color and gloss retention and protect the tank steel for up to 25 years.

#### B. Repair Interior Wet Coatings

No immediate coating repairs are required in the interior wet. Minor coating repair could be done that would include a partial abrasive blast of failed areas of the interior wet ceiling along weld seams,

beams, ladder, and manways to SSPC-SP10 Near White. Prime surface of prepared areas with epoxy and apply two additional coats of epoxy. No coating repairs are required below the normal water level. It should be noted that the interior wet coatings system is reported to be 12 years old. The typical life expectancy of interior wet coatings is approximately 15 years. Replacement of the existing coating system on the interior wet at the same time as the exterior coating work may be beneficial by reducing the maintenance schedule for painting the tank in the future.

### C. Repair Interior Dry Coatings

Power tool or abrasive-blast rusted areas in the interior dry to SSPC-SP6. This is primarily needed on the platforms, catwalk, manways, fittings, supports, and overflow piping seams. Prime damaged areas with epoxy primer and apply a finish epoxy coat to match existing.

1. Remove all insulation from the fill pipe, abrasive-blast the entire fill pipe to SSPC-SP6, and provide a two-coat epoxy system.
2. Provide new pipe insulation and aluminum jacket on riser pipe.
3. Install a fail-safe vent in place of the existing bolted, flanged manway to protect against pressure/vacuum damage. Provide a gasket between the flanges.
4. Seal the annular space between the side of the access tube and the roof penetration collar to prevent contamination entering the water containment portion of the tank.
5. Continue operation and yearly maintenance of the cathodic protection system.
6. Replace the curb on the interior wet manway with new steel curb.
7. Relocate cables along the ladder in the access tube to maintain 4 inches clearance from the ladder side rails.
8. Relocate the support for the communication antenna to allow interior wet manway cover to swing fully open.
9. Replace light bulbs.
10. Regrade around the tank to allow top of foundation to be 6 inches above grade and overflow discharge to drain away from the tank.

**OPINION OF PROBABLE COSTS**

This section presents an opinion of probable costs for the recommended improvements. The costs were developed based on recent projects of similar scope and information from coating suppliers.

Item	Description	Partial Blast and Overcoat	Full Blast and Recoat
1	a. Partial surface preparation and overcoat of tank exterior, including shroud	\$190,000	
	b. Full blast and recoat exterior of tank, including shroud		\$230,000
2	a. Spot surface preparation interior wet and spot coat	\$10,000	
	b. Full blast and recoat of interior wet		\$80,000
3	Spot surface prepare interior dry and spot coat	\$20,000	\$20,000
4.	Full blast and recoat of riser piping	\$20,000	\$20,000
5.	New pipe insulation and aluminum jacket on riser pipe	\$5,000	\$5,000
6.	Provide new fail-safe roof vent	\$7,500	\$7,500
7.	Seal annular space to interior wet between access tube and roof	\$2,000	\$2,000
8.	Continue operation and maintenance of cathodic protection system	By Village	By Village
9.	Remove curb on interior wet manway and replace with new steel curb	\$6,000	\$6,000
10.	Relocate cables along ladder side rails	\$1,000	\$1,000
11.	Relocate communication support away from interior wet manway	By Village	By Village
12.	Replace light bulbs	\$500	\$500
13.	Regrade around tank and overflow discharge	\$1,000	\$1,000
	Subtotal	\$263,000	\$373,000
	Contingency (15 percent)	\$40,000	\$56,000
	<b>Total</b>	<b>\$313,000</b>	<b>\$429,000</b>

**Opinion of Probable Cost**

For more location information  
please visit [www.strand.com](http://www.strand.com)

## Office Locations

Cambridge, Ohio | 614.447.3501

Columbus, Indiana | 317.533.0811

Columbus, Ohio | 614.858.0460

Indianapolis, Indiana | 317.477.0007

John A. Birchall | 812.734.4200

Lexington, Kentucky | 859.270.8500

Louisville, Kentucky | 502.883.0000

Madison, Wisconsin\* | 608.251.4646

Milwaukee, Wisconsin | 414.271.0771

Phoenix, Arizona | 602.437.3733

\*Corporate Headquarters



Professional

Engineering

Services

67th Street  
Elevated Tank  
Observation

Report

Village of

Willowbrook, IL

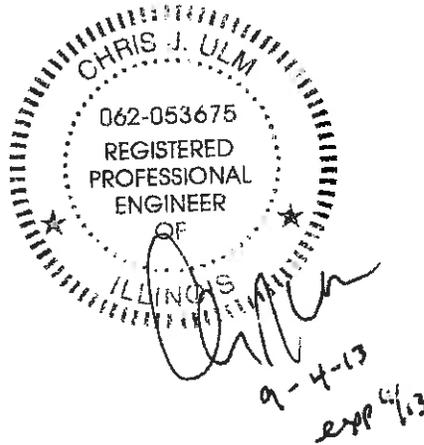
August 2013



# Report for Village of Willowbrook, Illinois

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## 67th Street Elevated Tank Observation Report



Prepared by:

STRAND ASSOCIATES, INC.®  
IDFPR No. 184-001273  
1170 South Houbolt Road  
Joliet, IL 60431  
[www.strand.com](http://www.strand.com)  
August 2013



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or Following

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**BACKGROUND INFORMATION**

Inspector: Steve Kluesner  
Anand Sridhar

Observation Date: August 15, 2013

Location: Lake Hinsdale Drive  
Willowbrook, Illinois

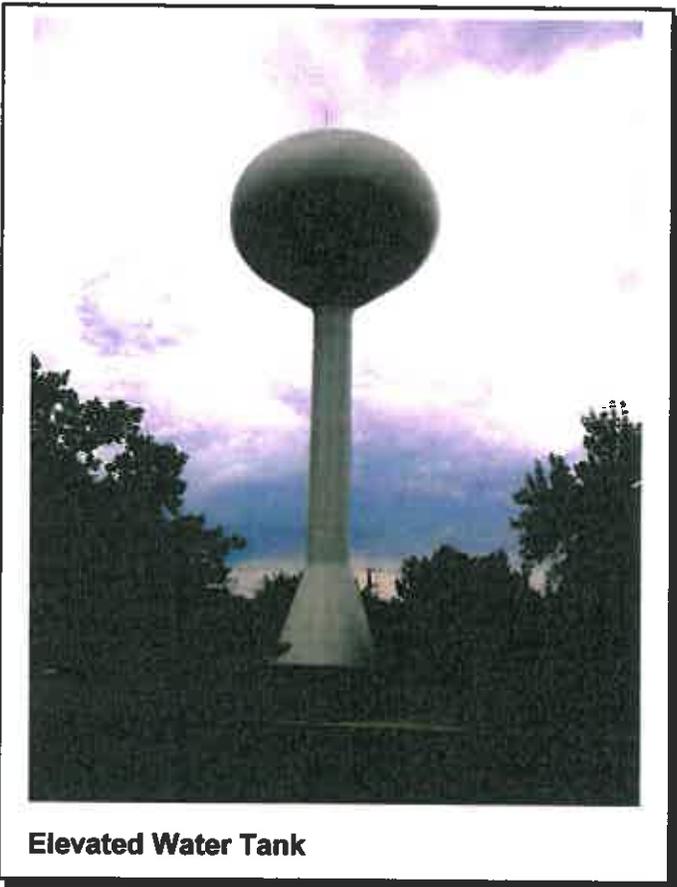
Nameplate Data: There was no nameplate.

Capacity: 500,000 gallons

This is a spheroid-style elevated tank.

The tank was approximately one-half full at the time of observation.

Photographs of the structure and surrounding area were taken.



**SITE INFORMATION**

**A. Access to Site**

The main entrance is located off Lake Hinsdale Drive. However, the tank is generally located in the lot just northwest of the intersection of Illinois Route 83 and 67th Street. Access is through a single concrete drive.

**B. Surrounding Structures**

The building is surrounded on all four sides by grass-covered area with the exception of the concrete driveway and associated sidewalk. Illinois Route 83 is located approximately 150 feet to the east and 67th Street is located approximately 80 feet to the south.

A concrete sidewalk connects the driveway to a transformer (5 1/2-foot by 4-foot) mounted on a concrete base (6-foot by 5 1/2-foot) and a radio communications panel (2-foot 9-inch by 2-foot) mounted on a concrete base (3-foot by 3-foot). Both structures are approximately 15 feet south of the base cone.



There are several trees within 15 feet of the base cone, and there is a row of bushes immediately surrounding the base cone.

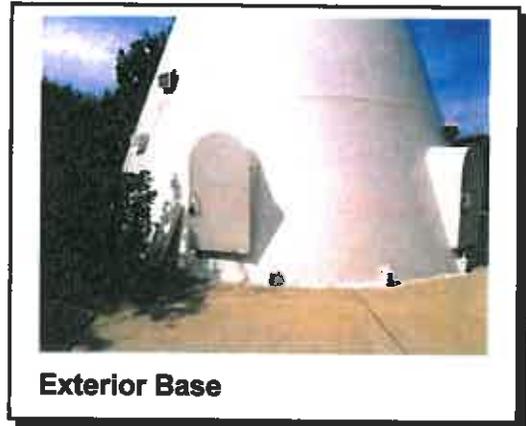
There is a fire hydrant located approximately 12 feet northwest of the base of the cone.

### FOUNDATION

There are no indications of differential foundation settlement. There are no indications of underground pipe leaks. The soil is not eroded on any side of the foundation. The foundation also appears dry without any indication of dampness.

Most of the 18 anchor bolts (1.5-inch diameter) are in good condition with minor corrosion. The chairs are 4.5 inches by 6 inches.

The tower rests on a concrete foundation. The elevation of the top of the foundation varies from 1 inch above grade in the north to 4 inches above grade in the west to at grade in the south and east. The foundation, where observed, appears weathered but in good condition. There is minor spalling in the northwest corner. The grout at the base appears to be in good condition but has minor spalling in the north and west portions of the base cone.



Exterior Base

### VALVE VAULT

There is a control valve vault for the tank in a pit located within the base cone pedestal. The pit measures 4 feet by 6 feet by 6 1/2 feet deep. The pit contains a sump pump but no expansion joint was observed. The base of the vault appears to be dry with no visible condensation or standing water.

The water main enters the valve vault from the southeast and appears to be 12 inches in diameter. The vault is secured by steel/aluminum grating. The piping is in fair condition and appears to have significant rusting. The flanges and fittings appear in very poor condition.



Valve Vault

There are two gate valves and a tee with a blind flange immediately above the valve vault inside the pedestal. The pipe is tapped for a gauge and associated WIKA pressure transducer and a sample tap for the chlorine analyzer. The pipe is not insulated below the last gate valve.

## PIPING

The 12-inch-diameter riser pipe has 3/4-inch fiberglass insulation with aluminum jacketing that appears in good condition. The pipe condition and coating condition under the insulation were not observed. The condition of the pipe in the base cone appears to be poor with fittings and flanges severely corroded upstream of where the insulation begins. There is an expansion joint located in the riser pipe adjacent to the upper catwalk prior to the pipe entering the water containment portion of the tank. The expansion joint appears to be in good condition.

There is a 1-inch-diameter condensate pipe that exits through a penetration in the north corner of the base cone approximately 2 feet above grade.

There is a 6-inch-diameter overflow pipe that exits through the southeast corner of the base cone. There is no screen, only a flapper. There is also no pit or riprap. The overflow dumps directly onto the ground. The overflow pipe terminates 24 inches above the ground. The overflow pipe coatings above the condensate platform appear corroded (at weld seams and on the pipe itself).

The sump pump piping exits the valve pit below grade but discharges above grade in the southeast corner of the base cone at the same location as the overflow pipe. The sump pump pipe appears to be 2-inch polyvinyl chloride. It discharges to a funnel and there is no air gap.

There are 6-inch and 8-inch-diameter ductile iron pipes stubbed through the floor on the north side of the base cone that are capped with blind flanges.

