WOODLAKE TAX DISTRICT

FA... 5/22/12

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FACSIMILE TRANSMITTAL SHEET

TO: Cameron Walden

FROM: Evan Jones, President WTD

COMPANY: CT DPH

DATE: 05/22/2012

FAX NUMBER: 1-860-509-7359

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RE: ARRA/DWSRF Request for Consideration Atmospheric Storage Tank with Associated Water System Improvements Project Woodlake Tax District - PWS ID#1680031

YOUR REFERENCE NUMBER:

☐ URGENT √FOR REVIEW PLEASE COMMENT ☐ PLEASE REPLY ☐ PLEASE RECYCLE

NOTES/COMMENTS:

Woodlake

Woodlake Tax District

May 22, 2012

GeoInsight Project 3464-000

Cameron Walden
Supervising Sanitary Engineer
Drinking Water Section
Connecticut Department of Public Health
410 Capitol Avenue – MS# 51WAT
P.O. Box 340308
Hartford, CT 06134

Re: ARRA/DWSRF Priority Ranking – Request for Reconsideration
Atmospheric Storage Tank with Associated Water System Improvements Project
Woodlake Tax District – PWS ID # CT1680031
Woodbury, Connecticut

Dear Mr. Walden:

Woodlake Tax District (WTD) respectfully requests the Connecticut Department of Public Health (CTDPH) reconsider the priority ranking assigned to the WTD Drinking Water State Revolving Fund (DWSRF) Project, titled Atmospheric Storage Tank with Associated Water System Improvements Project. The CTDPH draft priority ranking awarded 25 points to WTD's project. A total of 50 points were identified in WTD's CTDPH DWSRF Project Eligibility Application- Project Rollover Update Form (DWSRF Form), dated December 15, 2011. We believe this point total more accurately reflects the critical importance of maintaining WTD's infrastructure in a manner that ensures continual compliance with CTDPH water quality and design standards.

Maintaining water infrastructure and capacity development are critical to Woodlake Tax District (WTD) because of the community water system's remote location in Woodbury and its isolation from other community water systems. The two nearest community water systems to WTD are the Woodbury Water Company, greater than 2.25 miles away and Heritage Village, greater than 3 miles away. The estimated cost of interconnecting with either of these systems is estimated to be $1,900,000 to $2,800,000. An assessment of the water supply capacity and willingness of these two systems to consider serving WTD would also need to be completed before either of these could be considered as viable, however, extremely expensive options.

WTD's Board of Directors believes that vigilant maintenance and proactive infrastructure improvements are the most cost effective and sustainable approach for ensuring the continued regulatory compliance and operation of WTD's water system. Having successfully participated

in two prior DWSRF funding opportunities, the DWSRF is a critically important infrastructure improvement and capacity development funding source to this small community water system.

The goal of this WTD – DWSRF atmospheric storage tank project is to provide redundancy to WTD's existing 500,000-gallon tank, enabling Woodlake to meet Connecticut Department of Public Health (CTDPH) design criteria for storage in a community water system under all operating conditions; including periods when repair or maintenance of one tank would be necessary. This project has been considered by WTD for many years; however, it has become a higher priority in recent years because of issues experienced with maintaining the existing atmospheric tank, as described below.

In May of 2005, a routine inspection of the tank identified a few areas of cracking and leakage that were in need of repair. Subsequently, an attempt to repair this area was made by patching the exterior of the tank. A leak persisted and the tank manufacturer recommended making internal and additional external repairs. Subsequent external repairs involved partially draining the tank. During that time, the quantity of potable water available to supply the WTD demands and fire flow was significantly reduced. The importance of enhancing atmospheric storage to ensure no interruption of domestic water supply or fire protection became evident at that time. Installing a second storage tank will provide redundancy and enable the WTD to remove one tank from service for inspection, maintenance, and repair or in an emergency without compromising the WTD's ability to meet system demands.

