SOURCE WATER PROTECTION PLAN

for the

TWILIGHT PARK COTTAGERS ASSOCIATION GREENE COUNTY, NEW YORK

Revised May 2015

Prepared by:



Steven Winkley New York Rural Water Association

TABLE OF CONTENTS

		Page
1.0	Introduction	1
2.0	Source Water Resources and Land Ownershi	o1
3.0	Potential Sources of Contamination	8
4.0	Possible Source Water Protection Strategies	12
5.0	Future Water Supply Sources	15
Figure	es	
1.	Water Supply Sources	2
2.		3
3.	** *	5
4.		6
5.	Well 3 Source Water Assessment Area	7
6.	Potential Water Supply Well Sites	9
Appen	ndix A Well 3 Pumping Test	A-1
Appen	ndix B Well 3 Water Quality Graphs	B-1
Appen	ndix C Educational Materials	

1.0 INTRODUCTION

Twilight Park is a community of 102 cottages located near the hamlet of Haines Falls in the Town of Hunter, New York. The Twilight Park Cottagers Association (aka Twilight Park Association or Twilight Cottagers, Inc.) owns and maintains several buildings and facilities for residents of Twilight Park, including a public water system that is operated from mid-May through mid-October each year. The Twilight Park Association water system is regulated by the New York State Department of Health (NYSDOH) as a transient, non-community public water system. It is classified as a public water system since it provides water to the public for human consumption through pipes for at least 60 days out of the year. However, it is not regulated as a community system because it does not serve a year-round population.

The Twilight Park Association's source water resources include both surface water and ground water wells. The primary water supply source is a surface water reservoir (Figures 1 and 2). The system's supply is augmented by three drilled bedrock wells (Figure 1) that are primarily utilized when water from the reservoir has higher turbidity levels or when the reservoir is experiencing low levels due to drier weather conditions.

The purpose of this source water protection plan is to help ensure that the residents of Twilight Park continue to have reliable, high-quality, and safe drinking water supply sources for future generations. This plan was prepared by the New York Rural Water Association (NYRWA) with the cooperation of the Twilight Park Board of Directors, the Water and Sewer Committee, and the Park Superintendent. The plan identifies the wells' critical wellhead management and source water assessment areas, maps the reservoir's watershed area, documents land use and ownership in these areas, identifies potential sources of contamination, develops protection strategies, and helps plan for the future.

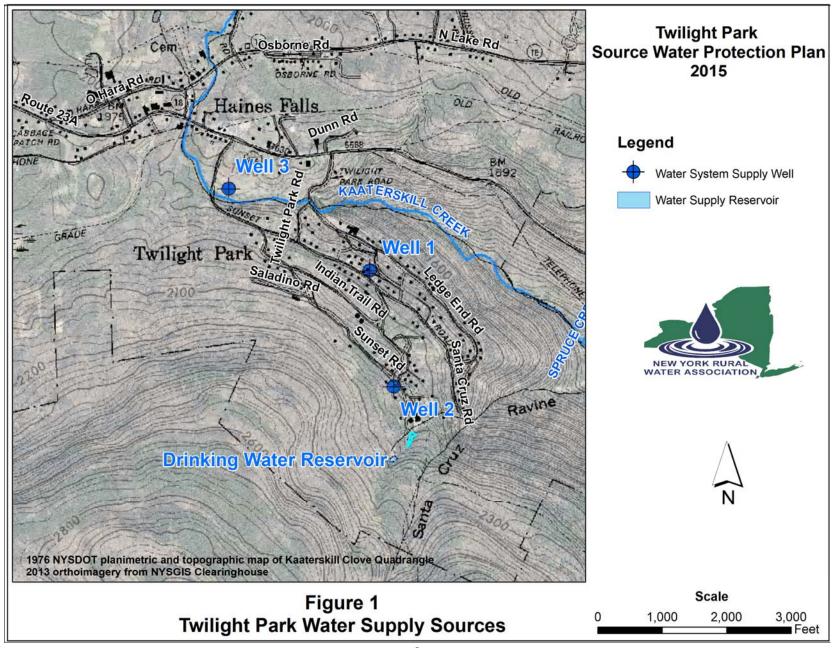
2.0 SOURCE WATER RESOURCES AND LAND OWNERSHIP

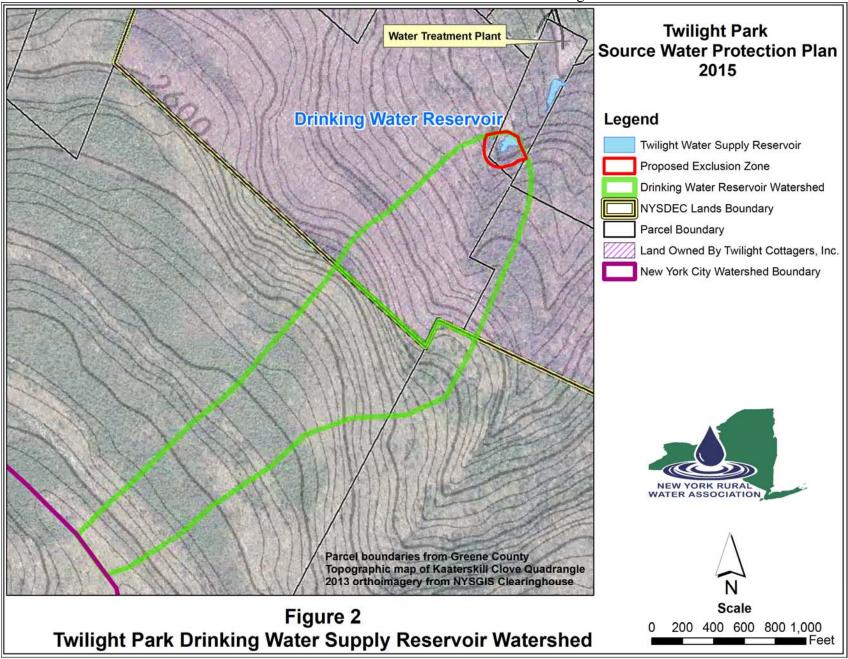
2.1 Twilight Park Drinking Water Reservoir