## ACCESSORIES

### A. Electrical Service

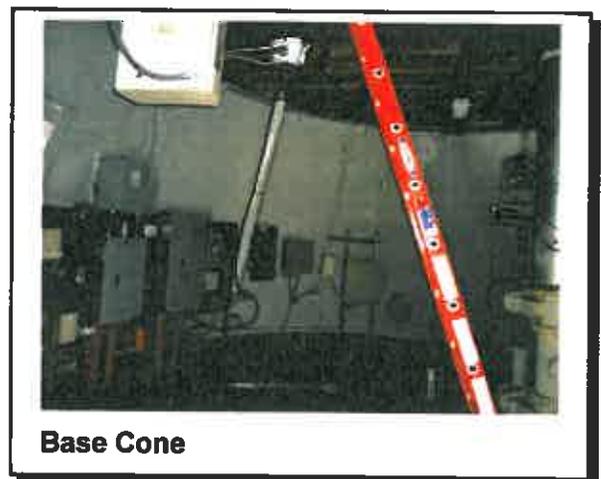
The power conduit penetrations are located in the southeast corner of the base cone. Multiple conduits appear to penetrate one 4-inch opening in the cone. The lighting and main distribution panels are mounted on a rack located along the southeast corner of the base cone immediately adjacent to the southernmost door.

### B. Communication

There is a communication pole for the supervisory control and data acquisition system located on top of the tank. The pole and supports appear to be



Base Cone Riser Piping



Base Cone

unpainted galvanized metal that was welded to the top of the tank. Two communication wires are affixed to the overflow pipe, and it appears that has caused damage to the coatings of that pipe. Above the catwalk, one communication wire is affixed to the overflow pipe, and one communication wire is affixed to the conduit that runs parallel to and behind the right side of the ladder.

A red double-obstruction light and sensor are mounted on top of the tank.

#### C. Cathodic Protection

The cathodic protection system is by Corpro, model TASCA 30-8 CJ. The serial number is C-020681. It is a hanging-type system.

#### D. Lighting

There are four halogen lamps in the pedestal with no visible or easily accessible switch. There are two incandescent light fixtures between the wooden platform and the lower platform. There is one incandescent light fixture in each of the following: the stem, below the upper platform, above the upper platform, and at the top of the access tube. There are two exterior halogen lights adjacent to each door.

#### E. Other

There is a HACH chlorine analyzer located in the west side of the base cone. The tap is located on the fill piping at the same location as the pressure gauge. There is tubing routed overhead to the chlorine analyzer unit and associated lab sink.

There is an emergency eyewash and shower station located in the northwest side of the tank. The station is not functional.

There are two electric unit heaters and an electrically actuated damper located in the southwest corner of the base cone.

### LADDERS

#### A. Lower Ladder

There is a wooden platform that has an opening located within the base cone. There is no permanent ladder installed to the wooden platform. A fiberglass extension ladder was available for accessing the wooden platform.

Above the wooden platform, there is a 14-inch-wide ladder with square rungs spaced 12 inches apart. There is a channel-style slide rail safety climb system. There is no safety cage between the wooden platform and the condensate platform. The ladder is at a slight angle to the condensate platform and appears to be in good condition.



**B. Shaft Ladder**

The ladder between the condensate platform and the upper catwalk appears to be in good condition and there is a safety cage installed. The ladder and safety climb system are the same within the entire interior dry. The lower ladder ends at the bottom of the condensate platform. The upper shaft ladder extends above the upper platform.

**C. Access Tube Ladder**

The ladder above the upper catwalk within the access tube appears in fair condition. The ladder and rungs have more rust than shows on the ladders below. The ladder has a channel-style safety climb system. The ladder is 14 inches wide with square rungs spaced 12 inches apart.

**D. Interior Wet Ladder**

The ladder in the water containment portion of the tank is 14 inches wide with square rungs spaced 12 inches apart. The ladder in the interior wet appears in poor condition with significant metal loss. There is no safety climb system installed.

**DOORS, HATCHES AND PLATFORMS****A. Doors**

There are two entrance doors located in the northeast and southeast corners of the base cone. They are 62 inches tall by 31 inches wide. They are made of 1/4-inch steel plate with a padlock. Both doors have an arched entrance on top.

**B. Platform Hatches**

All manways on all platforms have 24-inch-diameter openings with a 4-inch curb, and the hatch overlaps by 2 inches. The lid on the condensate platform hatch exhibits significant steel loss. The upper catwalk does not have a hatch.

There is a 3-foot by 4-foot opening to the wooden platform with no hatch.

**C. Shaft Hatch**

There is a 20-inch-diameter painters' access hatch at the top of the shaft accessible from the upper catwalk. The painters' hatch does not have a curb or an overlapping lid. The lid is retained by a chain and bolt.

**D. Access Tube**

The access tube is 36 inches in diameter. The access tube appears to be in generally good condition. There is minor rusting at fittings and appurtenances. There is an oval water containment hatch located at the base of the access tube near the upper catwalk. The hatch is approximately 24 inches by

18 inches. The hatch is secured with bolted-on brackets. The access tube shows signs of steel pitting near the upper catwalk.

There is a 24-inch-diameter access tube hatch at the top of the tank. The hatch extends out from the access tube with a 4-inch curb and lid with 2-inch overlap.

E. Roof Hatches

There is one 24-inch-diameter interior wet access hatch with a 4-inch curb and 2-inch overlapping cover. The lid was secured with a welding rod. Significant rusting was noted on the interior wet side of the hatch lid.

F. Tank Vent

There is an approximate 1-inch air gap between the access tube and the tank roof. There is an approximate 6-inch curb from the tank roof. The air gap is not screened. The top of the access tube overhangs the air gap for protection.

G. Wooden Platform

The wooden platform is located within the base cone. The floor is constructed of unpainted plywood. The walls appear to be in good condition. The joists that support the platform are resting on a welded steel lip along the perimeter of the base cone.

H. Condensate Platform

The condensate platform appears in good condition. The hatch and manway show some corrosion and there is a rectangular weld seam (approximately 4 square feet) that has corrosion on both sides of the platform. The walls immediately above and below the platform are in good condition with very little or no corrosion visible.



Upper Catwalk



Floor of Condensate Platform

## I. Upper Catwalk

The upper catwalk is in good condition. The lip has some visible corrosion and there is a rectangular (with one rounded long edge) weld repair that exhibits significant corrosion on both sides. That area appears to be approximately 2 square feet. There is a 4-inch toe plate and a 42-inch-high railing with a middle support rail.

## PAINT HISTORY

It was reported that the tank was last painted in 2002. The specifications for the work completed in 2002 included the following.

### A. Exterior

The tank exterior was surface-prepared to the Steel Structures Painting Council (SSPC) SSPC-SP6 and primed with a zinc-rich primer, Tnemec Series 91 H2O Hydro-Zinc. An epoxy intermediate coat of Tnemec Series 66 Hi-Build Epoxoline was applied followed by a urethane finish color coat of Tnemec Series 73 Endura-Shield. A full clear coat of Tnemec Series 76 Endura-Clear was applied over the finish color coat. All surface preparation and painting work were completed within a containment shroud.

### B. Interior Dry

The tank interior dry was surface-prepared to SSPC-SP6 and primed with Tnemec Series 65 Poxi-Prime. A full epoxy finish coat of Tnemec Series 20 Pota-Pox was applied over the primer.

### C. Interior Wet

The tank interior wet was surface-prepared to SSPC-SP10 and primed with a zinc-rich primer, Tnemec Series 91 H2O Hydro-Zinc. Two coats of epoxy, Tnemec Series 20 Pota-Pox, were applied over the primer.

## PAINT CONDITION

### A. Exterior

There appear to be significant areas of missed clear coat on the top of the base cone, on the lower stem on the east and south side of the tank, on the upper stem on the northeast side of the tank, on the transition of the stem and ball on all sides of the tank, and below the top of the ball.

The exterior of the base cone had an average coating of 15 mils. There was small coating damage on the doors, apparently from the installation of the door switch. There



appears to be spot failure on the northwest and southeast side of the tank. An adhesion test of the exterior base cone resulted in a rating of 4, which is good adhesion.

The coatings on the roof of the tank appear to be in poor condition. The roof had an adhesion cross-cut test result of 2 to 3. The average coating thickness on the roof was 9 to 12 mils. There is significant clear coat and top coat delamination of the outer roof area. Coating damage was also noted on the tank roof from installation of antenna supports.

**B. Interior Dry**

The interior dry is generally in good condition.

The base cone coatings average 17 to 22 mils thick. There is coating delamination and rusting along the bottom weld seam and base plate of the base cone.

The interior dry between the wooden platform and the condensate platform had significant coating delamination of the top coat. It appears an overcoat over aluminum was done. The coating is peeling off and can be peeled back with very little effort along the weld seam and side of the stem and base cone. Epoxy will not adhere well to an aluminum coating system. This does not match the specifications that were provided for this tank.



There are coating failures on the pipes and valves. The average coating was 8 to 11 mils but significant corrosion was exhibited.

The walls in the tank stem are generally in good condition. The overflow piping coating averaged 5 mils thick and was not completely painted on the back side.

The platform floors show spots of corrosion. The stem to ball transition shows significant amounts of corrosion. The walls and seams around the platforms appear in generally good condition. The hatches, manways, and lips exhibit some corrosion.

### C. Interior Wet

The interior wet was only accessed from the roof because the tank was not completely drained. The interior wet coatings average 9 to 12 mils thick. The sidewall coatings appear to be in good condition with some minor rusting observed. Rust streaks trail down the length of the stem from corrosion above.

The access tube appears to have metal loss and areas of significant pitting that were previously painted. Most repainted pitted areas appear in good condition. There are a few areas of rust.

The interior wet ladder is in poor condition. The ladder rungs have significant signs of coating failures resulting in corrosion and metal loss.

The roof of the interior wet exhibits some minor corrosion at tank construction weld seams and major corrosion at weld areas (likely from mounting communication equipment) that were welded after the previous repaint of the tank. The roof beams also exhibit some corrosion. There was no caulk observed between the roof beams and ceiling of the tank. Rusting was observed along the top side of these beams and the roof.



## RECOMMENDATIONS

This section presents the recommended improvements to upgrade and maintain the 67th Street water storage tank. The elevated tank appears in fair to good condition overall. Not all of the recommendations need to be implemented; however, they are listed for your information.

### A. Repair or Replace Exterior Coatings

Based on the condition of the exterior coatings and the previous repainting work completed, two options were developed for repair. Option 1 is recommended for implementation.

- Option 1. Abrasive-blast to SSPC-SP6 Commercial Blast to the nearest weld seam of the upper half of the tank ball and all metal within that area that has significant coating delamination. Spot prepare all other areas with coating delamination to SSPC-SP6. Brush blast the remainder of the exterior of the tank to SSPC-SP7 to remove the clear coat. Prepare the tank exterior inside shrouding to prevent damage to nearby structures.

Prime the exterior upper ball with epoxy and apply a urethane intermediate coat. Follow the intermediate coat with one finish color coat of fluoropolymer.

Prime all spot-prepared areas and apply a full tie coat of epoxy over the remaining exterior portions of the tank. Apply one intermediate coat of urethane followed by one finish color coat of fluoropolymer.

This coating system should protect the tank and provide good color and gloss retention for 15 to 20 years.

- Option 2 Abrasive-blast the entire exterior to SSPC-SP6 Commercial Blast. A shroud is recommended. Prime the exterior with a zinc-rich primer and apply a urethane intermediate coat. Follow the intermediate coat with one finish color coat of fluoropolymer. This coating system is expected to maintain color and gloss retention and protect the tank steel for up to 25 years.

#### **B. Repair Interior Wet Coatings**

Partial abrasive-blast failed areas of the interior wet ceiling along weld seams, beams, ladder, and manways to SSPC-SP10 Near White. This includes all areas damaged from welding supports on the exterior roof. All pitted areas should be filled prior to painting. Prime surface-prepared areas with epoxy and apply two additional coats of epoxy. Seal along the roof beams and ceiling with caulk.

It should be noted that the interior wet coatings system is reported to be 11 years old. The typical life expectancy of interior wet coatings is approximately 15 years. Replacement of the existing coating system on the interior wet at the same time as the exterior coating work may be beneficial by reducing the maintenance schedule for painting the tank in the future.