The existing tank was originally constructed in 1974 and has a finite lifespan. Therefore, tank age has also been a factor in the decision to move forward with this project. A second tank would provide supplemental storage within the system to ensure system performance is not compromised during times of future tank repairs which may be necessary during routine or emergency situations. The tank size of 350,000-gallons has been designed with fire flow requirements in mind and also being sensitive to potential water age issues.

The proposed project includes constructing a 350,000-gallon atmospheric storage tank; installing associated piping, valving, pumping improvements, and controls; site preparation, including filling and grading; and conducting a geotechnical foundation analysis.

We offer for your consideration, the following discussion relating to the categories selected for our DWSRF Form. The deficiency categories taken from the DWSRF Form, are shown in **bold print** followed by our justification for selecting the category, shown in *italics.* For reference we have attached a copy of the System Improvements Information Form submitted with the DWSRF Form, as Attachment A:

T. Small System Capacity Deficits, 20 points: project will correct sources of supply, treatment, pumping, transmission and storage facilities to provide flows in excess of the maximum flows and projected peak period consumption.

Justification: To reiterate the discussion above as it relates to capacity deficit, in May of 2005, a routine inspection of the existing atmospheric storage tank identified a few areas of cracking and leakage that were in need of repair. An initial external patch was not successful, additional external repairs to the tank were needed and required the tank level be lowered significantly to ensure that the leak was

properly sealed. During that time, the quantity of potable water available to supply the WTD demands was reduced significantly and fire protection capacity was also diminished. The importance of enhancing atmospheric storage in excess of maximum flows and projected peak demand became evident at that time.

BB. Proactive infrastructure, 5 points each, unless noted, with a maximum of 25 points: Pumping Facilities, Main Replacement/Improvement, Storage Tanks, Emergency Power Provisions.

[X] **Pumping Facilities**
[X] **Main Replacement/ Improvement**
[X] **Storage Tanks (replace, repair, repaint, new, etc.)**
[X] **Emergency Power Provisions**

Justification: As discussed above, proactive infrastructure improvements and infrastructure redundancy are especially critical because of WTD's rural location and distance from another larger public water supply capable of serving WTD. WTD has proactively applied for funding assistance to ensure that our critical infrastructure is maintained. The critical infrastructure in need of repair, upgrade, and/or replacement outlined within this project includes; upgrading pumping facilities, replacing/improving sections of our water main, the addition of a 350,000 gallon storage tank, emergency power at our Booster Pumping station and emergency power at our Bedrock well field.

Sustainability Planning, 10 points: project is consistent with system improvements identified in a DPH approved Water Supply Plan [RCSA Section 25-32d-3(e)].

Justification: As provided in Table 23b, Five Year Water System Improvements, of WTD's Water Supply Plan Update (WSP), dated February 28, 2011, WTD indicates making application through the DWSRF to secure funding for the atmospheric storage tank. We qualify this improvement with "applying for funding" because of the critical nature of the DWSRF to WTD's continued maintenance and improvements. We understand that WTD is quite unique in its ability to qualify for funding, which requires demonstrating adequate financial capacity, while not being affiliated with a traditional municipality. Please refer to Attachment B for a copy of Table 23b.

WTD would also like to comment on the Tie Breaking Procedure provided in Section VII- D of the FFY 2011-2012 CTDPH DWSRF Draft Intended Use Plan. While we appreciate that weighting funding toward the greatest population impacted by the project is logical, having the first tie-breaker be based on the project population served, small systems such as WTD will almost always fall low on the list and likely below the funding line. We offer that it would be more appropriate that the first tie-breaker to be percentage of population impacted by the project and that the second tie-breaker be the total population served by the project. As is the case for WTD in this funding round and likely going forward, WTD's total population served by the project is apt to be very small when compared to the vast majority of systems applying for and ultimately qualifying for funding. This puts small systems such as WTD at a constant

disadvantage. However, 100% of WTD's population is impacted by this project while projects which received higher ranking showed percentages of populations served ranging from 87% down to 0.3 % of total population served. Much larger systems, with very likely much larger financial capacity and flexibility to fund their projects, rank higher on the draft DWSRF priority list than small population systems with fewer financing options and rate making capacity. As mentioned previously, the DWSRF is a critically important infrastructure improvement and capacity development funding source for our small community water system.