As discussed previously, the primary drinking water supply source for the Twilight Park Association is a reservoir with a surface area of approximately 0.2 acres (Figure 2). The watershed that supplies surface water runoff and ground water discharge to this water body has been mapped by NYRWA on the basis of topography. This watershed is a 60-acre forested area (Figure 2). Thirty-nine (39) percent of this watershed area is owned by Twilight Cottagers, Inc. (Twilight Park Association). The remainder is owned by New York State as Catskill Forest Preserve (Figure 2).

Lower reservoir levels have historically been evidenced seasonally (typically in August and September). In addition, periods of high precipitation and runoff can increase turbidity levels in the reservoir. To prevent problems with the recently installed cartridge/bag filtration system at the water treatment plant (Figure 2), water from the wells is subsequently utilized during these periods.

In addition to the watershed area, NYRWA has delineated a reservoir exclusion zone as a 100-foot buffer extending around the reservoir (Figure 2). This is an area that is proposed to restrict access.





2.2 Well 1

Well 1 is located on a 0.8 acre lot owned by Twilight Cottagers, Inc. near the intersection of Sunset Road and Pebble Rock Hill Road (Figure 3). It is an 856-foot deep well that was formerly utilized by a cottage that burned on the site. Well 1 has a reported yield of 7 gallons per minute (gpm). Although connected to the public water system, it has not been recently used due to noticeable sulfur content.

NYRWA has delineated a wellhead management area defined by a 200-foot radius circle around Well 1 (Figure 3). NYSDOH regulations state that public water systems shall control by ownership, lease, easement or other legally enforceable arrangement the land use activities within 200 feet of public supply wells. NYSDOH regulations further dictate that the owner of the water system possess legal title to lands within 100 feet of the supply well. NYSDOH primarily established these protective distance buffers to offer sanitary protection from potential contaminants such as bacteria and viruses.

Well 1 and the other supply wells utilized by the Twilight Park Association were installed before these wellhead regulations were promulgated by the NYSDOH and thus are believed to be grandfathered. Based upon Greene County real property data, portions of privately-owned parcels with cottages on them within the Well 1 wellhead management area include those of: Joe Kindred & Ann-Dee Burnham; Stephen & Susan Underwood; Philip & Mary Huyck; Dorsey & Susan Dunn; Nicholas Lemann & Judith Shulevitz; and Edward & Cecilia Willi (Figure 3).

2.3 Well 2

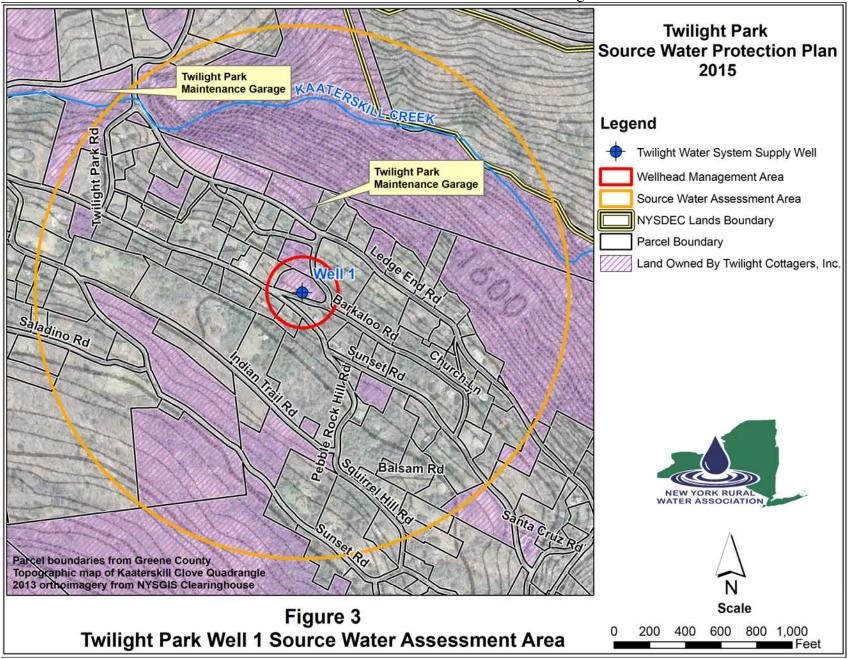
Well 2 is a 440-foot deep drilled well that reportedly yields 5 gpm. It is located on a parcel owned by Twilight Cottagers, Inc. (Figure 4). The 200-foot radius circle that has been defined as the Well 2 wellhead management area includes portions of privately-owned parcels with cottages on them belonging to: David Maurer; Daniel & Janinne Maurer; Richard & Leslie Manix; and Pete Bailey (Figure 4).

