

SOURCE WATER ASSESSMENT REPORT

AN EVALUATION OF THE SUSCEPTIBILITY OF PUBLIC DRINKING WATER SOURCES TO POTENTIAL CONTAMINATION

CT0473011

Connecticut Water Company Northern Region Western System - Shenipsit Lake

The State of Connecticut Department of Public Health (DPH) in cooperation with the Department of Environmental Protection (DEP) recently completed an initial assessment of the Northern Region Western System - Shenipsit Lake, which is a source of public drinking water that is maintained and operated by the Connecticut Water Company. This one-time assessment is part of a nationwide effort mandated by Congress under the Safe Drinking Water Act Amendments of 1996 to evaluate the susceptibility of all public drinking water sources in Connecticut to potential sources of contamination. DPH began working in partnership with the DEP in 1997 to develop Connecticut's Source Water Assessment Program, which was approved by the U.S. Environmental Protection Agency in 1999. Sources of potential contamination that are of concern to public drinking water supplies here in Connecticut are generally associated with historic waste disposal or commercial, industrial, agricultural and residential properties that store or use hazardous materials like petroleum products, solvents or agricultural chemicals.

The assessment is intended to provide Connecticut Water Company consumers with information about where their public drinking water comes from, sources of potential contamination that could impact it, and what can be done to help protect it. This initial assessment complete will also assist the public water supply system, regional planners, local government, public health officials and state agencies in evaluating the degree to which the Northern Region Western System - Shenipsit Lake may be at risk from potential sources of contamination. The assessment can be used to target and implement enhanced source water protection measures such as routine inspections, protective land use regulations, acquisition of critical land, proper septic system maintenance, and public education. General sources of contamination with the potential to impact the Northern Region Western System - Shenipsit Lake include properties with underground fuel storage tanks, improperly maintained on-site septic systems, improper waste disposal, or commercial/industrial sites that store or use chemicals or generate hazardous wastes.

Northern Region Western System - Shenipsit Lake Source Water Assessment Summary

STRENGTHS

Point source pollution discharge points not present in this watershed area

Public water system has a comprehensive source protection program.

POTENTIAL RISK FACTORS

Potential contaminant sources present in the watershed

Less than 20% of watershed area owned by public water system

Susceptibility Rating

	Environmental Sensitivity	Potential Risk Factors	Source Protection Needs
Rating			
Low	X	X	
Moderate			
High			X

Overall Susceptibility Rating: Moderate

This rating indicates susceptibility to potential sources of contamination that may be in the source water area and does not necessarily imply poor water quality.

Detailed information about the specific factors and information used in establishing this rating can be found in Table 2. Information about opportunities to improve protection in the Northern Region Western System - Shenipsit Lake is also presented in Table 2.



Keeping Connecticut Healthy

State of Connecticut Department of Public Health

Drinking Water Division

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OVERVIEW - The Northern Region Western System - Shenipsit Lake watershed encompasses some 10,441 acres of land in Ellington, Somers, Stafford, Tolland and Vernon. Approximately 10.9% of this watershed is owned by the Connecticut Water Company. Public drinking water sources in this system include Shenipsit Lake. State-wide satellite imagery developed by the University of Connecticut indicates that undeveloped land and residential properties presently account for approximately 90.8% percent of the land cover in the Northern Region Western System - Shenipsit Lake. Commercial development at 1.0% and agricultural land use at 8.2% account for the remainder of the land coverage in the source water area. Approximately 18.7% of the land in the watershed area is preserved including all watershed land owned by the Connecticut Water Company, state forest and parklands, and municipally or privately held land designated as open space. Information about drinking water quality and treatment is available in the Connecticut Water Company’s annual Consumer Confidence Report.

ASSESSMENT METHODS.

The drinking water source assessment methods used by the Department of Public Health Drinking Water Division to evaluate the susceptibility of public drinking water sources to contamination are based on criteria individually tailored to surface water and groundwater sources. The criteria are keyed to sanitary conditions in the source water area, the presence of potential or historic sources of contamination, existing land use coverage’s, and the need for additional source protection measures within the source water area. Source-specific data for community and non-community systems were used to determine whether a particular criterion should be rated as low, moderate or high, relative to the risk of potential contamination at the drinking water source. Further, a ranking system was used to compute an average rank for each community drinking water source based on its environmental sensitivity, potential risk of contamination and source protection needs. Watersheds and reservoirs rated as having a low, moderate or high susceptibility to potential sources of contamination generally exhibit the characteristics summarized in Table 1.

Table 1 – General Watershed Area Characteristics and Susceptibility Ratings

Susceptibility Rating	General Characteristics of the Watershed Area*
Low	Low density of potential contaminant sources Lower intensity of land development
Moderate	Low to moderate density of potential contaminant sources Moderate intensity of land development
High	Moderate to high density of potential contaminant sources Higher intensity of land development No local watershed protection regulations Detectable nitrates and/or volatile organic chemicals in the untreated source water during the past three years that are below the maximum contaminant levels allowed by state and federal drinking water regulations

** Note: Not all characteristics may be present for a given susceptibility rating*

Readers of this assessment are encouraged to use the attached glossary to assist in the understanding of the terms and concepts used throughout this report.

Maps representing the location and features of the Northern Region Western System - Shenipsit Lake source water area have not been included with this assessment report because of homeland security concerns.

NORTHERN REGION WESTERN SYSTEM - SHENIPSIT LAKE ASSESSMENT RESULTS.