Thank you for considering WTD's comments. We are hopeful that you will reconsider the points awarded to WTD. Please contact Jeff Burmeister, Woodlake Operations Manager or me at (203) 263-5303 or via e-mail at *manager@woodlakect.com*. You may also e-mail me at *ekj522@msn.com* if you have questions or comments regarding these comments.

Sincerely,
Woodlake Tax District

Evan Jones
President, Woodlake Tax District

cc: Donald P. Iannicelli, GeoInsight, Inc.

ATTACHMENT A

SYSTEM IMPROVEMENTS INFORMATION FORM
REVISED DECEMBER 15, 2011

Attachment A

System Improvement Information

PLEASE CHECK THE LETTER OF ALL THAT APPLY. Points are only awarded for the deficiency corrected which addresses the highest health risk and compliance concern, and represents a significant portion of the total project cost. **Adequate documentation or justification to validate deficiencies or violations must be provided to earn points.**

☐**A. Surface Water Treatment Rule Violation, 50 points.** Project will achieve compliance for any of the following: unfiltered surface water, insufficient disinfection contact time, Ground Water Under the Direct Influence of Surface Water, turbidity violation.

☐**B. Microbiological Violation, 50 points.** Project will correct a deficiency resulting in water being delivered to consumers exceeding a Maximum Contaminant Level (MCL). This project may be a new source, replacement of contaminated equipment, piping, or treatment.

☐**C. Inorganic Violation – Nitrate/Nitrite/Nitrogen only, 50 points.** Project will correct a deficiency resulting in water being delivered to consumers exceeding an MCL for Nitrate, Nitrite and Nitrogen.

☐**D. Inorganic Violation – Lead/Copper Exceedance only, 40 points.** Project will correct a deficiency resulting in water being delivered to consumers exceeding the Action Level for lead or copper.

☐**E. Inorganic Chemical Violation – Arsenic only, 40 points.** Project will correct a deficiency resulting in water being delivered to consumers exceeding an MCL for Arsenic.

☐**F. Radioactivity Violations, 40 points.** Project will correct a deficiency resulting in water being delivered to consumers exceeding an MCL for radiologicals.

☐**G. Inorganic Chemical Violation, 30 points.** Project will correct a deficiency resulting in water being delivered to consumers exceeding an MCL for inorganic chemicals (excluding lead, copper, sodium, arsenic, and nitrate).

☐**H. Organic Chemical Violations, 30 points.** Project will correct a deficiency resulting in water being delivered to consumers exceeding an MCL for organic chemicals.

☐**I. Pesticides, Herbicides and PCBs Violations, 30 points.** Project will correct a deficiency resulting in water being delivered to consumers exceeding an MCL for pesticides, herbicides and PCBs.

☐**J. Approaching MCL (50% of current MCL), 25 points.** These points may be awarded if the project is being undertaken to treat or eliminate contamination of a regulated contaminant that is approaching an MCL.

☐**K. Treatment Technique Violations (Fluoride, Chlorine Residual, or Phosphates only), 20 points.** Project will correct a deficiency resulting in water being delivered to consumers that does not meet state or federal standards due to treatment technique violations.

☐**L. Exceeding DPH Action Levels (AL), 15 points.** Project will correct any inorganic, organic, pesticide, herbicide, PCB and radiological level that has exceeded DPH ALs, but has not received an MCL violation. The DPH's AL list can be found on the DPH website under the Environmental Health Section: Publications and Reports ("Action Level List for Private Wells").

☐**M. Sodium Exceedance, 10 points.** Project will correct a deficiency resulting in water being delivered to consumers exceeding the sodium notification level.