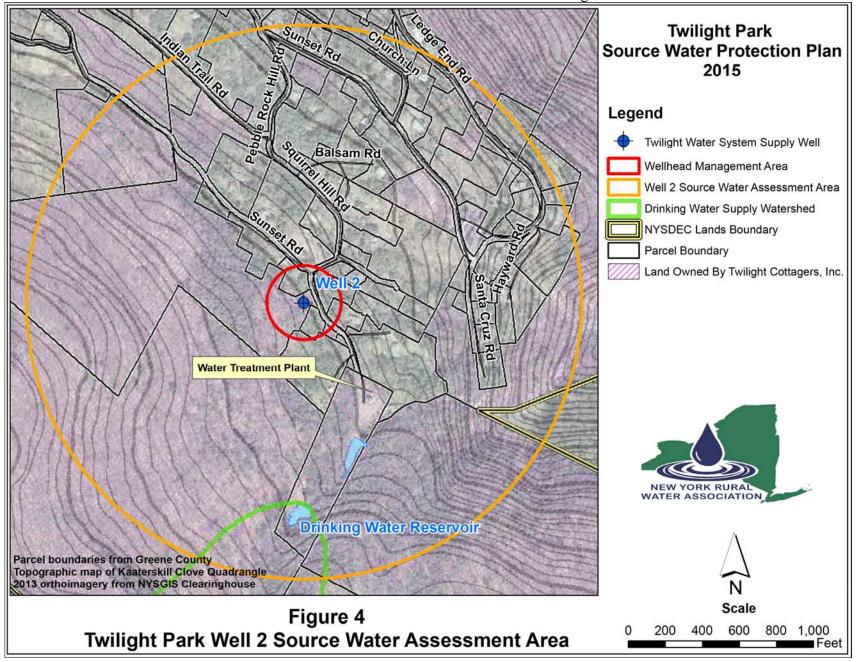
Based upon water meter records, Well 2 pumped a total of only 27,140 gallons for the 2015 system season.

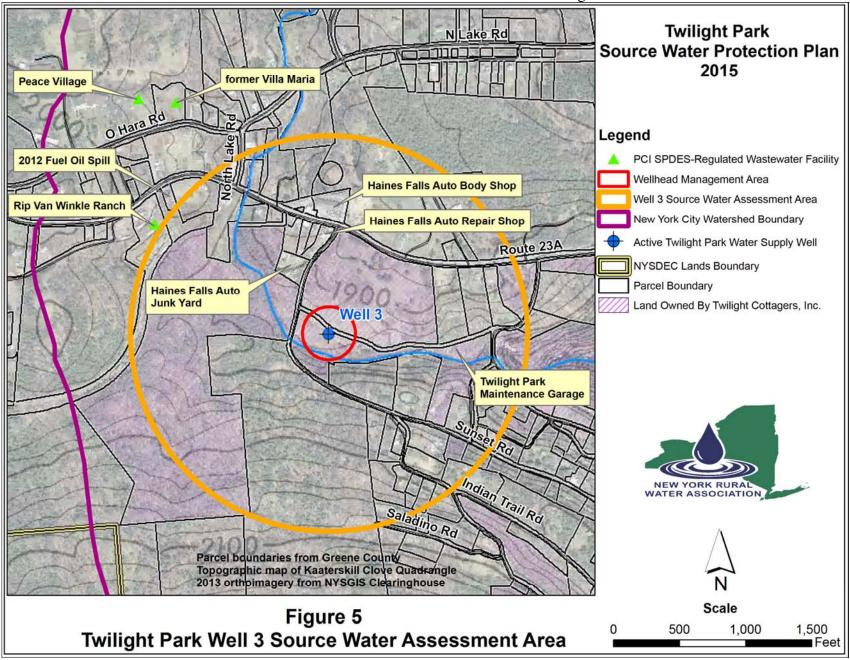
2.4 Well 3

Well 3 is the primary ground water source for the Twilight Park Association., producing a total of 421,190 gallons over the course of the 2015 system season. Well 3 was installed in 2001 by Titan Drilling and is 198 feet deep with 60 feet of casing. It is located on the former golf course property owned by Twilight Cottagers, Inc. (Figure 5). The Well 3 wellhead management area, defined by the 200-foot radius circle, is entirely owned by Twilight Cottagers, Inc. (Figure 5).

Appendix A is a time-drawdown plot of a 3,612 minute pumping test of Well 3 by Titan Drilling in October 2001. The pumping rate during the test was reduced during the test from an initial rate of 64 gpm until water level drawdown finally stabilized at a rate of 12 gpm (Appendix A). The last 24 hours of pumping was conducted at 12 gpm.







2.5 Other Ground Water Sources

There are two other drilled wells located on the former golf course property in proximity to Well 3 (see Figure 6). These wells (Well 4 and Well 5) have not been connected to the system due to issues with well interference, potential contamination concerns, yield, and water quality.

Several cottages in Twilight Park have drilled wells to provide water the remaining seven months of the year that the public water system is not in operation. Available data on these wells is shown on Figure 6. The depths of these individual residential wells range from 198 to 750 feet. The median depth of these wells is 597 feet. Reported yields for the residential wells within Twilight Park range from 0.5 to 3 gpm. The median yield is 1.75 gpm. Note that the NYSDOH does not recommend the use of wells with yields of less than 1 gpm for homes with four or more bedrooms.