#### **C. Repair Interior Dry Coatings**

Power tool or abrasive-blast rusted areas in the interior dry to SSPC-SP6. This is primarily needed on the platforms, catwalk, manways, fittings, supports, and overflow piping. All pitted areas should be filled prior to painting. Prime damaged areas with epoxy primer and apply a finish coat to match existing. The existing epoxy coating that was previously applied over the existing aluminum coating should be fully removed, along with the aluminum coating, by surface preparing to SSPC-SP6. A two-coat epoxy system should be applied in those areas. The extent of the areas with an aluminum undercoat is unknown and does not match what was originally specified to be completed.

1. Abrasive blast pipe in vault to SSPC-SP6 and provide a two-coat epoxy system.
2. Install a new 24-inch-diameter flanged manway in the tank roof and install a new fail-safe vent bolted to the flanged manway to protect against pressure/vacuum damage. Provide a gasket between the flanges.
3. Replace the lid on the condensate platform hatch with a new lid.
4. Replace deteriorated ladder rungs on the interior wet ladder. Install safety climb system on interior wet ladder.

5. Seal the annular space between the side of the access tube and the roof penetration collar to prevent contamination from entering the water containment portion of the tank.
6. Continue operation and yearly maintenance of the cathodic protection system.
7. Provide a No. 4 mesh screen on the overflow pipe.
8. Provide a splash pad for overflow and grade to drain away from tank.

### OPINION OF PROBABLE COSTS

This section presents an opinion of probable costs for the recommended improvements. The costs were developed based on recent projects of similar scope and information from coating suppliers.

Item	Description	Partial Blast and Overcoat	Full Blast and Recoat
1a.	Partial surface preparation and overcoat of tank exterior, including shroud	\$210,000	
1b.	Full blast and recoat exterior of tank, including shroud		\$230,000
2a.	Spot surface preparation of interior wet and spot coat; caulk roof beams	\$35,000	
2b.	Full blast and recoat of interior wet; caulk room beams		\$85,000
3.	Spot surface prepare interior dry and spot coat	\$30,000	\$30,000
4.	Full blast and recoat of valve vault piping	\$10,000	\$10,000
5.	Provide new roof manway and fail-safe roof vent	\$15,000	\$15,000
6.	Replace condensate platform manway lid	\$2,000	\$2,000
7.	Replace ladder rungs and install safety climb system on interior wet ladder	\$7,000	\$7,000
8.	Seal annular space to interior wet between access tube and roof	\$2,000	\$2,000
9.	Continue operation and maintenance of cathodic protection system	By Village	By Village
10.	Provide No. 4 mesh screen on overflow pipe	\$100	\$100
11.	Provide splash pad and grading for overflow discharge	\$1,000	\$1,000
	Subtotal	\$312,100	\$382,100
	Contingency (15 percent )	\$46,900	\$57,400
	<b>Total</b>	<b>\$359,000</b>	<b>\$439,500</b>

**Opinion of Probable Costs**

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\*Corporate Headquarters



Professional

Engineering

Services

# Standpipe Observation

## Report

Village of

Willowbrook, IL

August 2013



# Report for Village of Willowbrook, Illinois

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## Standpipe Observation Report



Prepared by:

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August 2013



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**BACKGROUND INFORMATION**

Inspector: Steve Kluesner  
Anand Sridhar

Observation Date: August 16, 2013

Location: 75th Street  
Willowbrook, Illinois

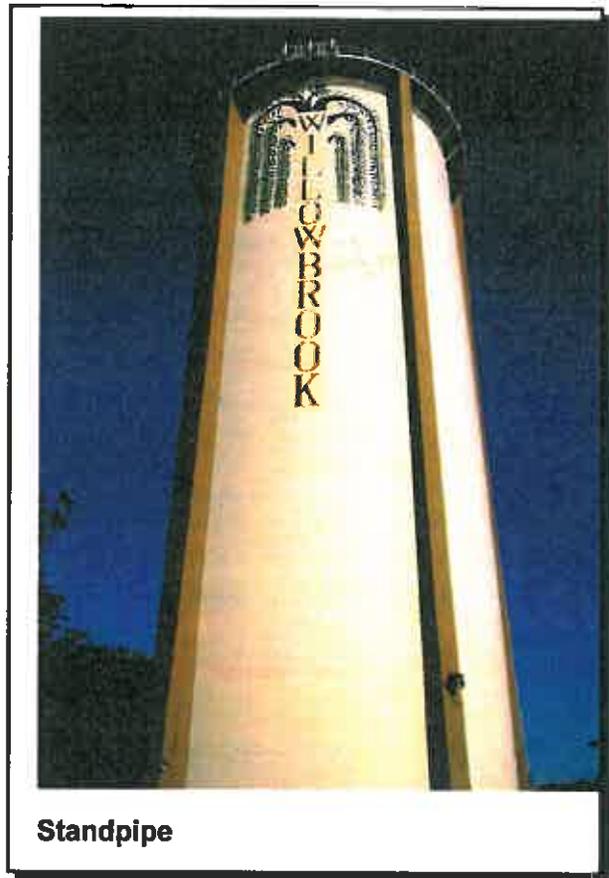
Nameplate Data: Constructed by Chicago  
Bridge and Iron Company  
(CB&I)  
Na-Con, Inc. in August 1985  
Contract No. C-511

Capacity: 3,000,000 gallons

Nominal Diameter: 57 feet 9.5 inches

Nominal Height: 153 feet 6 inches

This is a standpipe tank. "WILLOWBROOK" is written in block lettering vertically down the pipe with a willow tree logo at the top of the tank.

**Standpipe**

The tank was approximately one-half full at the time of observation.

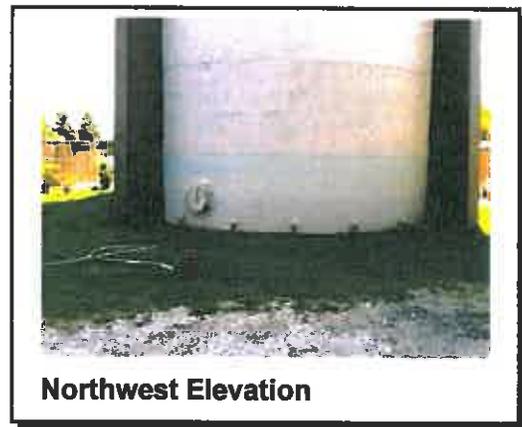
Photographs of the structure and surrounding area were taken.

**SITE INFORMATION****A. Access to Site**

The main entrance is via an asphalt drive that serves the standpipe and water supply facility. There also appears to be a small asphalt drive to the northwest of the site that connects to 73rd Court.

**B. Surrounding Structures**

There are several structures owned by the Public Works Department and one cellular building on the same site as the standpipe. The Public Works building is approximately 30 feet north of the standpipe. The water treatment plant building is approximately 15 feet south of the south pilaster.

**Northwest Elevation**

There is a domed shed (apparently for salt storage) southeast of the standpipe and three separate storage areas for gravel and other materials east of the standpipe.

The standpipe on the north and east sides is surrounded by a retaining wall and guardrail system approximately 15 feet from the tank.

There are four 24-inch-diameter catch basins within 7 feet of the standpipe in all four quadrants.

There is a fire hydrant 16 feet northwest of the standpipe.

There is electrical power and an associated transformer enclosure approximately 14 feet from the southwest quadrant.

The standpipe is surrounded by asphalt driveway in the north, east, and west. The driveway is a minimum of 15 feet wide in all directions.

There is a 16-foot by 24-foot chain link fence that houses a US Cellular building approximately 7.5 feet from the northeast pilaster.

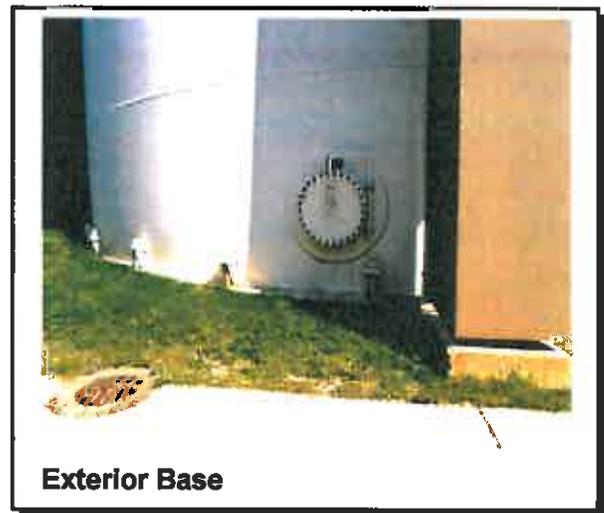
## FOUNDATION

There are no indications of differential foundation settlement. No soil is eroded, nor is there visible undermining of the foundation. The grade appears to be uneven on the southwest side of the tank. The soil appears dry and not saturated.

There are no indications of underground pipe leaks.

Some of the 28 2 7/8-inch anchor bolts exhibit moderate corrosion. The chairs are 8 inches by 12 inches.

The tower rests on a concrete foundation. The foundation is exposed on the south side approximately 3 to 5 inches but is at grade on all other sides. The south side foundation is weathered but appears in good condition. The grout is spalling on the west side of the standpipe but appears to be in good condition on all other sides.



Exterior Base

## PIPING

There is 8-inch-diameter steel overflow piping located on the southeast side of the tank that is routed inside a pilaster. The piping outside of the pilaster appears to be ductile iron and has a few damaged portions that are rusting. The screen appears to be size 4 mesh and is located approximately 17 inches above the concrete sidewalk/splash pad. There is no flapper valve. The screen appears in good condition.

The overflow pipe is located within the 36-inch by 54-inch southeast pilaster. There is a 30-inch by 30-inch bolted steel plate for access into the base of the pilaster. The overflow pipe appears in good condition when observed from the top of the reservoir. No coating measurements were taken.

The fill pipe into the bottom of the standpipe was not observed.

## ACCESSORIES

### A. Electrical Service and Devices

A transformer is located on the southwest side of the tank. There is electrical conduit powering the halogen lights on the southeast and northwest pilasters. There is also an antenna with associated conduit located on the northwest pilaster. The halogen lights and antenna are both approximately 30 feet above ground level.

There are three incandescent lights in the access pilaster. The bottom light was not working. There is a double-obstruction light located on the top of the tank.

### B. Cathodic Protection

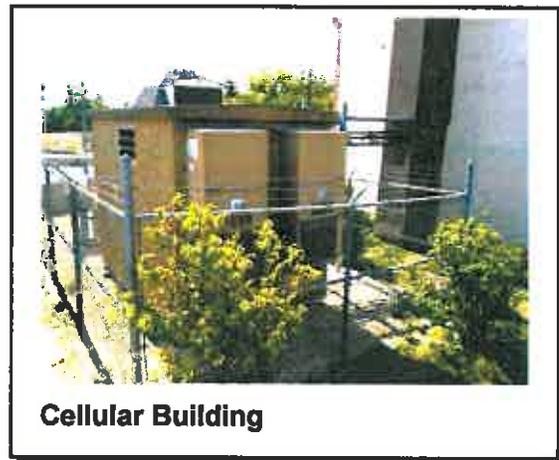
Cathodic protection was not observed.

### C. Cellular Additions

There are six cellular antennas mounted on the railing on the top of the standpipe, three on the north side and three on the southeast side. Cables are routed from the cellular building along an ice bridge to the eastern pilaster. Cables are routed up the tank inside the eastern pilaster and along the handrail on top of the tank.



**Overflow Piping**



**Cellular Building**

## LADDERS AND DOORS

### A. Ladder

The ladder for the standpipe is located in the southern (access) pilaster. The ladder appears to be in good condition with some corrosion around the weld seams where the ladder rung connects to the ladder side rail. The ladders are 16 inches wide with 12-inch spacing between square rungs. There is a rod-style safety climb system.

There is an arching ladder that begins on the south side of the tank roof and terminates at the top of the roof. This ladder also has a rod-style safety climb system.

**B. Doors**

The only door is located in the southern pilaster. The door is a 1/4-inch-thick steel plate approximately 78 inches tall by 25 inches wide.