Based on a combination of current reservoir and watershed area conditions, existing potential contaminant sources, and the level of source protection measures currently in place, the source water assessment for this watershed system indicates that it has an overall Moderate risk of contamination from any identified potential sources of contamination. The assessment findings for the Northern Region Western System - Shenipsit Lake are summarized in Table 2, which lists current conditions in the source water area and recommendations or opportunities to enhance protection of this public drinking water source. A listing of potential contaminant source types in the area, if present, can be found in Table 3. A summary of source water area features is shown in Table 4.

The assessment of this and other comparable watershed areas throughout Connecticut generally finds that adopting recommendations similar to those presented in Table 2 could reduce the susceptibility of most surface water sources to potential sources of contamination.

Table 2 Source Water Assessment Findings and Source Protection Opportunities For the Northern Region Western System - Shenipsit Lake

Assessment Category	Conditions as of June 2002	Recommendations and Source Protection Opportunities
<p>Environmental Sensitivity Factors</p> <p>Contaminants Detected in Untreated Source Water</p>	<p>Predominant watershed topography characterized by gentle slopes</p> <p>Reservoirs have moderate capacity to support excessive growths of algae and plankton</p> <p>None</p> <p>Click here to review EPA's current drinking water standards</p>	<p>Monitor runoff during heavy precipitation events</p> <p>Monitor reservoir nutrient levels for source waters classified as eutrophic or mesotrophic.</p> <p>Encourage homeowners to adopt residential best management practices that minimize the use of hazardous materials or generation of hazardous waste in the watershed.</p>
<p>Potential Risk Factors</p>	<p>Potential contaminant sources present in the watershed</p> <p>More than 50% of land for this source water area is undeveloped, which could present a risk if developed inappropriately.</p> <p>Major state or interstate roadways present in the watershed</p> <p>Known contaminant release points present in the watershed</p>	<p>Periodically inspect these sites and maintain a water quality monitoring program consistent with the level of potential risk</p> <p>Proactively work with local officials and developers to insure that only low-risk development occurs within the watershed area</p> <p>Monitor road salt and herbicide usage along these roadways and address potential for hazardous material spills resulting from vehicular accidents</p> <p>Maintain an adequate level of surveillance around contaminant release point sites to insure that surface water contamination is not occurring</p> <p>Encourage residential property owners to inspect and regularly cleanout onsite septic systems and replace underground fuel storage tanks with above ground tanks.</p>
<p>Source Protection Needs Factors</p>	<p>Less than 20% of watershed area owned by public water system</p> <p>Less than 20% of the land in the source water area exists as preserved open space</p> <p>Point source pollution discharge points not present in this watershed area</p>	<p>Increase ownership or control of watershed area whenever land becomes available for purchase or support land acquisition by public or private conservation/preservation organizations</p> <p>Support and encourage the acquisition of open space land within the watershed area</p> <p>Support environmental awareness and education within the community.</p>

Inventoried significant potential contaminant sources present in the Northern Region Western System - Shenipsit Lake source water area are listed in Table 3. While these facilities, if present, have the potential to cause surface water contamination; there is no indication that they are doing so at this time.

Table 3 – Summary of Significant Potential Contaminant Types in the Northern Region Western System - Shenipsit Lake Source Water Area

Category	Subcategory	Number of SPCS Types
Waste Storage, Handling, Disposal	Hazardous Waste Facilities	5
	Solid Waste Facilities	0
	Miscellaneous	0
Bulk Chemical, Petroleum Storage	Underground Storage Tanks	0
	Tank Farms	0
	Warehouses	0
Industrial Manufacturing / Processing	Chemical & Allied Production	0
	Chemical Use Processing	1
	Miscellaneous	0
Commercial Trades and Services	Automotive and Related Services	0
	Chemical Use Services	0
	Miscellaneous	0
Miscellaneous	No Identifiable SPCS Type	0
Agricultural Operations	Animal or Livestock Waste Handling	1
	Pesticide Storage or Application	0
Total Number of Contaminant Types		7

Prominent features of the Northern Region Western System - Shenipsit Lake source water area are summarized in Table 4.

Table 4 - Features of the Northern Region Western System - Shenipsit Lake

Location of Watershed Area	Ellington, Somers, Stafford, Tolland and Vernon
Name of Reservoir(s) and Diversion(s)	Shenipsit Lake
Number and Type of Public Drinking Water Reservoirs or Diversions in the Watershed	1 Distribution
Trophic Status of Reservoir(s)	Mesotrophic
DEP Surface Water Classification	AA
Watershed Area (total acreage)	10,441 acres
Preserved Land in the Watershed ^a	1,951 acres
Predominant Watershed Topography	gentle slopes
General Land Use and Land Cover in the Watershed ^b	
-Urban - Commercial or Industrial	1.0%
-Urban - Residential	6.3%
-Agricultural	8.2%
-Undeveloped Land	84.5%
Significant Potential Contamination Sources	
-Number of inventoried facilities in source water area ^c	6
-Count of inventoried facilities per square mile	0.37 per sq mile
-Number of contaminant types within inventoried facilities	7
Number of Contaminant Release Points Inventoried by CTDEP ^d	4

^a Preserved land includes any combination of land owned by the public water supply, state forest and parklands, and municipally or privately held land designated as open space.

^b Based on statewide data layer of land use and land cover developed by UCONN Dept of Natural Resource Management Engineering and Connecticut DEP satellite imagery averaged across the entire watershed.

^c Inventoried facilities reflect the actual number of SPCS sites present in the source water area, which may have more than 1 type of contaminant present at the facility.

^d Sites or locations with documented accidental spills, leaks or discharges. While these sources, which are cataloged and tracked by the Connecticut DEP, may fall within a public drinking water supply source water area, they may or may not presently be discharging to the environment or causing contamination of a public drinking water source.