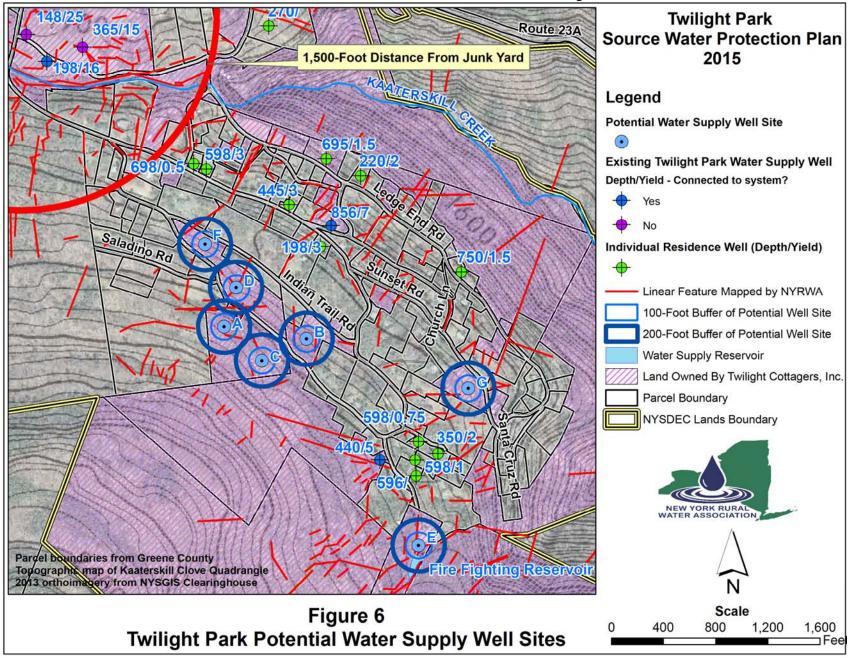
Wells in the Haines Falls area are completed in bedrock of the Oneonta Formation. This rock formation consists chiefly of alternating layers of shale and sandstone. The red, green, and gray shale layers are weak and highly erosive, typically forming slopes. They are also very poor ground water producers. Relatively flat benches or ledges throughout Twilight Park are underlain by the more resistant red to gray sandstone beds. These rocks are sometimes adequately fractured to produce higher well yields. Pebble-rich conglomerate beds are also found in the Oneonta Formation and these can be water-bearing as well (large blocks of conglomerate rock are found throughout Twilight Park).

Finding significant bedrock well yields depends upon intersecting an adequate number of fractures (cracks) in the bedrock. Fracture zones in the bedrock are sometimes manifested at the land surface by linear features that are seen on topographic maps and aerial photography. NYRWA has identified these linear features in the area using highly detailed elevation maps and orthoimagery (aerial photography that has been digitized). Linear features are mapped on Figure 6.

3.0 POTENTIAL SOURCES OF CONTAMINATION

Unfortunately source water contamination can and does occur. A crucial first step in reducing or eliminating the threat of contamination of drinking water sources is identifying land uses or practices that have the potential to degrade water quality.

For the reservoir, the area that was examined for potential sources of contamination is the watershed area. For the ground water wells, the area that was examined is referred to as a source water assessment area. This area, defined by a 1,500-foot radius circle, approximates the actual land area which *could* contribute water to the well. Such an area is consistent with NYSDOH's Source Water Assessment Program and its predecessor, the New York State Department of Environmental Conservation (NYSDEC) Wellhead Protection Program. Unfortunately it is very difficult to delineate the exact area that contributes ground water to individual bedrock wells because of the complex, fractured nature of such aquifers. There is simply not sufficient available hydrogeologic information and water level monitoring data to do this in most instances.



3.1 Drinking Water Reservoir

The 60-acre watershed (catchment) area for the drinking water reservoir is completely undeveloped and devoid of existing sources of contamination. It is largely forested. The majority of the land is owned by New York State. The rest (39 percent) is owned by Twilight Cottagers, Inc. (see Section 2.1).

3.2 Wells 1 and 2

There are no regulated environmental facilities within the source water assessment areas for Wells 1 and 2. Within the source water assessment area for Well 1, there is a storage tank containing gasoline at the park's maintenance garage near the superintendent's house. However, this is located 450 feet downgradient (downhill) of the supply well. Thus, any leak or spill here is highly unlikely to impact the supply well.

There is a seasonal sanitary sewer collection and disposal system at Twilight Park. The sewage disposal pits for this system are a considerable distance downgradient of the supply wells (to the east of Ledge End Road) and are not believed by NYRWA to pose a contamination risk.

However, some residents have installed individual sewage systems for their cottages in order to live in the park year-round. Some of these systems are simply holding tanks that are periodically pumped out. A few are traditional anaerobic septic systems with a septic tank and leach field. Many are aerobic systems that utilize aerobic bacteria to break down sewage to more rapidly and completely digest sewage. There are a number of different types of aerobic systems. One that has been mentioned as existing in the area is the Cromaglass® wastewater treatment system. It is a type of aerobic system known as sequencing batch reactor. Such systems still generate effluent that must be disposed of, though it is of a higher quality than that from traditional septic systems. Other cottages may have composting toilets with graywater disposal systems. Graywater includes all household wastewater that doesn't come from toilets. This includes wastewater flows from baths/showers, clothes washing, dishwashers, etc.