**MANWAYS, PILASTERS, AND RAILINGS****A. Pilasters**

There are five hollow pilasters that are approximately 36 inches by 54 inches. Each has a 30-inch by 30-inch steel plate bolted access opening, except the southern pilaster which contains the door. The pilasters are located in the northeast, southeast, south, southwest, and northwest, and they appear to be evenly spaced. The northeast pilaster is used for cellular cabling. The northeast pilaster exhibits noticeable corrosion damage around the weld seam for the cellular cabling. The southeast pilaster is used for the overflow pipe. The south pilaster is used for the access ladder. The northwest and southwest pilasters appear to be empty.

**B. Sidewall Manways**

There are two manways at the bottom of the standpipe that are approximately 25 inches in diameter. They are located adjacent to the southern and northwestern pilasters. Hatch covers are attached to a swing-arm welded to the tank. There are gaskets between the manway and covers. The hatches are in good condition, except the bolts show significant rust.

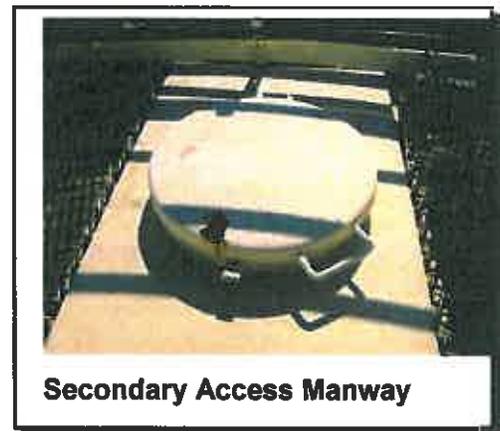
**C. Roof Manways**

There is a 36-inch-diameter access manway on the southern pilaster to the roof. This manway has a 4-inch curb with 2 inch hinged overlapping lid. There is a 1-inch-high cutout along the curb.

There are two secondary 24-inch-diameter access manways in the southwest and northwest pilasters. There are no ladders. These manways also have a 4-inch curb and 2-inch hinged overlapping cover.

There is a 24-inch-diameter manway with 4-inch curb and 2-inch hinged overlapping cover in the southeast pilaster to the overflow pipe. There is no ladder.

There are two 24-inch-diameter manways to the interior wet. They are located just west of and accessible by the roof ladder. Both manways have a 4-inch curb and 2-inch hinged overlapping cover. There are no ladders in the interior wet.



#### D. Roof Platform and Railing

There is a 4-foot-wide platform around the perimeter of the standpipe. There is a 42-inch-high handrail with toe plate, midrail, and top handrail.

The grating is unpainted but appears to be in good condition. The roof platform encompasses the tops of the five pilasters.



**Roof Platform**



**Roof Vent**

#### E. Roof Vent

There is one mushroom-style roof vent. The screen is rusted and appears in poor condition. The tightening bolts were loose.

#### G. Cellular Mounting Devices

There are currently six cellular cables on the northeast pilaster. Three cables run along the bottom of and parallel to the railing and are mounted on the railing to the north, and three cables are run and mounted similarly to the southeast.

### PAINT HISTORY

It was reported the tank was last painted in 1999. The specifications for the work completed in 1999 included the following.

#### A. Exterior

The lower one-third of the tank's exterior was surface-prepared to Steel Structures Painting Council (SSPC) SSPC-SP6 and primed with a zinc-rich primer, Tnemec Series 91 H2O Hydro-Zinc. The upper two-thirds of the tank were power-washed in accordance with SSPC-SP12, spot surface-prepared to SSPC-SP11 Power Tool Cleaning, and spot-primed with Tnemec Series N27 epoxy. An intermediate coat of Tnemec Series 66 Hi-Build Epoxoline epoxy was applied, followed by a urethane finish color

coat of Tnemec Series 73 Endura-Shield. A clear coat of Tnemec Series 76 Endura-Clear was applied over the logo only.

**B. Interior Dry (Pilasters)**

The tank interior dry was surface-prepared to SSPC-SP6 and primed with Tnemec Series 65 Poxi-Prime. A full epoxy finish coat of Tnemec Series 20 Pota-Pox was applied over the primer.

**C. Interior Wet**

The tank interior wet was surface-prepared to SSPC-SP10 and primed with a zinc-rich primer, Tnemec Series 91 H2O Hydro-Zinc. Two coats of epoxy, Tnemec Series 20 Pota-Pox, were applied over the primer.

**PAINT CONDITION**

**A. Exterior Sidewalls**

The exterior sidewalls along the base have an average coating thickness of 10 mils but were measured as low as 6 mils in some places. An adhesion test was performed on the exterior sidewalls near the base of the tank. Adhesion of the coatings is good at the base of the tank.

The exterior coatings are very chalked. A methyl-ethyl-ketone wipe test was conducted on the sidewall near the base of the tank. The exterior coatings rubbed off very easily. This is an indication the coatings are not suitable for overcoating with a high-performance coating system.

There are significant areas of rust spots where coatings failed. The most significant coating failures occur 70 to 80 feet from the bottom of the tank on sidewalls where the tank was last overcoated in 1999.

There is significant damage on tank sidewalls at the bottom of each pilaster. There are some coating failures on the exposed overflow pipe.



**B. Exterior Roof**

Many spot failures, approximately 6 inches in diameter, were observed on the roof tank. An adhesion test was performed on the tank roof. The adhesion of the coatings is good on the roof away from the spot failures. The rooftop has very few failures. The coating thickness averages 18 mils.

**C. Interior Dry**

The interior face of the pilasters is considered the interior dry. There appeared to be many spot failures, and there was significant corrosion noted around the seams and at the edges (the gap between the pilaster sidewalls and face of the tank sidewalls). There is coating damage at the base of the northeast pilaster from cellular cable penetrations.

**D. Interior Wet**

The interior wet sidewalls appeared visually good. Some corrosion was observed around the interior wet manways. The roof beams appeared to be in good condition with minor corrosion observed on the very top part of the beam. No caulk was observed between the beams and roof plates.

**RECOMMENDATIONS**

This section presents the recommended improvements to upgrade and maintain the standpipe water storage tank. Not all the recommendations need to be implemented; however, they are listed for your information.

**A. Full Blast and Recoat Tank Exterior**

The existing coatings are 14 years old. A majority of the tank was overcoated in 1999, which has base coatings much older. The adhesion of the coatings is good; however, a methyl-ethyl-ketone wipe test on the exterior removed the coatings easily, which indicates this tank is not a good candidate for overcoating with high-performance coatings.

Abrasive-blast the entire exterior to a SSPC-SP6 Commercial Blast. All weld seams should be abrasive-blasted to SSPC-SP10 Near White Blast. Prime the exterior with a zinc-rich primer and apply a urethane intermediate coat. Follow the intermediate coat with one finish color coat of fluoropolymer. This coating system is expected to maintain color and gloss retention and protect the tank steel for up to 25 years.

**B. Repair Interior Wet Coatings**

No immediate coating repairs are required in the interior wet. Minor coating repair could be completed that would include a partial abrasive-blast of failed areas of the interior wet ceiling along weld seams,

beams, and manways to SSPC-SP10 Near White. Prime surface-prepared areas with epoxy and apply two additional coats of epoxy. No coating repairs are required below the normal water level. Seal along the roof beams and ceiling with caulk.

It should be noted that the interior wet coatings system is reported to be 14 years old. The typical life expectancy of interior wet coatings is approximately 15 years. Replacement of the existing coating system on the interior wet at the same time as the exterior coating work may be beneficial by reducing the maintenance schedule for painting the tank in the future.

**C. Repair Interior Dry Coatings**

Power tool or abrasive-blast all rusted and delaminated areas inside the pilasters to SSPC-SP6. This is primarily needed on the lower 15 feet of the pilasters. Prime damaged areas with epoxy primer and apply a finish epoxy coat to match existing.

**D. Install a Fail-Safe Vent**

Install a fail-safe vent in place of the existing mushroom vent to protect against pressure/vacuum damage. This includes installing a flange on the existing vent pipe and providing a gasket between the flanges.

**OPINION OF PROBABLE COSTS**

This section presents an opinion of probable costs for the recommended improvements. The costs were developed based on recent projects of similar scope and information from coating suppliers.

Item	Description	Partial Blast and Overcoat	Full Blast and Recoat
1.	Full blast and recoat exterior of tank, including shroud	\$460,000	\$460,000
2.	a. Spot surface preparation interior wet and spot coat, caulk roof beams	\$70,000	
	b. Full blast and recoat of interior wet, caulk room beams		\$275,000
3.	Full blast and recoat bottom 15 feet of each pilaster and spot surface spot coat remainder	\$30,000	\$30,000
4.	New fail-safe vent	\$7,000	\$7,000
	Subtotal	\$567,000	\$772,000
	Contingency (15 percent)	\$85,000	\$115,000
	<b>Total</b>	<b>\$652,000</b>	<b>\$887,000</b>

**Opinion of Probable Costs**

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**MUNICIPAL SERVICES COMMITTEE MEETING  
AGENDA ITEM SUMMARY SHEET**

**AGENDA ITEM DESCRIPTION**

**DISCUSSION – HVAC MAINTENANCE CONTRACT PROPOSALS**

**COMMITTEE REVIEW**

- Finance/Administration  
 Municipal Services  
 Public Safety

Meeting Date:

October 14, 2013

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Discussion | <input checked="" type="checkbox"/> Approval of Staff Recommendation (for consideration by Village Board at a later date) |
| <input type="checkbox"/> Seeking Feedback      | <input type="checkbox"/> Approval of Staff Recommendation (for <u>immediate</u> consideration by Village Board)           |
| <input type="checkbox"/> Regular Report        | <input type="checkbox"/> Report/documents requested by Committee  |

**BACKGROUND**

The Village has for many years used the company, Season Comfort Corp., Westmont, for heating ventilation and air conditioning (HVAC) maintenance service in the Village Hall building. They have installed many of the HVAC units currently serving the Village Hall, and staff is satisfied with their response time on calls and quality of work. Upon acquiring the 835 Midway Drive building, we learned that the owners of that building were under an HVAC maintenance contract with The Heat Engineering Company, Countryside. This contract will expire at the end of the year for the 835 building. The former owners of the 835 Midway Drive building are extremely satisfied with the maintenance services provided by The Heat Engineering, and advised that the annual fee for their service contract was by-far the lowest offered by similar contractors.

**REQUEST FOR FEEDBACK**

Since we are in need of a HVAC service agreement to cover both the public works garage and the newly acquired 835 Midway Drive building (after December 31, 2013), staff contacted The Heat Engineering Company to request a service agreement proposal. The following is a cost comparison for a one-year HVAC service agreement, including quarterly inspections:

LOCATION	Season Comfort Corp.	The Heat Engineering Co.
7760 Quincy Street (Village Hall)	\$2,428	\$2,975
700 WB Cntr. Pkwy. (PW Garage)	\$1,584	(included in the above price)
835 Midway Drive	\$2,750	(included in the above price)
<b>Annual Total Cost:</b>	<b>\$6,762</b>	<b>\$2,975</b>

Each company's agreement includes quarterly inspections and a similar list of preventative maintenance services provided under the agreement. The Heat Engineering Company will provide a 10% discount on repair parts. With regard to labor fees for repair work not covered under the agreement:

RATE - Type	SEASON COMFORT	THE HEAT ENGINEERING
Regular	\$125.00/hr.	\$129.00/hr.
Overtime	\$187.50/hr.	\$192.00/hr.

**STAFF RECOMMENDATION**

Based on the above, although at a slightly higher hourly labor rate for work not covered under the service agreement, The Heat Engineering Company proposal is lower than our current contractor. Staff would recommend that we accept new maintenance service agreements from The Heat Engineering Company.



September 4, 2013  
Village of Willowbrook  
7760 Quincy St.  
Willowbrook IL 60527

Mr. Tim Halik:

**RE: Service Agreement for heating and cooling equipment**

Thank you for allowing Heat Engineering the opportunity of making the proposal of working in your facilities. We highly recommend obtaining a service agreement to cover your HVAC equipment. A regular maintenance schedule ensures longevity and helps your equipment to achieve maximum efficiency. We propose a Service Agreement to cover the following equipment:

7760 Quincy:

- 6 Roof top Heat/Cool Units
- 1 Condenser 1 Air Handler
- 3 Heaters
- 1 Water Heater

129 / hr. - REG.

700 Willowbrook Center Parkway

- 1 Furnace
- 1 Condenser
- 1 Thru The Wall Unit
- 3 Heaters
- 1 Water Heater

192 / hr. - O.T.