SOURCE WATER ASSESSMENT REPORT

AN EVALUATION OF THE SUSCEPTIBILITY OF PUBLIC DRINKING WATER SOURCES TO POTENTIAL CONTAMINATION

APA 42

Aug-03

Connecticut Water Company Northern Region-Western System Hunt Wellfield

The State of Connecticut Department of Public Health (DPH) in cooperation with the Department of Environmental Protection (DEP) recently completed an assessment of the Hunt Wellfield, which is a source of public drinking water that is maintained and operated by the Connecticut Water Company. This one-time assessment is part of a nationwide effort mandated by Congress under the Safe Drinking Water Act Amendments of 1996 to evaluate the susceptibility of all public drinking water sources in Connecticut to potential sources of contamination. DPH began working in partnership with the DEP in 1997 to develop Connecticut's Source Water Assessment Program, which was approved by the U.S. Environmental Protection Agency in 1999. Sources of potential contamination that are of concern to public drinking water supplies here in Connecticut are generally associated with historic waste disposal or commercial, industrial, agricultural and residential properties that store or use hazardous materials like petroleum products, solvents or agricultural chemicals.

The assessment is intended to provide Connecticut Water Company consumers with information about where their public drinking water comes from, sources of potential contamination that could impact it, and what can be done to help protect it. This assessment will also assist the public water supply system, regional planners, local government, public health officials and state agencies in evaluating the degree to which the Hunt Wellfield may be at risk from potential sources of contamination. The assessment can be used to target and implement enhanced source water protection measures such as routine inspections, protective land use regulations, acquisition of critical land, proper septic system maintenance, and public education. General sources of contamination with the potential to impact the Hunt Wellfield include properties with underground fuel storage tanks, improperly maintained on-site septic systems, improper waste disposal, or commercial/industrial sites that store or use chemicals or generate hazardous wastes.

Hunt Wellfield Source Water Assessment Summary

STRENGTHS

Public Water System Source Protection Program

Less than 10% of this source water area is currently developed for commercial or industrial use

POTENTIAL RISK FACTORS

Potential contaminant sources in source water area

No local aquifer protection regulations

3 contaminant release points in source water area

Susceptibility Rating

Rating	Environmental Sensitivity	Potential Risk Factors	Source Protection Needs
Low	X		
Moderate		X	
High			X

Overall Susceptibility Rating: Moderate

This rating indicates susceptibility to potential sources of contamination that may be in the wellfield source water area and does not necessarily imply poor water quality.

Detailed information about the specific factors and information used in establishing this rating can be found in Table 1. Information about opportunities to improve protection in the Hunt Wellfield source water area is also presented in Table 2.



Keeping Connecticut Healthy

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Drinking Water Division

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OVERVIEW - The Hunt Wellfield is located in an aquifer that is comprised largely of water-bearing sand and gravel deposits. The source water area is delineated by a preliminary Level B aquifer protection mapping area, which encompasses some 3128.4 acres of land in East Windsor. Vacant land and residential properties in the Hunt Wellfield source water area presently account for approximately 63.9 percent of the land cover. Commercial development at 3.5 percent and agricultural land use at 32.5 percent, account for the remainder of the land coverage's in the source water area. Information about drinking water quality and treatment is available in the Connecticut Water Company's annual Consumer Confidence Report.

ASSESSMENT METHODS.

The drinking water source assessment methods used by the Department of Public Health Drinking Water Division to evaluate the susceptibility of public drinking water sources to contamination are based on criteria individually tailored to surface water and groundwater sources. The criteria are keyed to sanitary conditions in the source water area, the presence of potential or historic sources of contamination, existing land use coverage's, and the need for additional source protection measures within the source water area. Source-specific data for community and non-community systems were used to determine whether a particular criterion should be rated as low, moderate or high, relative to the risk of potential contamination at the drinking water source. Further, a ranking system was used to compute an average rank for each community drinking water source based on its environmental sensitivity, potential risk of contamination and source protection needs.

Wellfields rated as having a low, moderate or high susceptibility to potential sources of contamination generally exhibit the characteristics summarized in Table 1.

Table 1 – General Source Water Area Characteristics and Susceptibility Ratings

Susceptibility Rating	General Characteristics of the Source Water Area*
Low	Low density of potential contaminant sources Lower intensity of land development
Moderate	Low to moderate density of potential contaminant sources Moderate intensity of land development
High	Moderate to high density of potential contaminant sources Higher intensity of land development No local aquifer protection regulations Detectable nitrates and/or volatile organic chemicals in the untreated source water during the past three years that are below the maximum contaminant levels allowed by state and federal drinking water regulations

** Note: Not all characteristics may be present for a given susceptibility rating*

Readers of this assessment are encouraged to use the attached glossary to assist in the understanding of the terms and concepts used throughout this report.

Maps representing the location and features of the Hunt Wellfield source water area have not been included with this assessment report because of homeland security concerns

HUNT WELLFIELD ASSESSMENT RESULTS.

Based on a combination of current wellfield and source water area conditions, existing potential contaminant sources, and the level of source protection measures currently in place, the source water assessment for this wellfield indicates that it has an overall Moderate risk of contamination from identified potential sources of contamination. It should be noted that this rating does not necessarily imply poor water quality or ongoing violations of the Connecticut Public Health Code. The assessment findings for the Hunt Wellfield are summarized in Table 2, which lists current conditions in the wellfield source water area and recommendations or opportunities to enhance protection of this public drinking water source. A listing of potential contaminant source types in the area can be found in Table 3. A summary of source water area features is shown in Table 4.

The assessment of this and other comparable wellfields throughout Connecticut generally finds that adopting recommendations similar to those presented in Table 2 could reduce the susceptibility of most groundwater sources to potential sources of contamination.