.It is unclear at this time if any of these individual sewage systems exist within the wellhead management areas of Well 1 or Well 2. If such systems are located upgradient (uphill) in close proximity of the supply wells, it is possible that they could have an impact on the supply wells. Fortunately, the time of year that such individual sewage systems are most likely to be utilized does not coincide with use of the Twilight Park supply wells.

It may also be possible that cottages within the wellhead management areas and source water assessment areas have tanks for storage of heating oil (#2 fuel oil), kerosene, or other liquid fuels. Spills associated with the delivery of such fuel, leaks from home storage tanks, and other system failures are among the most common types of spills reported to the NYSDEC Spills Hotline (1-800-457-7362).

3.3 Well 3

As evidenced by Figure 5, there are a number of potential contaminant sources within the source water assessment area of Well 3. Several of these potential contaminant sources are regulated by the NYSDEC.

3.3.1 Haines Falls Auto

The closest of these regulated facilities is Haines Falls Auto. This facility is located on several different parcels (Figure 5), and offers auto and truck repair, vehicle body repair, towing, a junk yard, and a metals recycling area. The junk yard and metals recycling area is approximately 450 feet northwest of Well 3. Haines Falls Auto should have a State Pollutant Discharge Elimination System (SPDES) Multi Sector General Permit for Stormwater Discharges from Industrial Activity permit. This requires the preparation of a Stormwater Pollution Prevention Plan (SWPPP), self monitoring, reporting, and record retention requirements, and implementation of best management practices (BMPs) to prevent or minimize contamination of stormwater runoff from vehicle dismantling, maintenance, etc. As part of the SWPPP for Haines Falls Auto, the facility has installed an oil-water separator and a bio-retention basis. The outfall for the stormwater collection and treatment system is to a ditch along the western edge of Sunset Road. Automobile salvage yards are required to monitor their stormwater discharges for the following parameters: total suspended solids (TSS), oil and grease, benzene, ethylbenzene, toluene, xylene, aluminum, iron, and lead.

Reportedly, Haines Falls Auto would like to transfer construction and demolition (C&D) debris onto 100-yard containers from its own operations and from containers brought to the facility. They have been advised by NYSDEC that they would need to apply for permits for both a C&D Debris Processing Facility and a Transfer Station Facility under Part 360 regulations.

Since Haines Falls Auto stores more than 1,100 gallons of petroleum, it must register all storage tanks with the NYSDEC and meet applicable regulations for the storage and handling of petroleum. According to the NYSDEC Petroleum Bulk Storage (PBS) Program online database, Haines Falls Auto currently has a total of 26 registered tanks. These tanks are all aboveground and have a cumulative capacity of 10,248 gallons of product. The product stored in these tanks includes: used oil, motor oil, transmission fluid, gasoline, diesel, kerosene, and #2 fuel oil. Tanks range from in size from 120 gallons to 1,000 gallons. Thirteen of these tanks with a total capacity of 7,232 gallons are for storing used oil. Despite the relatively large volume of petroleum products stored at Haines Falls, a search of NYSDEC's Spill Incidents Database by NYRWA revealed no reported petroleum spill incidents at this location.

3.3.2 Other Regulated Facilities

Just northwest of the Well 3 source water assessment area, there are three facilities with past or present NYSDEC SPDES permits for the discharge of treated sanitary waste in excess of 1,000 gallons per day (Figure 5). These facilities are the Rip Van Winkle Ranch, the former Villa Maria, and Peace Village. Some of these discharges are to ground water via subsurface disposal systems. Others discharge to surface water through outfalls to streams. The Rip Van Winkle

Ranch system is in the process of being renewed as a new system. It is permitted for a discharge of up to 4,700 gallons per day of sewage to ground water and a tributary of Kaaterskill Creek. The former Villa Maria had a SPDES permit that expired in 2008. This system consists of a 10,000 gallons per day sand filter that eventually discharges to O'Hara Brook, a tributary of Kaaterskill Creek. The SPDES permit for Peace Village is reported to have expired on 11/30/2013. This system discharged into O'Hara Brook. The present status of this wastewater disposal system is not known to NYRWA.

The only other regulated facility determined by NYRWA within or the near the Well 3 source water assessment area is a spill of 75 gallons of #2 fuel oil that occurred on May 18, 2012 at 5287 Route 23A (Figure 5). This spill incident, spill #1201588 in the NYSDEC spills database, remains open. Keeping a spill incident open typically means that cleanup and removal actions has not been completed and remedial activities may still be taking place.

3.3.3 Other Potential Contamination Sources

The Twilight Park Association does have a small aboveground storage tank for diesel at its maintenance garage located some 1,000 feet east of Well 3 (Figure 5). Residences and businesses in the source water assessment area rely upon septic systems for wastewater disposal. Flushing of toxic chemicals down drains and toilets can lead to ground water contamination and excess nitrate loading of ground water can sometimes occur if the density of septic systems is too large.

4.0 POSSIBLE SOURCE WATER PROTECTION STRATEGIES

4.1 Continue Water Quality Monitoring

Monitoring is an effective source water protection tool. Although not required by NYSDOH as a transient, non-community water system, the Twilight Park Association began annual sampling of Well 3 in 2012 for various inorganic chemicals, physical characteristics, and volatile organic compounds (VOCs) due to concerns associated with the Haines Falls Auto facility. .No VOCs have ever been detected. Levels of other parameters, including the various metals sampled have either been non-detectable or at levels below primary Maximum Contaminant Levels (MCLs).