835 Midway

- 4 Roof top Heat/Cool Units
- 2 Unit Heaters

---

\$2,975.

This agreement covers the above equipment and controls located in the immediate area of the equipment and the room thermostats. It does not cover any of the piping throughout the building, any electrical conduits or wiring from the panels to the equipment, but does cover fuses and troubleshooting of the same. Balancing of the airflow would not be included. Compressors and heat exchangers are not included unless covered under manufactures warranty.

**THE HEAT ENGINEERING COMPANY** is not required under this agreement to make repairs caused by fire, flood, acts of God, and improper repairs made by others or any causes not the result of normal wear and tear.

Normal maintenance would be during our usual working hours: 7:30 A.M. to 4:00 P.M. Monday through Friday. Emergency calls would be done as necessary, but if possible during normal working hours. We will normally respond within four hours, but due to circumstances, it may take up to 24 hours

**SERVICE CONTRACT MAINTENANCE** includes:

Once a contract year complete clean and check of the heating equipment listed. This service includes changing the filters (price of filters not included), lubricating, checking the belts, checking all the safety devices, calibrating thermostats, cleaning the burners, checking heat exchanger, checking for gas leaks, checking the flue pipe and cleaning if necessary, checking out the entire operation of the heating system.

Once a contract year complete clean and check of the air-conditioning equipment listed. This includes washing down the coils, lubricating, checking pressures, checking the filters (price of filters not included), flushing out condensate drains and checking the entire operation of the air-conditioning.

Additional service calls on listed equipment are billed at the cost of labor at a preferred rate and parts discounted 10%

This agreement also provides two additional visits to replace filters, making this a quarterly event.

.....\$ 2975.

This contract will go into effect upon receipt of your check and a signed copy of this agreement. We appreciate your business and if you should have any questions regarding this agreement, please do not hesitate to call me.

Sincerely,



Michael Vlach  
Service Manager

ACCEPTED BY: \_\_\_\_\_



**VILLAGE OF WILLOWBROOK PUBLIC WORKS**  
700 Willowbrook Center  
Willowbrook, Illinois 60521  
(630)-323-8215  
**MAINTENANCE AGREEMENT**  
10-1-13 THRU 9-30-13

**TERMS:**

Cost per quarter for  
service inspection :

\$396.00

**ADDITIONAL ITEMS:**

Overtime rate per hour for  
non service agreement repairs

\$187.50

Labor rate per hour for  
non service agreement repairs

\$125.00

Total for yearly inspections

\$1,584.00

The Village of Willowbrook Shall reject any or all proposals presented, if the Village deems it is in the best interest to do so.

In the event the Service Contractor shall fail at any time to perform work specified in the service agreement, the Village of Willowbrook may terminate the service agreement.

**PROPOSAL SUBMITTED BY:**

Vito Palella

Vito Palella  
Company President

Accepted and Approved  
Village of Willowbrook

BY: \_\_\_\_\_  
Date

SEASON COMFORT :

P.W. - \$1,584.

835 - 2,750.

V.H. - 2,428. (THRU  
4/30/14)

6,762.

**SERVICES TO BE PROVIDED:**

Provide two (2) inspections per year.  
During each inspection, an inspection check list must be provided and upon completion of the inspection, submit it to the Village of Willowbrook.

Repair of equipment under contract will be done in accordance with hourly rates provided.

Repair of equipment will only be done upon authorization from Public Services Supervisor.

The service contractor will provide to the Village of Willowbrook instructions on how to efficiently operate the existing Heating & Air Conditioning equipment for greater operating efficiency.

The Service Contractor will provide to the Village of Willowbrook, technical advise and trouble shooting of any system failures that might occur during the term of the contract.

**GENERAL:**

The planned Service Agreement is a one (1) year contract, Starting October 1, 2013 thru September 30, 2013

The planned Service Agreement shall include new filters, lubricating, checking and adjusting fan belts and pulleys, and checking the system operation.

All filters to be changed every six (6) months

Replacement parts, other than grease and oil, are not included in this agreement and will be billed when required at a price agreed upon by suppliers and the Village.

The Service Contractor will provide all maintenance tools and equipment which is necessary to complete the assignment.

The Service Contractor will provide to the Village of Willowbrook a copy of the Certificate of Insurance at the time the contract is executed.

10/7/2013

VILLAGE OF WILLOWBROOK-PUBLIC WORKS  
 700 WILLOWBROOK CENTER  
 WILLOWBROOK IL 60521

Type	Manufacturer	Model No.	Serial No.	Belt Size	Filter Size	Capacity	Location
6 UNIT HEATERS EXHAUST	MODINE FOR TRUCKS	CAN'T GET TO TAGS					
INLINE EXHAUST		NOT USED					GARAGE
FURNACE	YORK	TG95080C16MP11A	WOC9667791	NONE	1-20X25X1 PLEATED		
CONDENSER	YORK	TCGD4254351A	WOD9704535				
HOT WATER HTR	LOCHNIVAR	LVN051G	FA11498430				

**VILLAGE OF WILLOWBROOK**  
835 Midway  
Willowbrook, Illinois 60521  
(630)-323-8215  
**MAINTENANCE AGREEMENT**  
10-1-13 THRU 9-30-13

**TERMS:**

Cost per quarter for  
service inspection

\$687.50

**ADDITIONAL ITEMS:**

Overtime rate per hour for  
non service agreement repairs

\$187.50

Labor rate per hour for  
non service agreement repairs

\$125.00

Total for yearly inspections

\$2,750.00

*The Village of Willowbrook Shall reject any or all proposals presented, if the Village deems it is in the best interest to do so.*

*In the event the Service Contractor shall fail at any time to perform work specified in the service agreement, the Village of Willowbrook may terminate the service agreement.*

**PROPOSAL SUBMITTED BY:**



Vito Palella  
Company President

**SEAL**

Accepted and Approved  
Village of Willowbrook

BY: \_\_\_\_\_  
Date

BY: \_\_\_\_\_  
Date

**SERVICES TO BE PROVIDED:**

**Provide four (4) inspections per year.**

During each inspection, an inspection check list must be provided and upon completion of the inspection, submit it to the Village of Willowbrook.

Repair of equipment under contract will be done in accordance with hourly rates provided.

Repair of equipment will only be done upon authorization from Public Services Supervisor.

The service contractor will provide to the Village of Willowbrook instructions on how to efficiently operate the existing Heating & Air Conditioning equipment for greater operating efficiency.

The Service Contractor will provide to the Village of Willowbrook, technical advise and trouble shooting of any system failures that might occur during the term of the contract.

**GENERAL:**

The planned Service Agreement is a one (1) year contract, Starting October 1, 2013 thru September 30, 2013

The planned Service Agreement shall include new filters, lubricating, checking and adjusting fan belts and pulleys, and checking the system operation.

All filters to be changed every three (3) months

Replacement parts, other than grease and oil, are not included in this agreement and will be billed when required at a price agreed upon by suppliers and the Village.

The Service Contractor will provide all maintenance tools and equipment which is necessary to complete the assignment.

The Service Contractor will provide to the Village of Willowbrook a copy of the Certificate of Insurance at the time the contract is executed.

10/7/2013

VILLAGE OF WILLOWBROOK  
835 MIDWAY  
WILLOWBROOK IL. 60521

Type	Manufacturer	Model No.	Serial No.	Belt Size	Filter Size	Capacity	Location
AIR HANDLER	TRANE	NO TAG			1-20X20X1 PLEATED		SHOP
ELECTRIC HEAT	DAYTON	CAN'T GET TO TAG					SHOP
CONDENSER	TRANE	RAUFB406-A	C84D04651				
RTU #1	TRANE	TCDD090D30ABC	R09101245D	1-A45	3-16X25X1 PLEATED		
RTU #2	TRANE	TFD090D30ABC	R09101293D	1-A44	3-16X25X1 PLEATED		
RTU #3	TRANE	TCDD048C30ABD	R09101186D	NONE	2-20X25X1 PLEATED		
RTU #4	TRANE	TCDD048C30ABD	R09101231D	NONE	2-20X25X1 PLEATED		
EXHAUST FAN	EMERSON	1CCB	21UCHBO				



EST. 1960

# Willowbrook

7760 Quincy Street  
Willowbrook, IL 60527-5594

Phone: (630) 323-8215 Fax: (630) 323-0787 www.willowbrook.il.org

## MONTHLY REPORT

### MUNICIPAL SERVICES DEPARTMENT

Permits issued for the month of September, 2013

#### Mayor

Frank A. Trilla

#### Village Clerk

Leroy R. Hansen

#### Village Trustees

Dennis Baker

Sue Berglund

Umberto Davi

Terrence Kelly

Michael Mistele

Paul Oggerino

#### Village Administrator

Tim Halik

#### Chief of Police

Mark Shelton

Alarm System	1
Bathroom addition	1
Concrete	5
Fence	3
Fire Alarm Alterations	1
In Ground Pool Demo	1
Interior Renovations	2
Kitchen Remodel	1
Patio Door Replacement	1
Plumbing Remodel	1
Reoccupancy	3
Reroof	9
Retaining Wall	1
Sprinkler System	1
Temporary Sign	4
Tenant Buildout	2
Wall Modification	1
<b>TOTAL</b>	<b>38</b>

Final Certificates of Occupancy	0
Temporary Certificates of Occupancy	0
Permit Revenue for September 2013	\$ 18,865.93
Total Revenue Collected for Fiscal Year To Date	\$ 125,607.20
Total Budgeted for Fiscal Year 2013/14	\$ 150,000.00
Total Percentage of Budgeted Revenue Collected to Date	83.74

Respectfully submitted,

Timothy Halik  
Village Administrator



Proud Member of the  
Illinois Route 66 Scenic Byway

MUNICIPAL SERVICES DEPARTMENT

PERMIT REVENUE

Fiscal Year 2013/14

MONTH	CURRENT FISCAL YEAR	PRIOR FISCAL YEAR
MAY	\$ 21,169.24	\$ 33,083.60
JUNE	\$ 19,335.70	\$ 30,569.43
JULY	\$ 48,123.47	\$ 11,471.85
AUGUST	\$ 17,977.86	\$ 14,433.22
SEPTEMBER	\$ 18,865.93	\$ 28,145.41
OCTOBER		\$ 6,068.00
NOVEMBER		\$ 8,590.80
DECEMBER		\$ 14,215.08
JANUARY		\$ 27,201.63
FEBRUARY		\$ 7,918.18
MARCH		\$ 19,167.39
APRIL		\$ 32,909.32
COLLECTED REVENUE	\$ 125,607.20	\$ 223,573.91
BUDGETED REVENUE	\$ 150,000.00	\$ 110,000.00
REVENUES COLLECTED- (OVER)/UNDER BUDGET	\$ 125,607.20	\$ (123,573.91)
PERCENTAGE OF BUDGETED REVENUE COLLECTED	83.74	212.34