Table 2

**Source Water Assessment Findings and Source Protection Opportunities
Northern Region-Western System Hunt Wellfield**

Assessment Category	Conditions Through June 2002	Recommendations and Source Protection Opportunities
<p>Environmental Sensitivity Factors</p> <p>Contaminants Detected in Untreated Source Water</p>	<p>All wells in the Hunt Wellfield are sited and constructed in accordance with DPH regulations and the most recent DPH sanitary survey of this wellfield indicates that it is free of deficiencies.</p> <p>Nitrate >1mg/L</p> <p>Except where noted above, any detected contaminants listed are below maximum contaminant levels (MCL) established by the federal government or guidance levels established by the Connecticut Department of Public Health. The presence of these contaminants, in general, indicates that this wellfield is sensitive to human activity.</p> <p>Click here to review EPA's current drinking water standardsT</p>	<p>Maintain monitoring levels specified in the Connecticut Public Health Code Section 19-13-B102</p> <p>Encourage homeowners to adopt residential best management practices that minimize the use hazardous materials or generation of hazardous waste.</p>
<p>Potential Risk Factors</p>	<p>Potential contaminant sources in source water area</p> <p>3 contaminant release points in source water area</p> <p>More than 30% of land for this source water area is undeveloped, which could present a risk if developed inappropriately.</p>	<p>Periodically inspect SPCS sites and maintain a water quality monitoring program consistent with the level of potential risk</p> <p>Maintain an adequate level of surveillance around contaminant release point sites to insure that groundwater contamination is not occurring</p> <p>Proactively work with local officials and developers to insure that only low-risk development occurs within the source water area</p> <p>Encourage residential property owners to conduct scheduled inspections and maintenance of underground fuel storage tanks and on-site septic systems.</p>
<p>Source Protection Needs Factors</p>	<p>Level B aquifer mapping completed</p> <p>100 percent ownership or control of sanitary radius around wellheads in wellfield.</p> <p>Local aquifer protection regulations have not been adopted for this source water area</p> <p>Less than 10% of the land in the source water area exists as preserved open space</p>	<p>Complete Level A mapping</p> <p>Develop and adopt local aquifer protection regulations</p> <p>Support and encourage the acquisition of open space land within the source water area</p> <p>Support environmental awareness and education within the community.</p>

Inventoried significant potential contaminant sources in the Hunt Wellfield source water area are listed in Table 3. While these facilities have the potential to cause groundwater contamination, there is no indication that they are doing so at this time.

Table 3 Summary of Significant Potential Contaminant Types in the Hunt Wellfield Source Water Area

Category	Subcategory	Number of SPCS Types
Waste Storage, Handling, Disposal	Hazardous Waste Facilities	2
	Solid Waste Facilities	2
	Miscellaneous	0
Bulk Chemical, Petroleum Storage	Underground Storage Tanks	7
	Tank Farms	0
	Warehouses	0
Industrial Manufacturing / Processing	Chemical & Allied Production	0
	Chemical Use Processing	0
	Miscellaneous	0
Commercial Trades and Services	Automotive and Related Services	5
	Chemical Use Services	2
	Miscellaneous	0
Agriculture and Related	Pesticide Storage, Handling or Application	0
Total Number of Contaminant Types		18

Prominent features of the Hunt Wellfield source water area are summarized in Table 4.

Table 4 Features of the Hunt Wellfield Source Water Area

Number and Type of Public Drinking Water Supply Wells	6 stratified drift wells
Source Water Area Delineation Method ^a	preliminary Level B
DEP Groundwater Classification	GAA - Groundwater used as a public drinking water supply, presumed to be drinkable without treatment
Size of Source Water Area	3128.4 acres
Location of Source Water Area	East Windsor
Predominant Land Use and Land Cover in Source Water Area ^b	
-Urban - Commercial or Industrial	3.5 %
-Urban - Residential	14.0 %
-Agricultural	32.5 %
-Undeveloped Land	50.0 %
Preserved Land In Source Water Area ^d	200.2 acres
Significant Potential Contamination Sources	
-Number of inventoried facilities in source water area	12
-Count of inventoried facilities per square mile	2.45 per sq mile
-Number of contaminant sources within inventoried facilities	18
Number of Contaminant Release Points Inventoried by CTDEP ^c	3

^a Source water delineation method depends on data available for the wellfield

^b Based on statewide data layer of land use and land cover developed by UCONN Dept of Natural Resource Management Engineering and Connecticut DEP satellite imagery.

^c Sites or locations with documented accidental spills, leaks or discharges. While these sources, which are cataloged and tracked by the Connecticut DEP, may fall within a public drinking water supply source water area, they may or may not presently be discharging to the environment or causing contamination of a public drinking water source.

^d Any combination of state forest and parklands and municipally or privately held land designated as open space.

SOURCE WATER ASSESSMENT REPORT

AN EVALUATION OF THE SUSCEPTIBILITY OF PUBLIC DRINKING WATER SOURCES TO POTENTIAL CONTAMINATION

APA 43

Aug-03

Connecticut Water Company Northern Region-Western System Spring Lots Wellfield

The State of Connecticut Department of Public Health (DPH) in cooperation with the Department of Environmental Protection (DEP) recently completed an assessment of the Spring Lots Wellfield, which is a source of public drinking water that is maintained and operated by the Connecticut Water Company. This one-time assessment is part of a nationwide effort mandated by Congress under the Safe Drinking Water Act Amendments of 1996 to evaluate the susceptibility of all public drinking water sources in Connecticut to potential sources of contamination. DPH began working in partnership with the DEP in 1997 to develop Connecticut's Source Water Assessment Program, which was approved by the U.S. Environmental Protection Agency in 1999. Sources of potential contamination that are of concern to public drinking water supplies here in Connecticut are generally associated with historic waste disposal or commercial, industrial, agricultural and residential properties that store or use hazardous materials like petroleum products, solvents or agricultural chemicals.