The only exception to the monitoring results to date was the 2014 result for iron (3.22 mg/l). This result is significantly above the MCL of 0.3 mg/l. As the graph in Appendix B indicates, this is an order of magnitude higher than the previous years. Subsequent testing in 2015 revealed low levels of iron (0.038 mg/l). It appears that the elevated 2014 result was likely due to well inactivity at the time of testing. Iron is one of the pollutants of concern that automobile salvage yards are required to monitor from their stormwater discharges. Iron is not an expensive parameter to analyze and can be treated using a variety of methods.

Total dissolved solids (TDS) is s a measure of the combined content of all inorganic and organic substances contained in a liquid in molecular, ionized, or micro-granular suspended form. Water from Well 3 has a TDS level of 580 to 590 mg/l, slightly above a secondary MCL of 500 mg/l set by the USEPA. TDS does not cause health risks but water with TDS above 500 mg/L may have some undesirable aesthetic issues such as odor, taste, staining, and corrosion. As the graph

in Appendix B indicates, there is no apparent trend in TDS levels in Well 3. The levels of TDS in Well 3 are not uncommon for local bedrock ground water, but it would be helpful to see how the TDS of Well 3 compares to Wells 1 and 2.

There are no designated limits on sodium levels in water. NYSDOH recommends that water containing more than 20 mg/l of sodium should not be used for drinking by people on severely restricted sodium diets. Similarly, water containing more than 270 mg/l of sodium should not be used for drinking by people on moderately restricted sodium diets. Well 3 sodium levels are in the 45.9 mg/l to 50.9 mg/l range and show no noticeable trend at this time. If there are any Twilight Park residents on severely restricted sodium diets, they should be informed to not drink the ground water when it is being utilized by the water system.

4.2 Implement Best Management Practices (BMPs)

Twilight Park Association staff should consider developing and implementing a series of good housekeeping measures or best management practices (BMPs), particularly within the wellhead management and source water assessment areas of water supply sources. Examples of these BMPs include:

- Installation of impervious barriers/concrete pads under aboveground fuel storage tanks or deicing salts storage area.
- Installation of berms or dikes around tanks and storage areas.
- Using spill/overflow protection and cleanup equipment.
- Roofing or covering fuel or deicing salts storage areas.
- Use of drip pans under vehicles and equipment.
- Indoor storage of vehicles and equipment if possible.
- Use of absorbents for any spills or leaks.
- Not fueling or equipment washing within the wellhead management areas or reservoir exclusion zone.
- Installation of signs or markers indicating the wellhead management areas or reservoir exclusion zone.
- Proper handling and recycling of used oil, paint, spent solvent, etc.
- Conducting employee training on a regular basis.

4.3 Improve Security Adjacent to Supply Sources

Security can be improved around supply wells and the reservoir exclusion zone through installation of fencing. However, fencing in some areas such as a highly public area near Well 3 may be aesthetically displeasing to some. One solution for Well 3 is the installation of a protective well enclosure. The well enclosure is constructed of durable steel and includes shielded stainless steel locks for safety and an easily removable lid to allow access. A picture of a well enclosure is shown below.



Example of Protective Well Enclosure

Such enclosures should be considered even for wells that are not presently connected to the water system. If these wells are never to be used, consideration should be given to properly abandoning them following state regulations and protocols.

4.4 Wellhead Management Area Inventory and Education

An inventory of the Well 1 and Well 2 wellhead management areas should be conducted to determine if there are individual sewage systems and/or fuel storage facilities within these areas. As previously stated, public water systems shall ideally control land use activities within 200 feet of supply wells.

The Twilight Park Association should undertake an education program to encourage best management practices for property owners within the wellhead management areas. Examples of these sample materials can be found in Appendix C.

4.5 Amendment of Town Site Plan Review Law

As indicated in Figure 5, there are several vacant or undeveloped properties upgradient of Well 3 and the former golf course property in Haines Falls. Currently there are no local municipal laws to protect water supply sources from new land uses that could pose a potential contaminant risk. Although there is no zoning in the Town of Hunter, there is a comprehensive site plan review law that requires the preparation, review, and approval of a site plan prior to the issuance of a building permit for the construction or alteration of a multiple unit residential building, commercial building, municipal building or industrial building, commercial tract of land or place of public assembly. The Town of Hunter is currently in the process of updating its site plan review law and the Town's Land Use Committee has proposed several drafts.

No consideration of existing public water supply sources is contained within the existing site plan review law or the current draft of the proposed site plan review law that is available on the Town's website. This could be addressed by two amendments proposed by NYRWA. First, *the*

location of all public water system sources within 1,500-feet of the proposed use could be added to the Site Plan Checklist. Second, under the Planning Board's general considerations in its review/approval of the site plan, the following could be added: protection of the quality and quantity of available water resources utilized by private and public water supply sources in the vicinity of the proposed use.

NYRWA, through its Source Water Protection Program, can provide free technical assistance to the Town of Hunter on a source water protection plan.