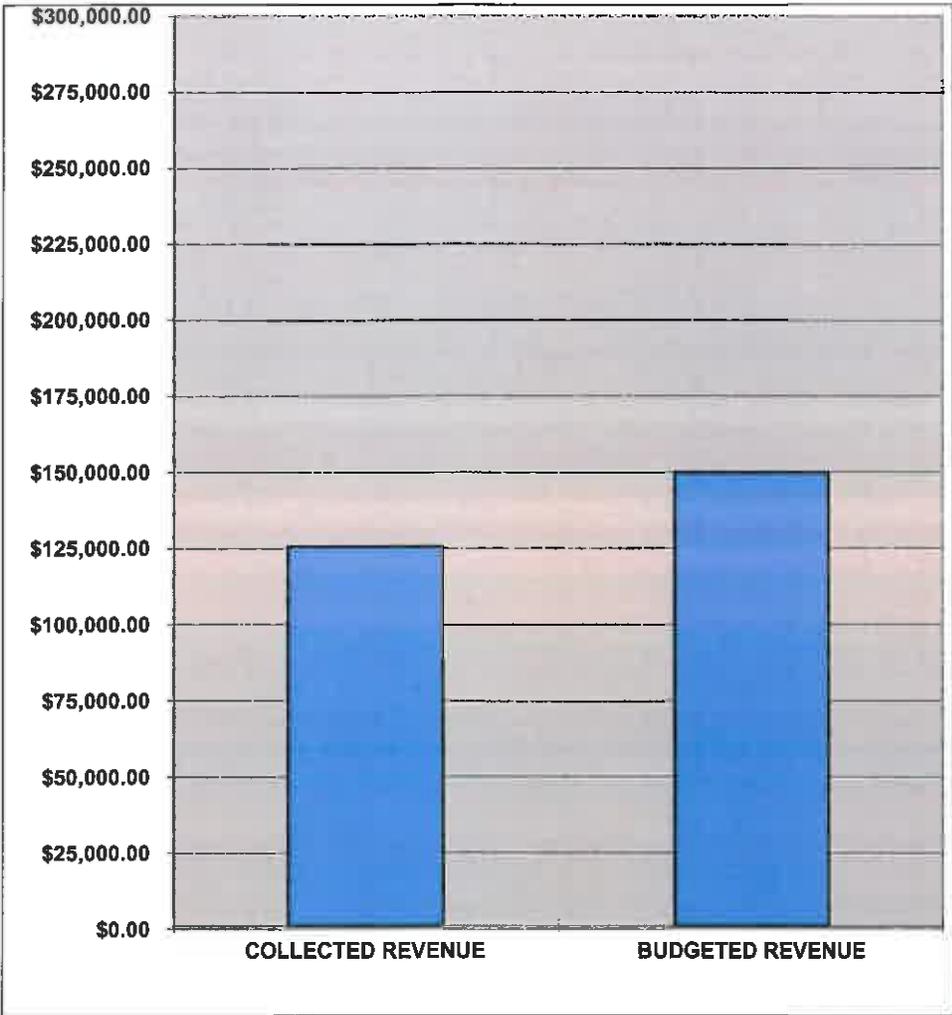
MUNICIPAL SERVICES DEPARTMENT

PERMIT REVENUE

	Fiscal Year 13/14	Fiscal Year 12/13
COLLECTED REVENUE	\$ 125,607.20	\$ 233,573.91
BUDGETED REVENUE	\$ 150,000.00	\$ 110,000.00

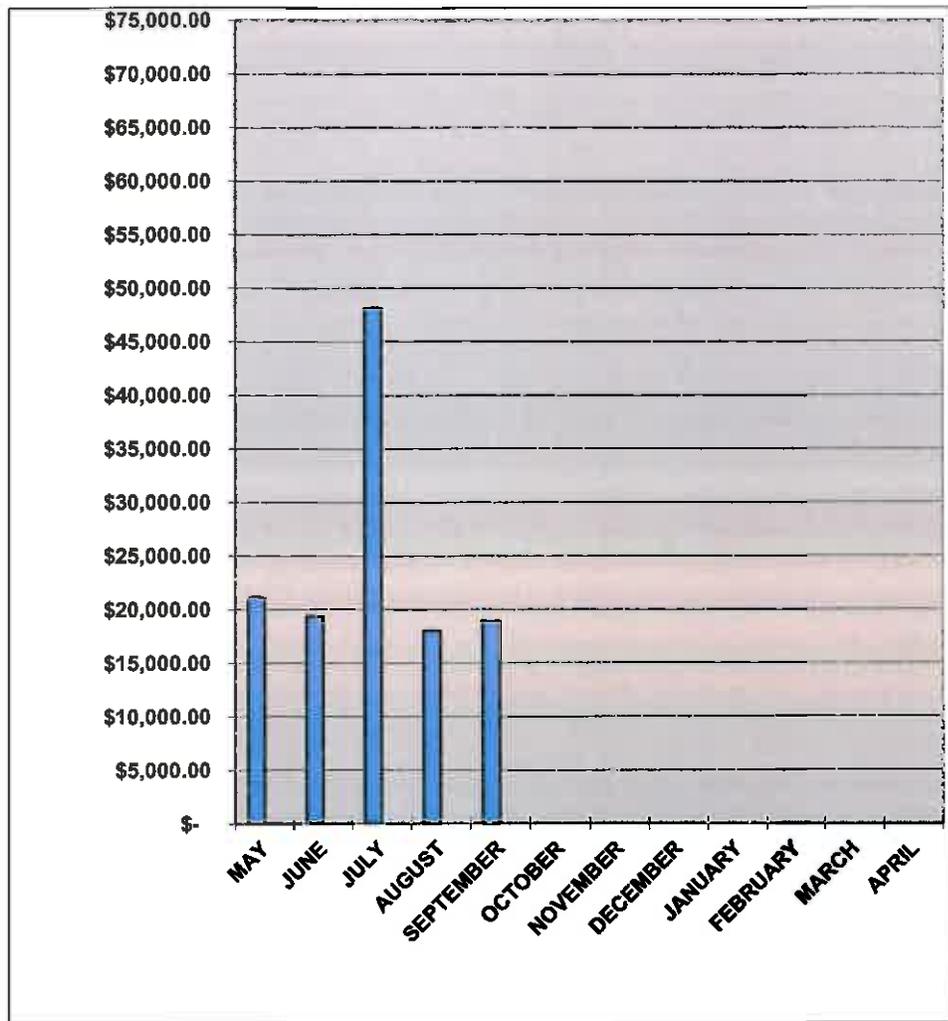
MUNICIPAL SERVICES DEPARTMENT

PERMIT REVENUE



# MUNICIPAL SERVICES DEPARTMENT

## PERMIT REVENUE



## 2012-13

Permit	Date Issued:	Name:	Address:	Permit Purpose:	Business Name:	Fee:	RES / COMM:	Date Released:
13-288	09/06/13	Midwest Express	40 W. 75th Street	Alarm System		\$ 100.00	R	09/06/13
13-292	09/17/13	David Page	6333 Wesley Road	Bathroom addition		\$ 500.00	R	09/17/13
13-271	09/03/13	Matthew Guardiola	207 Somerset Road	Concrete		\$ 125.00	R	09/04/13
13-287	09/11/13	Mike Silwoski	303 61st Street	Concrete		\$ 425.00	R	09/11/13
13-298	09/16/13	James Mirro	348 79th Street	Concrete Drive		\$ 125.00	R	09/16/13
13-266	09/16/13	Steven Zilkowski	6406 Waterford Cr	Concrete Drive		\$ 125.00	R	09/16/13
13-267	09/05/13	Abraham Saleh	7525 Clarendon Hills Rd	Concrete Patio		\$ 75.00	R	09/05/13
13-290	09/16/13	John Swieton	6636 Sheffield	Fence		\$ 50.00	R	09/16/13
13-255	09/16/13	Kristen Rodney	6333 Tremont	Fence		\$ 50.00	R	09/16/13
13-296	09/30/13	Paul Wong	364 63rd Street	Fence		\$ 50.00	R	09/30/13
13-289	09/16/13	The Plastics Group	7409 Quincy	Fire Alarm alterations	The Plastics Group	\$ 100.00	C	09/16/13
13-293	09/16/13	Bernhard Karacson	6600 Quincy Street	In ground pool demo		\$ 150.00	R	09/16/13
13-225	09/05/13	Paul Dayhoff	6050 Stewart Drive	Interior Renovations		\$ 1,819.21	R	09/05/13
13-279	09/11/13	Willowbrook Ford	7301 Kingery Hwy	Interior Renovations	Willowbrook Ford	\$ 6,201.20	C	09/11/13
13-294	09/16/13	Jennifer Brown	6349 Tremont Street	Kitchen Remodel		\$ 500.00	R	09/16/13
13-285	09/05/13	Phil White	12 Kent Court	Patio Door Replacement		\$ 75.00	R	09/05/13
13-260	09/27/13	Willowbrook Office Pl	625 Plainfield Road #336	Plumbing remodel	Crystal Home Health	\$ 100.00	C	09/20/13
13-275	09/03/13	Midwest Express	40 West 75th Street	Reoccupancy	Midwest Express	\$ 200.00	C	09/03/13
13-281	09/04/13	Don Wiskes	7668 Plaza Court	Reoccupancy	Tax Consulting Office	\$ 200.00	C	09/05/13
13-295	09/16/13	Willowbrook Office Pl	625 Plainfield Road	Reoccupancy		\$ 200.00	R	09/16/13
13-282	09/04/13	JDC Construction	7742 Blackberry	Reroof		\$ 35.00	R	09/04/13
13-278	09/05/13	John Lubien	7815 Clarendon Hills Rd	Reroof		\$ 35.00	R	09/05/13
13-301	09/18/13	Joseph Centeno	7501 Brookbank Rd	Reroof		\$ 35.00	R	09/17/13
13-302	09/19/13	Chunho Size	6300 Martin	Reroof		\$ 35.00	R	09/19/13
13-304	09/20/13	Paul Lucak	7802 Clarendon Hills Rd	Reroof		\$ 35.00	R	09/20/13
13-309	09/27/13	Mike Schuch	7725 Blackberry	Reroof		\$ 35.00	R	09/27/13
13-308	09/27/13	Nerijus Ceponas	7716 Appletree Lane	Reroof		\$ 35.00	R	09/27/13
13-307	09/27/13	Nerijus Ceponas	7711 Eleanor	Reroof		\$ 35.00	R	09/27/13
13-311	09/30/13	Vitalija Vaiklene	610 68th Street	Reroof		\$ 35.00	R	09/30/13
13-297	09/16/13	Nancy Baker	815 72nd Ct.	Retaining wall		\$ 75.00	R	09/16/13
13-284	09/11/13	Sandhya Shah	300 Ridgemoor Drive	Sprinkler System		\$ 50.00	R	09/11/13
13-272	09/16/13	Clovers Garden Center	735 Plainfield	Temporary Sign	Clovers Garden Ctr	\$ 200.00	C	09/16/13
13-283	09/16/13	Midwest Express	40 W. 75th Street	Temporary Sign	Midwest Express	\$ 100.00	C	09/16/13
13-229	09/17/13	Illinois Property Sol	500 Joliet	Temporary Sign	ETI	\$ 50.00	C	09/17/13
13-303	09/20/13	Willowbrook Ford	7301 Kingery Hwy	Temporary Sign	Willowbrook Ford	\$ 200.00	C	09/20/13
13-280	09/03/13	Illinois Property Sol	7700 Griffin Way	Tenant Buildout	Datamation	\$ 6,664.77	C	09/03/13
13-305	09/27/13	Dominick's Finer Food	6300 Kingery	Tenant Buildout	Dominick's	\$ 425.75	C	09/27/13
13-291	09/16/13	Glenda Sharp	7641 Blackberry Lane	Wall modifications		\$ 400.00	R	09/16/13