The assessment is intended to provide Connecticut Water Company consumers with information about where their public drinking water comes from, sources of potential contamination that could impact it, and what can be done to help protect it. This assessment will also assist the public water supply system, regional planners, local government, public health officials and state agencies in evaluating the degree to which the Spring Lots Wellfield may be at risk from potential sources of contamination. The assessment can be used to target and implement enhanced source water protection measures such as routine inspections, protective land use regulations, acquisition of critical land, proper septic system maintenance, and public education. General sources of contamination with the potential to impact the Spring Lots Wellfield include properties with underground fuel storage tanks, improperly maintained on-site septic systems, improper waste disposal, or commercial/industrial sites that store or use chemicals or generate hazardous wastes.

Spring Lots Wellfield Source Water Assessment Summary

STRENGTHS

Public Water System Source Protection Program

Less than 10% of this source water area is currently developed for commercial or industrial use

POTENTIAL RISK FACTORS

Potential contaminant sources in source water area

No local aquifer protection regulations

Susceptibility Rating

Rating	Environmental Sensitivity	Potential Risk Factors	Source Protection Needs
Low	X	X	
Moderate			
High			X

Overall Susceptibility Rating: Moderate

This rating indicates susceptibility to potential sources of contamination that may be in the wellfield source water area and does not necessarily imply poor water quality.

Detailed information about the specific factors and information used in establishing this rating can be found in Table 1. Information about opportunities to improve protection in the Spring Lots Wellfield source water area is also presented in Table 2.



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OVERVIEW - The Spring Lots Wellfield is located in an aquifer that is comprised largely of water-bearing sand and gravel deposits. The source water area is delineated by a preliminary Level B aquifer protection mapping area, which encompasses some 3606.5 acres of land in Enfield. Vacant land and residential properties in the Spring Lots Wellfield source water area presently account for approximately 85.6 percent of the land cover. Commercial development at 9.1 percent and agricultural land use at 5.3 percent, account for the remainder of the land coverage's in the source water area. Information about drinking water quality and treatment is available in the Connecticut Water Company's annual Consumer Confidence Report.

ASSESSMENT METHODS.

The drinking water source assessment methods used by the Department of Public Health Drinking Water Division to evaluate the susceptibility of public drinking water sources to contamination are based on criteria individually tailored to surface water and groundwater sources. The criteria are keyed to sanitary conditions in the source water area, the presence of potential or historic sources of contamination, existing land use coverage's, and the need for additional source protection measures within the source water area. Source-specific data for community and non-community systems were used to determine whether a particular criterion should be rated as low, moderate or high, relative to the risk of potential contamination at the drinking water source. Further, a ranking system was used to compute an average rank for each community drinking water source based on its environmental sensitivity, potential risk of contamination and source protection needs.

Wellfields rated as having a low, moderate or high susceptibility to potential sources of contamination generally exhibit the characteristics summarized in Table 1.

Table 1 – General Source Water Area Characteristics and Susceptibility Ratings

Susceptibility Rating	General Characteristics of the Source Water Area*
Low	Low density of potential contaminant sources Lower intensity of land development
Moderate	Low to moderate density of potential contaminant sources Moderate intensity of land development
High	Moderate to high density of potential contaminant sources Higher intensity of land development No local aquifer protection regulations Detectable nitrates and/or volatile organic chemicals in the untreated source water during the past three years that are below the maximum contaminant levels allowed by state and federal drinking water regulations

** Note: Not all characteristics may be present for a given susceptibility rating*

Readers of this assessment are encouraged to use the attached glossary to assist in the understanding of the terms and concepts used throughout this report.

Maps representing the location and features of the Spring Lots Wellfield source water area have not been included with this assessment report because of homeland security concerns

SPRING LOTS WELLFIELD ASSESSMENT RESULTS.

Based on a combination of current wellfield and source water area conditions, existing potential contaminant sources, and the level of source protection measures currently in place, the source water assessment for this wellfield indicates that it has an overall Moderate risk of contamination from identified potential sources of contamination. It should be noted that this rating does not necessarily imply poor water quality or ongoing violations of the Connecticut Public Health Code. The assessment findings for the Spring Lots Wellfield are summarized in Table 2, which lists current conditions in the wellfield source water area and recommendations or opportunities to enhance protection of this public drinking water source. A listing of potential contaminant source types in the area can be found in Table 3. A summary of source water area features is shown in Table 4.

The assessment of this and other comparable wellfields throughout Connecticut generally finds that adopting recommendations similar to those presented in Table 2 could reduce the susceptibility of most groundwater sources to potential sources of contamination.