☐**N. Color Violation, 10 points.** Project will correct a deficiency resulting in water being delivered to consumers exceeding a color of 15 standard units.

☐**O. pH Violation, 10 points.** Project will correct a deficiency resulting in water being delivered to consumers with low or high pH levels. pH values for water entering distribution is not to be less than 6.4 nor to exceed 10.0 entering the distribution system for systems that are not required to install optimal corrosion control treatment. For systems required to install such treatment, a range of 7.0 to 10.0 must be achieved.

☐ **P. Odor Violation, 10 points.** Project will correct a deficiency resulting in water being delivered to consumers with an odor value that has exceeded two (2).

☐ **Q. Turbidity (Ground Water) Violation, 10 points.** Project will correct a deficiency resulting in water being delivered to consumers with a turbidity that has exceeded five (5) standard units at representative sampling points in the distribution system.

☐ **R. Main Extension to Existing Private Wells with Public Health Code (PHC) Violations, 20 points.** Project will provide water to existing private wells that have PHC violations. Fill out the attached System Consolidation Worksheet.

☐ **S. Source Deficit or Insufficient Margin of Safety, 40 points.** Project will correct a deficit or insufficient source by adding more sources, rehabilitation of existing sources, etc. Project will correct the supply capacity of the water system to allow a sufficient margin of safety relating to the safe yield and available water versus the existing and projected demands of the system. For community systems with a population served of 1,000 or more, this project must be identified in the water supply plan.

☒ **T. System Capacity Deficits, 20 points.** Project will correct sources of supply, treatment, pumping, transmission and storage facilities to provide flows in excess of the maximum flows and projected peak period consumption.

☐ **U. Lack of Source (production) Meters, 20 points.** Project will include the addition of meters on all sources of supply.

☐ **V. Pressure Violation (water outages or pressure drops less than 25 psi), 20 points.** Project will correct seasonal water shortages requiring hauling or water conservation measures. Improvements may include: new source; increases in sizes of pumps, mains, or treatment facilities; or replacement of leaking water mains.

☐ **W. Source Development, 20 points.** Project will develop additional supplies to augment and/or replace existing sources.

☐ **X. Implementation of Conservation Measures, 15 points.** Project will result in the conservation of water that effectively reduces consumption permanently.

☐ **Y. Acquisition / Transfer of System, 25 points.** Project will result in a system being acquired or transferred. Fill out the attached System Consolidation Worksheet for each system to be acquired / transferred.

☐ **Z. Interconnection / Public Water System Absorbed, 15 points.** Project will result in the interconnection of a system and that system being absorbed. Fill out the attached System Consolidation Worksheet for each system to be interconnected.

☐ **AA. Interconnection / Public Water System Becomes Consecutive, 15 points.** Project will result in the interconnection of an existing public water system that will become a consecutive system following the interconnection. Fill out the attached System Consolidation Worksheet for each new consecutive system.

☒ **BB. Proactive Infrastructure, 5 points each, unless noted, with a maximum of 25 points.**

- ☐ **Upgrade Treatment Facilities (facility structures, treatment process, etc) (15 points)**
- ☒ **Pumping Facilities**
- ☒ **Main Replacement / Improvement**
- ☐ **Treatment Residuals Management**
- ☒ **Storage Tanks (replace, repair, repaint, new, etc)**
- ☐ **Main Extension for Interconnection**
- ☐ **System Automation**
- ☐ **Leak Detection**
- ☐ **Distribution Meters**
- ☐ **Posting / Fencing / Security Measures (10 points)**
- ☒ **Emergency Power Provisions**

☒ **CC. Sustainability Planning, 10 points each; 10 points maximum**

- ☒ **Project is consistent with system improvements identified in a DPH approved Water Supply Plan [RCSA Section 25-32d-3(e)] (attach supporting documentation)**
- ☐ **Project has been prioritized for undertaking in accordance with an on-going Asset Management Plan (attach supporting documentation)**

☐ **DD. Source / Distribution Violations or RCSA Section 19-13-B51a-m Non-Conformance 10 points.** Must relate only to construction projects. Projects eligible for these points include projects involving corrective actions to water supply wells drilled prior to January 12, 1971 that will result in conformance with the applicable requirements of RSCA Section 19-13-B51a-m for wells constructed after this date.