4.6 Request Interested Agency Status for SEQRA Review

SEQRA stands for New York State Environmental Quality Review Act. Any local government or state agency must conduct some level of environmental review under SEQRA if that agency must make a discretionary decision. If Haines Falls Auto is applying for a new permit under Part 360 for a C&D debris processing facility and a transfer station facility, NYSDEC permits for such facilities would be subject to SEQRA. In addition, the Town's site plan review law would require a site plan and SEQRA form(s) be prepared for such a change in use. Under SEQRA, Twilight Park can petition the NYSDEC and the Town of Hunter to be an "Interested Agency". This is an agency that lacks the jurisdiction to fund, approve or directly undertake an action but wishes to participate in the review process because of its specific expertise or concern about the proposed action.

5.0 POTENTIAL WATER SUPPLY WELLS

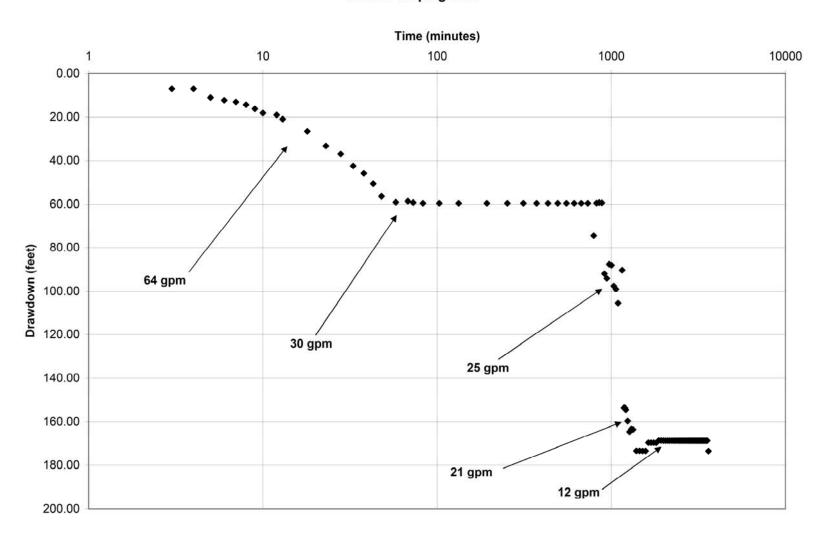
In the event of contamination of supply wells or disruption of use of the reservoir, alternative supply wells may have to be developed in the future. As indicated on Figure 6, NYRWA identified seven potential well sites on land owned by Twilight Cottagers, Inc. Although there are productive ground water resources on the former golf course property along the Kaaterskill Creek, this area was avoided by NYRWA in its analysis due to contamination concerns.

At each of these proposed sites, Twilight Cottagers, Inc. would own a 100-foot radius around any potential supply well. Protective easements would have to be secured to control the remaining 200-foot area at some of the sites however. Priority should be placed on those sites with mapped linear features.

.

APPENDIX A TIME-DRAWDOWN PLOT WELL 3 PUMPING TEST

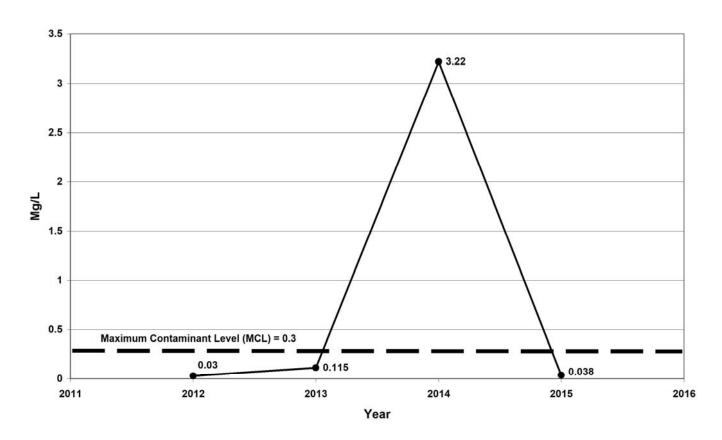
Twilight Park Association Well 3 Pumping Test