Table 2

**Source Water Assessment Findings and Source Protection Opportunities
Northern Region-Western System Spring Lots Wellfield**

Assessment Category	Conditions Through June 2002	Recommendations and Source Protection Opportunities
<p>Environmental Sensitivity Factors</p> <p>Contaminants Detected in Untreated Source Water</p>	<p>All wells in the Spring Lots Wellfield are sited and constructed in accordance with DPH regulations and the most recent DPH sanitary survey of this wellfield indicates that it is free of deficiencies.</p> <p>Nitrate >1mg/L</p> <p>Except where noted above, any detected contaminants listed are below maximum contaminant levels (MCL) established by the federal government or guidance levels established by the Connecticut Department of Public Health. The presence of these contaminants, in general, indicates that this wellfield is sensitive to human activity.</p> <p>Click here to review EPA's current drinking water standardsT</p>	<p>Maintain monitoring levels specified in the Connecticut Public Health Code Section 19-13-B102</p> <p>Encourage homeowners to adopt residential best management practices that minimize the use hazardous materials or generation of hazardous waste.</p>
<p>Potential Risk Factors</p>	<p>Potential contaminant sources in source water area</p> <p>More than 30% of land for this source water area is undeveloped, which could present a risk if developed inappropriately.</p>	<p>Periodically inspect SPCS sites and maintain a water quality monitoring program consistent with the level of potential risk</p> <p>Proactively work with local officials and developers to insure that only low-risk development occurs within the source water area</p> <p>Encourage residential property owners to conduct scheduled inspections and maintenance of underground fuel storage tanks and on-site septic systems.</p>
<p>Source Protection Needs Factors</p>	<p>Level B aquifer mapping completed</p> <p>100 percent ownership or control of sanitary radius around wellheads in wellfield.</p> <p>Local aquifer protection regulations have not been adopted for this source water area</p> <p>Less than 10% of the land in the source water area exists as preserved open space</p>	<p>Complete Level A mapping</p> <p>Develop and adopt local aquifer protection regulations</p> <p>Support and encourage the acquisition of open space land within the source water area</p> <p>Support environmental awareness and education within the community.</p>

Inventoried significant potential contaminant sources in the Spring Lots Wellfield source water area are listed in Table 3. While these facilities have the potential to cause groundwater contamination, there is no indication that they are doing so at this time.

Table 3 Summary of Significant Potential Contaminant Types in the Spring Lots Wellfield Source Water Area

Category	Subcategory	Number of SPCS Types
Waste Storage, Handling, Disposal	Hazardous Waste Facilities	6
	Solid Waste Facilities	0
	Miscellaneous	0
Bulk Chemical, Petroleum Storage	Underground Storage Tanks	12
	Tank Farms	1
	Warehouses	0
Industrial Manufacturing / Processing	Chemical & Allied Production	0
	Chemical Use Processing	4
	Miscellaneous	0
Commercial Trades and Services	Automotive and Related Services	15
	Chemical Use Services	1
	Miscellaneous	0
Agriculture and Related	Pesticide Storage, Handling or Application	0
Total Number of Contaminant Types		39

Prominent features of the Spring Lots Wellfield source water area are summarized in Table 4.

Table 4 Features of the Spring Lots Wellfield Source Water Area

Number and Type of Public Drinking Water Supply Wells	1 Caisson and 4 stratified drift wells
Source Water Area Delineation Method ^a	preliminary Level B
DEP Groundwater Classification	GAA - Groundwater used as a public drinking water supply, presumed to be drinkable without treatment
Size of Source Water Area	3606.5 acres
Location of Source Water Area	Enfield
Predominant Land Use and Land Cover in Source Water Area ^b	
-Urban - Commercial or Industrial	9.1 %
-Urban - Residential	44.3 %
-Agricultural	5.3 %
-Undeveloped Land	41.3 %
Preserved Land In Source Water Area ^d	247.2 acres
Significant Potential Contamination Sources	
-Number of inventoried facilities in source water area	23
-Count of inventoried facilities per square mile	4.08 per sq mile
-Number of contaminant sources within inventoried facilities	39
Number of Contaminant Release Points Inventoried by CTDEP ^c	0

^a Source water delineation method depends on data available for the wellfield

^b Based on statewide data layer of land use and land cover developed by UCONN Dept of Natural Resource Management Engineering and Connecticut DEP satellite imagery.

^c Sites or locations with documented accidental spills, leaks or discharges. While these sources, which are cataloged and tracked by the Connecticut DEP, may fall within a public drinking water supply source water area, they may or may not presently be discharging to the environment or causing contamination of a public drinking water source.

^d Any combination of state forest and parklands and municipally or privately held land designated as open space.

SOURCE WATER ASSESSMENT REPORT

AN EVALUATION OF THE SUSCEPTIBILITY OF PUBLIC DRINKING WATER SOURCES TO POTENTIAL CONTAMINATION

APA 47

Aug-03

Connecticut Water Company Northern Region-Western System Vernon Wells 1, 2, 4 Wellfield

The State of Connecticut Department of Public Health (DPH) in cooperation with the Department of Environmental Protection (DEP) recently completed an assessment of the Vernon Wells 1, 2, 4 Wellfield, which is a source of public drinking water that is maintained and operated by the Connecticut Water Company. This one-time assessment is part of a nationwide effort mandated by Congress under the Safe Drinking Water Act Amendments of 1996 to evaluate the susceptibility of all public drinking water sources in Connecticut to potential sources of contamination. DPH began working in partnership with the DEP in 1997 to develop Connecticut's Source Water Assessment Program, which was approved by the U.S. Environmental Protection Agency in 1999. Sources of potential contamination that are of concern to public drinking water supplies here in Connecticut are generally associated with historic waste disposal or commercial, industrial, agricultural and residential properties that store or use hazardous materials like petroleum products, solvents or agricultural chemicals.

The assessment is intended to provide Connecticut Water Company consumers with information about where their public drinking water comes from, sources of potential contamination that could impact it, and what can be done to help protect it. This assessment will also assist the public water supply system, regional planners, local government, public health officials and state agencies in evaluating the degree to which the Vernon Wells 1, 2, 4 Wellfield may be at risk from potential sources of contamination. The assessment can be used to target and implement enhanced source water protection measures such as routine inspections, protective land use regulations, acquisition of critical land, proper septic system maintenance, and public education. General sources of contamination with the potential to impact the Vernon Wells 1, 2, 4 Wellfield include properties with underground fuel storage tanks, improperly maintained on-site septic systems, improper waste disposal, or commercial/industrial sites that store or use chemicals or generate hazardous wastes.