☐ **EE. Implementation of Best Management Practices (BMP) on Watersheds as a Result of Construction, 10 points.** Must relate only to construction projects

☐ **FF. Source Protection Improvements, 5 points.** Must relate only to construction projects

☐ **GG. Purchase of Land, 5 points.** Must relate only to construction projects

☐ **HH. Affordability, 10 points.** Systems having projects in towns where the Median Household Income is less than or equal to 80% of the State's average MHI as determined by Connecticut Economic Resource Center, Inc., (CERC). The following represents the list of Cities and Towns which qualify for these additional points:

Ansonia, Bridgeport, East Hartford, Hartford, Killingly, Meriden, New Britain, New Haven, New London, North Canaan, Norwich, Plainfield, Torrington, Waterbury, West Haven, Windham

☐ **II. Ground Water Rule, maximum 20 points; minimum of 2 points.** Priority points will be assigned to eligible projects in an amount up to 20 points. Project will correct a "Significant Deficiency", as referenced in the DPH DWS "Significant Deficiencies Guidance Document", which has been identified by DPH. If a "Significant Deficiency" condition exists, but has not yet been documented by DPH, sufficient justification must be submitted to warrant these points.

- ☐ 100% ---------- 20 points
- ☐ 90% ---------- 18 points
- ☐ 80% ---------- 16 points
- ☐ 70% ---------- 14 points
- ☐ 60% ---------- 12 points
- ☐ 50% ---------- 10 points
- ☐ 40% ---------- 8 points
- ☐ 30% ---------- 6 points
- ☐ 20% ---------- 4 points
- ☐ 10% ---------- 2 points (>0 & up to 10%)

*** The Ground Water Rule percentage is calculated from the proportion of the total eligible DWSRF project cost that will be expended on eligible portions of the project that correct "Significant Deficiencies" by the total eligible DWSRF project cost. Please round the Ground Water Rule percentage to the nearest 10 percent.**

ATTACHMENT B

TABLE 23b

FIVE YEAR WATER SYSTEM IMPROVEMENTS

7.2 FIVE YEAR IMPROVEMENT PLAN

The following are improvements expected to be performed as part of WTD's 5-year improvement plan:

TABLE 23b
FIVE YEAR WATER SYSTEM IMPROVEMENTS

Improvement	Schedule to be Undertaken or Completed
1. Conduct the required annual cross connection survey. Scheduled with Butterworth and Scheck, Inc.	Fall 2011, Annually
2. Place the bedrock well field into service.	Fall 2011
3. Develop a list and implementation plan to replace/upgrade equipment within the water system at or near the end of its useful life.	December 2011, On-going
4. Clean raw water lines to remove iron build-up – Phase 2 and 3.	Summer 2012
5. Contract with Hungerford & Terry to inspect condition of iron/manganese filtration system; schedule media replacement as necessary.	Fall 2011
6. Explore interior dry inspection/repair, as recommended in inspection report dated May 20, 2005 by Extech, LLC.	Spring 2012
7. Apply for State funding to construct a 2nd atmospheric storage tank.	Spring 2012

7.3 TWENTY AND FIFTY YEAR IMPROVEMENT PLANS

Implementation of WTD's short term and 5-year improvement plans along with diligent oversight by WTD of the water systems operation and maintenance should ensure the system's operation out to the 2050 planning period. As equipment needs to be replaced or upgraded (Item #2 above) is identified, WTD will plan and budget accordingly. This may also require updating of the 5-year, and possibly 20-year improvement plan.