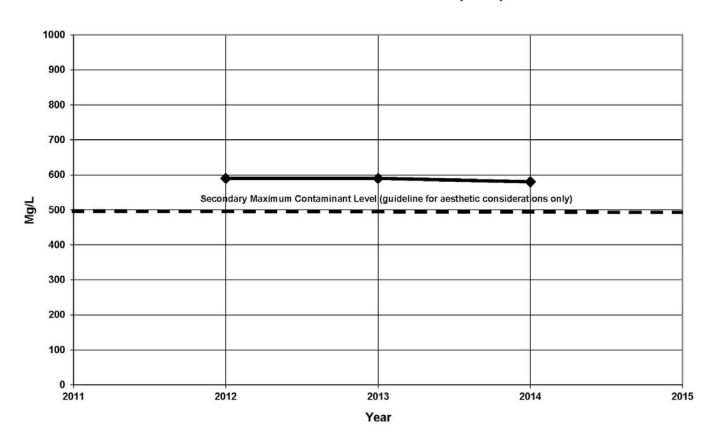
APPENDIX B

WELL 3 WATER QUALITY GRAPHS

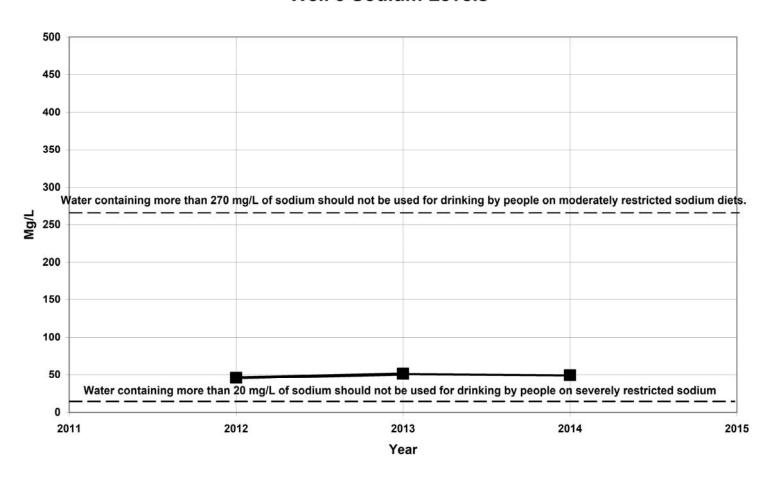
Well 3 Iron Levels



Well 3 Total Dissolved Solids (TDS)



Well 3 Sodium Levels



APPENDIX C

EDUCATIONAL MATERIALS FOR COTTAGERS LOCATED WITHIN WELLHEAD MANAGEMENT AREAS Name of Recipient Recipient Address Town, State, Zip

Enclosure

Date

Please Help Protect Twilight Park's Drinking Water

Dear Name of Recipient:

The Twilight Park Association would like to ask for your cooperation in ensuring a safe drinking water for our community. The Twilight Park Association water system has worked with the New York Rural Water Association to develop and implement a source water protection plan to prevent our drinking water sources from becoming contaminated. Once a source becomes contaminated, it is very costly and sometimes impossible to correct. We are writing to you because your property is located within 200 feet of one of the supply wells for the Twilight Park Association water system. This area is referred to as the wellhead management area. It is the minimum area around supply wells that the New York State Department of Health mandates public water systems protect from potential sources of contamination.

Since your property is in close proximity to one of Twilight Park's water system wells, activities on your property that affect ground water can also influence the quality of the water from the public water supply well. You may already know that that certain activities have the potential to affect the quality of ground water. For example, any gasoline, motor oil, paint, garden chemicals, lawn chemicals, fuel oil, or other household chemicals that are spilled, sprayed, spread, or dumped onto the ground can make their way into ground water. Some residents in Twilight Park also have individual sewage or graywater systems that could impact ground water quality.

Fortunately, you can minimize the likelihood of ground water contamination by following a few simple guidelines. Please take the time to review and follow the tips on the enclosed pamphlet, and make sure all family members, residents, or guests are aware of them. By following these simple steps, you can help minimize the potential for contamination of ground water and your drinking water supply.

If you have any questions about this letter, water protection efforts, please contact	1 1
Steven Winkley of the New York Rural Wandditional information.	•
Sincerely,	
Contact person's name Twilight Park Association	

Do's and Don'ts to protect your drinking water

DO use non-toxic and less-toxic alternatives to pesticides and household chemicals.

DO take leftover household chemicals to your town's household hazardous waste collection day.

DO test soil every two years to determine existing nutrient levels and pH before applying fertilizers.

DO use slow or controlled release nitrogen sources of fertilizer.

Keep these Household Hazardous Wastes Out of your Drinking Water

Automotive fluids, auto batteries, used motor oil, paint, paint thinner, other solvents, pesticides, and cleaning products

DO follow package directions on pesticides, fertilizers, and other household chemicals.

DO check your underground fuel storage tank (UST) frequently for leaks. Have an UST removed if it is more than 20 years old. Replace it with an aboveground storage tank that has a concrete slab underneath it, a cover and secondary containment.

DO take care of your septic system. Inspect the septic tank every year and have it pumped out every 3-5 years.

DO avoid damage to your leachfield and distribution lines by keeping vehicles, livestock, and other heavy objects off of it. **DO** measure the area of your lawn to be fertilized to determine how much to use.

DO calibrate or adjust spreader settings to match the recommended rate for fertilizers.

DO use drip pans large enough to contain motor vehicle or power equipment fluids being replaced or drained.

DO fully drain oil over a drip pan or pail before disposal. Most solid waste transfer stations accept used oil filters for recycling. Store and transport used oil filters in a covered leak-proof container until disposal.

DO keep absorbent materials such as rags, pads, speedee-dri, kitty litter, or other clay-based products handy to the work area and clean up all spills as soon as they occur. Dispose of all used absorbents immediately in a leak-proof container.

DO refuel or repair engines over an impervious surface such as a concrete floor or tarp.

DO drain all fluids from motor vehicle parts before removing them from the vehicle.

DON'T buy more pesticides or hazardous chemicals than you need.

DON'T dispose of hazardous chemicals by pouring them down the drain or onto the ground.

DON'T over-use pesticides or household chemicals. More is not necessarily better.

DON'T have your UST removed by a contractor who is not familiar with state guidelines for UST removal.

DON'T overload your septic system with solids by using a garbage disposal, unless the system is specifically designed for one.

DON'T pour chemicals down the sink or toilet.

DON'T use septic system cleaners or additives containing acids or chemical solvents such as trichloroethylene (TCE).

DON'T use fertilizers if heavy rains are anticipated as the nutrients will beflushed from the lawn into drains and low areas.

DON'T apply fertilizers within 10 feet of culverts, drainage ditches, wells, roadways, and walks, or 25 feet of most lakes and streams.