Vernon Wells 1, 2, 4 Wellfield Source Water Assessment Summary

STRENGTHS

Public Water System Source Protection Program

Less than 10% of this source water area is currently developed for commercial or industrial use

POTENTIAL RISK FACTORS

Potential contaminant sources in source water area

Aquifer only partially protected by local regulation

1 contaminant release point in source water area

Susceptibility Rating

Rating	Environmental Sensitivity	Potential Risk Factors	Source Protection Needs
Low	X	X	
Moderate			
High			X

Overall Susceptibility Rating: Moderate

This rating indicates susceptibility to potential sources of contamination that may be in the wellfield source water area and does not necessarily imply poor water quality.

Detailed information about the specific factors and information used in establishing this rating can be found in Table 1. Information about opportunities to improve protection in the Vernon Wells 1, 2, 4 Wellfield source water area is also presented in Table 2.



Keeping Connecticut Healthy

State of Connecticut Department of Public Health

Drinking Water Division

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OVERVIEW - The Vernon Wells 1, 2, 4 Wellfield is located in an aquifer that is comprised largely of water-bearing sand and gravel deposits. The source water area is delineated by a preliminary Level B aquifer protection mapping area, which encompasses some 755.0 acres of land in Vernon. Vacant land and residential properties in the Vernon Wells 1, 2, 4 Wellfield source water area presently account for approximately 87.1 percent of the land cover. Commercial development at 6.6 percent and agricultural land use at 6.3 percent, account for the remainder of the land coverage's in the source water area. Information about drinking water quality and treatment is available in the Connecticut Water Company's annual Consumer Confidence Report.

ASSESSMENT METHODS.

The drinking water source assessment methods used by the Department of Public Health Drinking Water Division to evaluate the susceptibility of public drinking water sources to contamination are based on criteria individually tailored to surface water and groundwater sources. The criteria are keyed to sanitary conditions in the source water area, the presence of potential or historic sources of contamination, existing land use coverage's, and the need for additional source protection measures within the source water area. Source-specific data for community and non-community systems were used to determine whether a particular criterion should be rated as low, moderate or high, relative to the risk of potential contamination at the drinking water source. Further, a ranking system was used to compute an average rank for each community drinking water source based on its environmental sensitivity, potential risk of contamination and source protection needs.

Wellfields rated as having a low, moderate or high susceptibility to potential sources of contamination generally exhibit the characteristics summarized in Table 1.

Table 1 – General Source Water Area Characteristics and Susceptibility Ratings

Susceptibility Rating	General Characteristics of the Source Water Area*
Low	Low density of potential contaminant sources Lower intensity of land development
Moderate	Low to moderate density of potential contaminant sources Moderate intensity of land development
High	Moderate to high density of potential contaminant sources Higher intensity of land development No local aquifer protection regulations Detectable nitrates and/or volatile organic chemicals in the untreated source water during the past three years that are below the maximum contaminant levels allowed by state and federal drinking water regulations

** Note: Not all characteristics may be present for a given susceptibility rating*

Readers of this assessment are encouraged to use the attached glossary to assist in the understanding of the terms and concepts used throughout this report.

Maps representing the location and features of the Vernon Wells 1, 2, 4 Wellfield source water area have not been included with this assessment report because of homeland security concerns

VERNON WELLS 1, 2, 4 WELLFIELD ASSESSMENT RESULTS.

Based on a combination of current wellfield and source water area conditions, existing potential contaminant sources, and the level of source protection measures currently in place, the source water assessment for this wellfield indicates that it has an overall Moderate risk of contamination from identified potential sources of contamination. It should be noted that this rating does not necessarily imply poor water quality or ongoing violations of the Connecticut Public Health Code. The assessment findings for the Vernon Wells 1, 2, 4 Wellfield are summarized in Table 2, which lists current conditions in the wellfield source water area and recommendations or opportunities to enhance protection of this public drinking water source. A listing of potential contaminant source types in the area can be found in Table 3. A summary of source water area features is shown in Table 4.

The assessment of this and other comparable wellfields throughout Connecticut generally finds that adopting recommendations similar to those presented in Table 2 could reduce the susceptibility of most groundwater sources to potential sources of contamination.

Table 2

**Source Water Assessment Findings and Source Protection Opportunities
Northern Region-Western System Vernon Wells 1, 2, 4 Wellfield**

Assessment Category	Conditions Through June 2002	Recommendations and Source Protection Opportunities
<p>Environmental Sensitivity Factors</p> <p>Contaminants Detected in Untreated Source Water</p>	<p>All wells in the Vernon Wells 1, 2, 4 Wellfield are sited and constructed in accordance with DPH regulations and the most recent DPH sanitary survey of this wellfield indicates that it is free of deficiencies.</p> <p>Nitrate >1mg/L</p> <p>Except where noted above, any detected contaminants listed are below maximum contaminant levels (MCL) established by the federal government or guidance levels established by the Connecticut Department of Public Health. The presence of these contaminants, in general, indicates that this wellfield is sensitive to human activity.</p> <p>Click here to review EPA's current drinking water standardsT</p>	<p>Maintain monitoring levels specified in the Connecticut Public Health Code Section 19-13-B102</p> <p>Encourage homeowners to adopt residential best management practices that minimize the use hazardous materials or generation of hazardous waste.</p>
<p>Potential Risk Factors</p>	<p>Potential contaminant sources in source water area</p> <p>1 contaminant release point in source water area</p>	<p>Periodically inspect SPCS sites and maintain a water quality monitoring program consistent with the level of potential risk</p> <p>Maintain an adequate level of surveillance around contaminant release point sites to insure that groundwater contamination is not occurring</p> <p>Encourage residential property owners to conduct scheduled inspections and maintenance of underground fuel storage tanks and on-site septic systems.</p>
<p>Source Protection Needs Factors</p>	<p>Level B aquifer mapping completed</p> <p>Portions of the 200 foot sanitary radius around wellheads for this wellfield are not owned or controlled by the public water system.</p> <p>Local aquifer protection regulations have not been adopted for the entire source water area</p> <p>Very little or no public/private preserved open space lands are present in the source water area</p>	<p>Complete Level A mapping</p> <p>Where feasible, increase ownership or control of 200 foot sanitary radius around all wellheads for this wellfield</p> <p>Extend coverage of local aquifer protection regulations</p> <p>Support and encourage the acquisition of open space land within the source water area</p> <p>Support environmental awareness and education within the community.</p>