ACCT. NO.	DESCRIPTION	RECEIVED THIS MONTH	RECEIVED THIS YEAR	BUDGET AMOUNT	PERCENT COLLECTED	BUDGET REMAINING
<u>GENERAL CORPORATE FUND</u>						
<u>Operating Revenue</u>						
<u>Property Taxes</u>						
01-310-101	PROPERTY TAX LEVY-SRA	29,118.66	65,349.61	67,908.00	96.23	2,558.39
01-310-102	PROPERTY TAX LEVY-RD & BRIDGE	42,004.55	94,635.48	93,000.00	101.76	-1,635.48
01-310-103	PRIOR YEAR TAX COLL	0.00	0.00	0.00	0.00	0.00
*TOTAL	Property Taxes	71,123.21	159,985.09	160,908.00	99.43	922.91
<u>Other Taxes</u>						
01-310-201	MUNICIPAL SALES TAX	338,139.11	1,522,305.10	3,447,000.00	44.16	1,924,694.90
01-310-202	ILLINOIS INCOME TAX	75,818.23	395,349.31	725,760.00	54.47	330,410.69
01-310-203	AMUSEMENT TAX	5,728.55	31,224.96	31,000.00	100.73	-224.96
01-310-204	REPLACEMENT TAX	0.00	592.00	1,188.00	49.83	596.00
01-310-205	UTILITY TAX	85,885.64	444,681.45	1,160,000.00	38.33	715,318.55
01-310-207	TELECOMMUNICATION LEASE	0.00	32,743.11	32,743.00	100.00	-0.11
01-310-208	PLACES OF EATING TAX	43,326.96	206,298.53	450,000.00	45.84	243,701.47
01-310-209	WATER TAX	14,617.43	57,276.77	144,947.00	39.52	87,670.23
01-310-210	WATER TAX - CLARENDON WATER CO	0.00	286.53	750.00	38.20	463.47
*TOTAL	Other Taxes	563,515.92	2,690,757.76	5,993,388.00	44.90	3,302,630.24
<u>Licenses</u>						
01-310-301	VEHICLE LICENSES	0.00	0.00	0.00	0.00	0.00
01-310-302	LIQUOR LICENSES	0.00	3,500.00	51,500.00	6.80	48,000.00
01-310-303	BUSINESS LICENSES	31.25	3,298.75	40,770.00	8.09	37,471.25
01-310-305	VENDING MACHINE	0.00	0.00	2,000.00	0.00	2,000.00
01-310-306	SCAVENGER LICENSES	0.00	0.00	1,000.00	0.00	1,000.00
*TOTAL	Licenses	31.25	6,798.75	95,270.00	7.14	88,471.25
<u>Permits</u>						
01-310-401	BUILDING PERMITS	18,865.93	125,607.20	150,000.00	83.74	24,392.80
01-310-402	SIGN PERMITS	550.00	2,184.50	4,000.00	54.61	1,815.50
01-310-403	OTHER PERMITS	0.00	138.00	400.00	34.50	262.00
01-310-404	COUNTY BMP FEE	0.00	0.00	0.00	0.00	0.00
*TOTAL	Permits	19,415.93	127,929.70	154,400.00	82.86	26,470.30
<u>Fines</u>						
01-310-501	CIRCUIT COURT FINES	15,937.52	56,376.94	120,000.00	46.98	63,623.06
01-310-502	TRAFFIC FINES	2,904.00	13,357.32	25,000.00	53.43	11,642.68
01-310-503	RED LIGHT FINES	2,250.00	312,955.00	540,000.00	57.95	227,045.00
*TOTAL	Fines	21,091.52	382,689.26	685,000.00	55.87	302,310.74

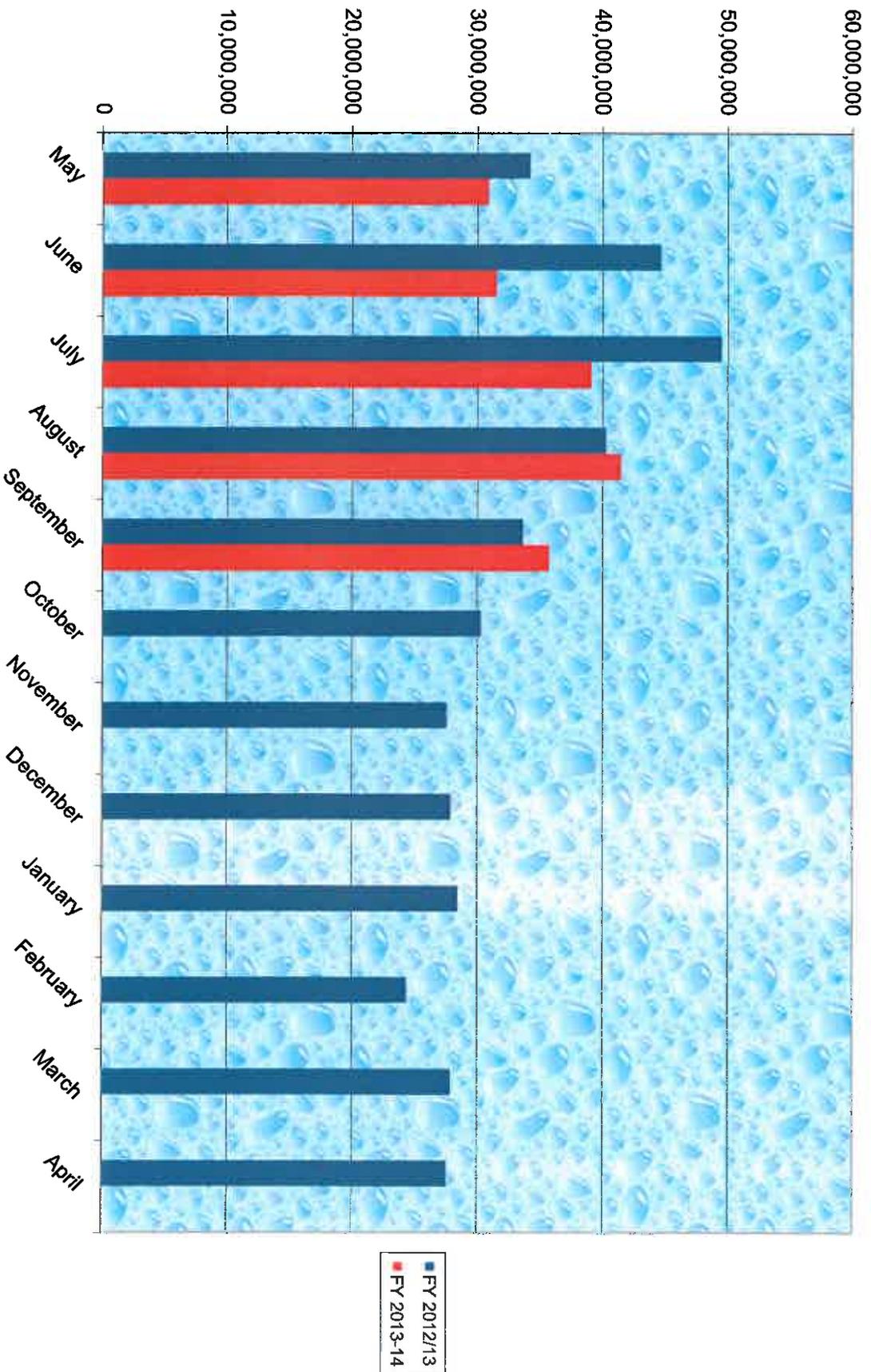
VILLAGE OF WILLOWBROOK - PUMPAGE REPORT  
TOTAL GALLONS PUMPED  
FY 2002/03 - FY 2013/14

Month	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
May	32,267,000	33,518,000	35,018,000	35,919,000	35,162,000	36,696,000	33,890,000	31,322,000	31,715,000	30,725,000	34,220,000	30,860,000
June	38,911,000	38,691,000	35,447,000	48,511,000	42,471,000	43,700,000	33,817,000	32,087,000	31,799,000	32,620,000	44,635,000	31,512,000
July	52,100,000	39,116,000	41,248,000	52,479,000	43,279,000	44,574,000	41,463,000	36,819,000	38,513,000	41,371,000	49,498,000	39,106,000
August	44,167,000	40,433,000	41,059,000	47,861,000	41,114,000	38,778,000	43,017,000	38,516,000	38,745,000	35,639,000	40,272,000	41,448,000
September	40,838,000	36,275,000	39,658,000	43,906,000	32,998,000	42,013,000	33,418,000	34,331,000	33,992,000	32,273,000	33,657,000	35,737,000
October	33,128,000	31,667,000	33,765,000	35,009,000	31,937,000	34,612,000	30,203,000	28,919,000	33,789,000	29,892,000	30,283,000	
November	28,560,000	28,260,000	30,106,000	29,515,000	29,153,000	29,847,000	28,054,000	26,857,000	28,125,000	27,138,000	27,535,000	
December	30,503,000	29,133,000	32,786,000	31,086,000	30,102,000	31,435,000	29,568,000	28,931,000	29,257,000	28,643,000	27,863,000	
January	30,343,000	29,602,000	31,223,000	29,411,000	30,340,000	32,444,000	29,383,000	28,123,000	28,401,000	28,846,000	28,427,000	
February	27,216,000	28,755,000	26,768,000	27,510,000	29,078,000	29,470,000	26,629,000	25,005,000	24,988,000	26,635,000	24,308,000	
March	29,488,000	30,315,000	30,025,000	29,905,000	30,362,000	31,094,000	28,408,000	27,945,000	27,909,000	28,911,000	27,862,000	
April	29,845,000	29,350,000	29,478,000	30,452,000	29,468,000	30,239,000	27,193,000	27,793,000	27,145,000	34,220,000	27,514,000	
<b>TOTAL</b>	<b>417,366,000</b>	<b>395,115,000</b>	<b>406,581,000</b>	<b>441,564,000</b>	<b>405,464,000</b>	<b>424,902,000</b>	<b>385,043,000</b>	<b>366,648,000</b>	<b>374,378,000</b>	<b>376,913,000</b>	<b>396,074,000</b>	<b>178,663,000</b>

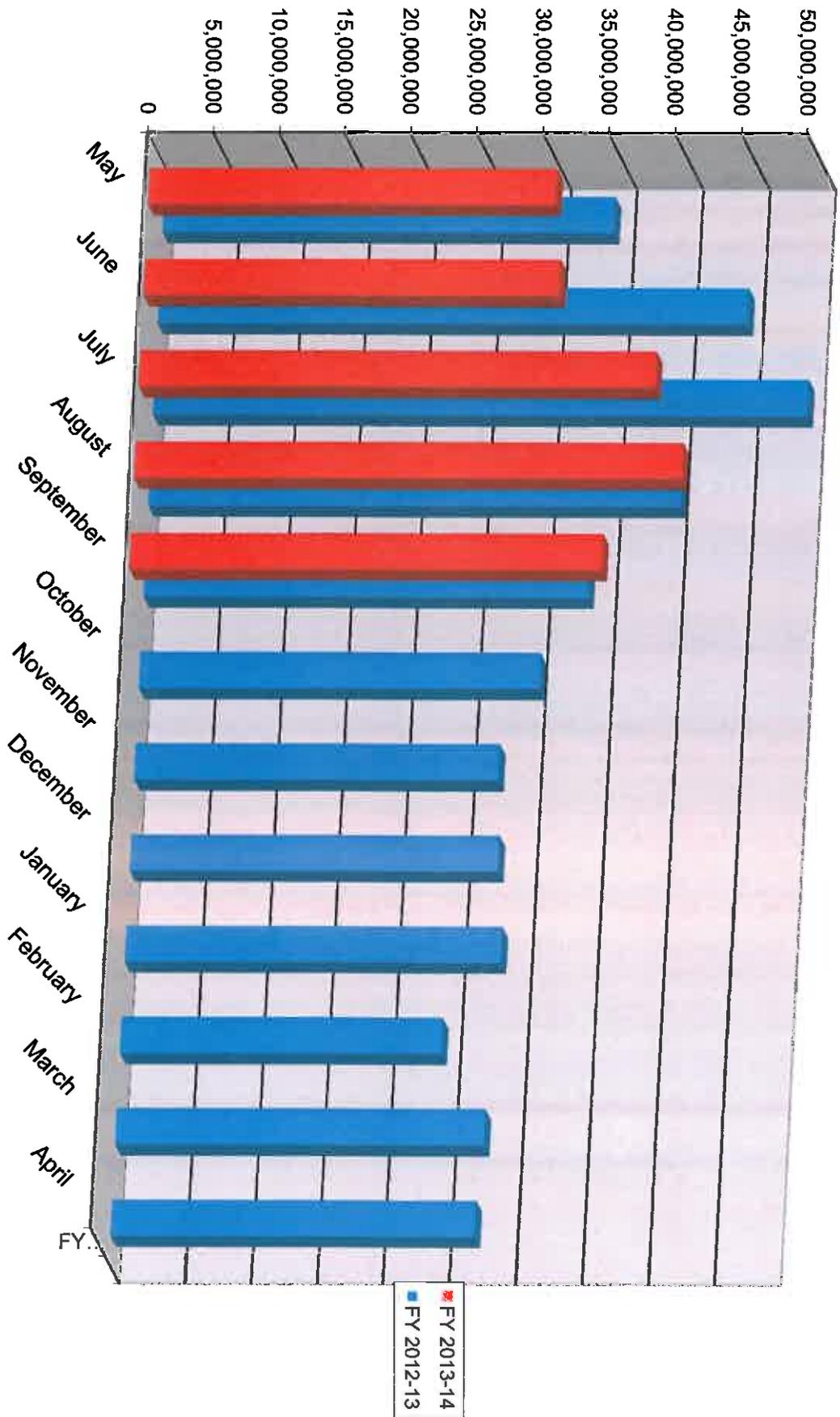
YEAR TO DATE LAST YEAR (gallons):	202,282,000
YEAR TO DATE THIS YEAR (gallons):	<u>178,663,000</u>
DIFFERENCE (gallons):	-23,619,000
PERCENTAGE DIFFERENCE (+/-):	-11.68%
FY13/14 PUMPAGE PROJECTION (gallons):	395,000,000
FY13/14 GALLONS PUMPED TO DATE:	<u>178,663,000</u>
CURRENT PERCENTAGE PUMPED COMPARED TO PROJECTION	<b>45.23%</b>

All table figures are  
in millions of  
gallons sold on a  
monthly basis per  
fiscal year.

# Village of Willowbrook Pumpage Report



Monthly Pumpage Chart





## Village of Willowbrook

August 2013 - Status Report

### Season Perspective

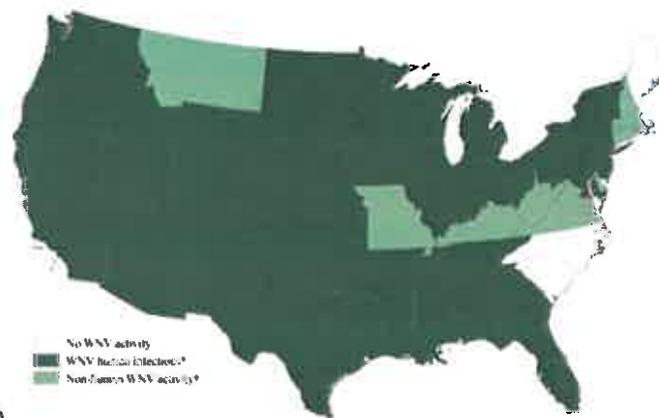
Weather conditions critically affect the seasonal mosquito population. Excessive rainfall periods trigger hatches of floodwater mosquitoes (*Aedes vexans*), the dominant annoyance species in northern Illinois that has a flight range of 15 to 20 miles.

An unusual distribution of temperature over North America this August has resulted in the month running about 3 degrees below normal in Chicago. In addition, there has been a significant lack of precipitation since July 1<sup>st</sup> through August. During this period less than 50% of normal rainfall has been recorded at O'Hare (approximately 3.0 inches versus the normal amount of 6.3 inches). As a result, the floodwater mosquito population has been curtailed, while the *Culex* population has been steadily building during this dry spell. In recent weeks, the number of West Nile virus (WNV) positive *Culex* mosquito samples has been spiking. The warming trend during the week of August 19<sup>th</sup> in combination with the lack of rainfall is setting-up the classic pattern for the increased risk of WNV transmission as September approaches.

August is prime time for WNV activity. Periodic rainfalls fill artificial containers and cause small pocket flooding around homes leading to *Culex* breeding and transmission of WNV. Inspection and larviciding operations have been intensified and truck adult mosquito control sprayings should be timed to hit brood peaks, as well as, positive reports of WNV in the *Culex* population.

### Mosquito-Borne Disease Update

As of August 27, 2013, the Centers of Disease Control and Prevention (CDC) reports forty-five (45) states have reported West Nile virus infections in people, birds, or mosquitoes. A total of 421 cases of West Nile virus disease: Neuroinvasive-197 cases and Non-Neuroinvasive-224 cases, including thirteen deaths, have been reported to CDC.





According to the Illinois Department of Public Health, there have been 1,274 WNV-positive mosquito samples. The first human case was reported on August 21<sup>st</sup> in Fox River Grove, southeast McHenry County. Since then, there has been a human case in Tazewell County.

Illinois Department of Public Health West Nile virus data summary (as of 8-28-2013)

County	American Crow	Blue Jay	Other Birds	Mosquito Batches	Horse	Human Cases
<a href="#">Cook</a>	2	1	5	885	0	0
<a href="#">DeKalb</a>	0	0	0	2	0	0
<a href="#">DuPage</a>	0	0	0	81	0	0
<a href="#">Kane</a>	2	0	1	9	0	0
<a href="#">Kendall</a>	0	0	0	3	0	0
<a href="#">Lake</a>	1	0	1	7	0	0
<a href="#">McHenry</a>	4	1	4	9	0	1
<a href="#">Stephenson</a>	1	0	0	0	0	0
<a href="#">Will</a>	0	0	0	20	0	0
<a href="#">Winnebago</a>	1	0	0	4	0	0
<b>TOTAL (50 Counties)</b>	<b>26</b>	<b>4</b>	<b>16</b>	<b>1274*</b>	<b>1</b>	<b>2</b>

**\*410% increase since the July report**

**Brood Prediction**

The floodwater mosquito (*Aedes vexans*) is the key nuisance species in the Chicagoland area. Distinct hatches of floodwater mosquito populations, or broods, are triggered by significant rainfall events. The Clarke Brood Prediction Model calculates peak annoyance periods based on rainfall and temperature data collected from weather stations in your area.

Weather Station Name	Rainfall Date	Rain Amount	Brood Prediction Date
Du Page Co.	07/18/2013	0.60	08/07/2013
Du Page Co.	07/19/2013	0.42	08/07/2013
Du Page Co.	07/20/2013	0.74	08/08/2013
Du Page Co.	07/26/2013	0.48	08/13/2013
Du Page Co.	08/22/2013	0.68	09/05/2013
Du Page Co.	08/31/2013	0.94	09/14/2013
Du Page Co.	09/01/2013	0.86	09/15/2013



## August 2013 New Jersey Light Trap Counts

(\*Red numbers indicate an annoyance level)

Trap Location	Aug 02	Aug 05	Aug 07	Aug 09	Aug 12	Aug 14	Aug 16	Aug 19	Aug 21	Aug 23	Aug 26	Aug 28	Aug 30
7710 Virginia Court	5	6	7	3	5	1	0	0	2	2	4	4	5

## Recommendations

The CDC currently shows a risk category 2. Increase larval control, source reduction, and public education emphasizing personal protection measures, particularly among the elderly. Intensify adult mosquito control in areas where surveillance indicates human risk, initiate adult mosquito control if not already in progress, initiate visible activities in community to increase attention to WNV transmission risk. Work with collaborators to reduce risks to the elderly.

## Operation and Surveillance Reports

Below is a report outlining all services performed in the month of August. These services could include the following:

- **1252 Complete Site Larval Inspection Service:** *Inspection service of all potential mosquito larvae development sites.*
- **1302 Targeted Site Larval Inspection:** *Inspection of all targeted larval development sites.*
- **1352 Larval Site Service Call:** *Special inspection of standing water for mosquito breeding per hot line request.*
- **1752 Backpack Larviciding:** *Backpack larviciding for biological control of mosquito larvae sites.*
- **1754 Hand Larviciding:** *Hand equipment larviciding for biological control of mosquito larvae.*
- **2002 Catch Basin Trmt:** *Catch Basin treatment for larval control.*
- **2006 Natular G30 Helicopter Prehatch:** *Helicopter prehatch application for larval control.*
- **2015 150-day Altosid Briq Street CB:** *Catch Basin treatment for larval control.*
- **2019 Altosid XR CB Bike:** *Catch Basin treatment for larval control.*
- **2021 Altosid CB Bike – 30 day:** *Catch Basin treatment for larval control.*
- **2202 5% Abate Heli Prehatch:** *Helicopter prehatch application pellets for larval control.*
- **2402 Helicopter Larviciding:** *Helicopter larvicide application for biological control of mosquito larvae.*
- **2712 Biomist ATV/ULV Appl. Nights:** *ATV/ULV application for adult mosquito control.*
- **2802 Anvil Truck ULV Application:** *Truck ULV application for adult mosquito control*
- **2808 Anvil Truck ULV Streets/Drives:** *Truck ULV application for adult mosquito control*
- **2888 Truck ULV:** *ULV application for adult mosquito control.*



**Services Performed August 2013:**

Service Item	Start Date
ROS1305 - Culex Site Inspection Service	08/12/2013
ROS1754 – Hand Larviciding	08/12/2013
ROS2786 - Anvil ULV Festival Touch-Up	08/14/2013



## Village of Willowbrook

September 2013 - Status Report

### Season Perspective

Weather conditions critically affect the seasonal mosquito population and risk of mosquito-borne disease transmission. Excessive rainfall periods trigger hatches of floodwater mosquitoes (*Aedes vexans*), the dominant annoyance species in northern Illinois that has a flight range of 15 to 20 miles. On-the-other hand, drought conditions provide the classic pattern for the northern house mosquito (*Culex pipiens*) to flourish in stagnant water habitats and increase the potential of West Nile virus (WNV).

September temperatures in the Chicago area fluctuated, but overall the month averaged nearly 3 degrees warmer than a year ago. The lack of precipitation in July and August made the floodwater mosquito a non-factor during the second half of the season. However, the dry conditions established the classic pattern for the *Culex* population to flourish in stagnant water habitats. In September, the number of WNV positive *Culex* mosquito samples spiked and several WNV human cases were reported in the Chicago area. Late summer is prime time for WNV activity and the National Weather Service predicts a warmer than normal September. WNV will be a threat until the first killer frost occurs.

### Mosquito-Borne Disease Update

As of September 24, 2013, 45 states and the District of Columbia have reported West Nile virus infections in people, birds, or mosquitoes, as shown on the map below. A total of 1,135 cases of West Nile virus disease in people, including 44 deaths, have been reported to CDC. Of these, 529 (47%) were classified as neuroinvasive disease (such as meningitis or encephalitis) and 606 (53%) were classified as non-neuroinvasive disease, including four deaths, have been reported to CDC.





According to the Illinois Department of Public Health as of September 25<sup>th</sup>, there have been 2,468 WNV-positive mosquito samples reported throughout the state. A total of 27 WNV human cases have been reported in 16 counties, 8 of which occurring in Cook County.

Illinois Department of Public Health West Nile virus data summary (as of 9-25-2013)

County	American Crow	Blue Jay	Other Birds	Mosquito Batches	Horse	Human Cases
Cook	2	1	7	1,673	0	8
DeKalb	0	0	0	6	0	0
DuPage	0	0	0	152	0	1
Kane	3	0	1	29	0	0
Kendall	0	0	0	7	0	0
Lake	1	0	1	32	0	2
McHenry	4	1	4	29	0	2
Stephenson	2	0	0	0	0	1
Will	1	0	0	77	1	0
Winnebago	9	0	0	12	0	0
<b>TOTAL (54 Counties)</b>	<b>46</b>	<b>9</b>	<b>22</b>	<b>2,468</b>	<b>4</b>	<b>27</b>

**Brood Prediction**

The floodwater mosquito (*Aedes vexans*) is the key nuisance species in the Chicagoland area. Distinct hatches of floodwater mosquito populations, or broods, are triggered by significant rainfall events. The Clarke Brood Prediction Model calculates peak annoyance periods based on rainfall and temperature data collected from weather stations in your area.

Weather Station Name	Rainfall Date	Rain Amount	Brood Prediction Date
Du Page Co.	08/22/2013	0.68	09/11/2013
Du Page Co.	08/31/2013	0.94	09/22/2013
Du Page Co.	09/01/2013	0.86	09/23/2013
Du Page Co.	09/28/2013	0.44	10/12/2013

**September 2013 New Jersey Light Trap Counts**

(\*Red numbers indicate an annoyance level)

Trap Location	Sep 02	Sep 04	Sep 06	Sep 09	Sep 11	Sep 13	Sep 16	Sep 18	Sep 20
7710 Virginia Court	1	0	1	5	5	2	0	1	1



## Recommendations

The CDC currently shows a risk category 2. Increase larval control, source reduction, and public education emphasizing personal protection measures, particularly among the elderly. Intensify adult mosquito control in areas where surveillance indicates human risk, initiate adult mosquito control if not already in progress, initiate visible activities in community to increase attention to WNV transmission risk. Work with collaborators to reduce risks to the elderly.

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- **2888 Truck ULV:** *ULV application for adult mosquito control.*

## Services Performed September 2013:

Service Item	Start Date
ROS2018 - Vectolex WSP CB Bike - 30 day	09/03/2013
ROS1305 - Culex Site Inspection Service	09/03/2013
ROS1305 - Culex Site Inspection Service	09/10/2013