Inventoried significant potential contaminant sources in the Vernon Wells 1, 2, 4 Wellfield source water area are listed in Table 3. While these facilities have the potential to cause groundwater contamination, there is no indication that they are doing so at this time.

Table 3 Summary of Significant Potential Contaminant Types in the Vernon Wells 1, 2, 4 Wellfield Source Water Area

Category	Subcategory	Number of SPCS Types
Waste Storage, Handling, Disposal	Hazardous Waste Facilities	0
	Solid Waste Facilities	0
	Miscellaneous	0
Bulk Chemical, Petroleum Storage	Underground Storage Tanks	5
	Tank Farms	0
	Warehouses	0
Industrial Manufacturing / Processing	Chemical & Allied Production	0
	Chemical Use Processing	2
	Miscellaneous	0
Commercial Trades and Services	Automotive and Related Services	0
	Chemical Use Services	1
	Miscellaneous	0
Agriculture and Related	Pesticide Storage, Handling or Application	0
Total Number of Contaminant Types		8

Prominent features of the Vernon Wells 1, 2, 4 Wellfield source water area are summarized in Table 4.

Table 4 Features of the Vernon Wells 1, 2, 4 Wellfield Source Water Area

Number and Type of Public Drinking Water Supply Wells	3 stratified drift wells
Source Water Area Delineation Method ^a	preliminary Level B
DEP Groundwater Classification	GAA (3 wells) - Groundwater used as a public drinking water supply, presumed to be drinkable without treatment and GA-impaired or GAA-impaired (1 well) - Groundwater that may not be meeting all standards with a goal to restore to drinking water quality
Size of Source Water Area	755.0 acres
Location of Source Water Area	Vernon
Predominant Land Use and Land Cover in Source Water Area ^b	
-Urban - Commercial or Industrial	6.6 %
-Urban - Residential	59.5 %
-Agricultural	6.3 %
-Undeveloped Land	27.6 %
Preserved Land In Source Water Area ^d	16.0 acres
Significant Potential Contamination Sources	
-Number of inventoried facilities in source water area	3
-Count of inventoried facilities per square mile	2.54 per sq mile
-Number of contaminant sources within inventoried facilities	8
Number of Contaminant Release Points Inventoried by CTDEP ^c	1

^a Source water delineation method depends on data available for the wellfield

^b Based on statewide data layer of land use and land cover developed by UCONN Dept of Natural Resource Management Engineering and Connecticut DEP satellite imagery.

^c Sites or locations with documented accidental spills, leaks or discharges. While these sources, which are cataloged and tracked by the Connecticut DEP, may fall within a public drinking water supply source water area, they may or may not presently be discharging to the environment or causing contamination of a public drinking water source.

^d Any combination of state forest and parklands and municipally or privately held land designated as open space.

SOURCE WATER ASSESSMENT REPORT

AN EVALUATION OF THE SUSCEPTIBILITY OF PUBLIC DRINKING WATER SOURCES TO POTENTIAL CONTAMINATION

APA 45

Connecticut Water Company Northern Region-Western System Powder Hollow Wellfield

The State of Connecticut Department of Public Health (DPH) in cooperation with the Department of Environmental Protection (DEP) recently completed an assessment of the Powder Hollow Wellfield, which is a source of public drinking water that is maintained and operated by the Connecticut Water Company. This one-time assessment is part of a nationwide effort mandated by Congress under the Safe Drinking Water Act Amendments of 1996 to evaluate the susceptibility of all public drinking water sources in Connecticut to potential sources of contamination. DPH began working in partnership with the DEP in 1997 to develop Connecticut's Source Water Assessment Program, which was approved by the U.S. Environmental Protection Agency in 1999. Sources of potential contamination that are of concern to public drinking water supplies here in Connecticut are generally associated with historic waste disposal or commercial, industrial, agricultural and residential properties that store or use hazardous materials like petroleum products, solvents or agricultural chemicals.

The assessment is intended to provide Connecticut Water Company consumers with information about where their public drinking water comes from, sources of potential contamination that could impact it, and what can be done to help protect it. This assessment will also assist the public water supply system, regional planners, local government, public health officials and state agencies in evaluating the degree to which the Powder Hollow Wellfield may be at risk from potential sources of contamination. The assessment can be used to target and implement enhanced source water protection measures such as routine inspections, protective land use regulations, acquisition of critical land, proper septic system maintenance, and public education. General sources of contamination with the potential to impact the Powder Hollow Wellfield include properties with underground fuel storage tanks, improperly maintained on-site septic systems, improper waste disposal, or commercial/industrial sites that store or use chemicals or generate hazardous wastes.

Powder Hollow Wellfield Source Water Assessment Summary

STRENGTHS

- Public Water System Source Protection Program**
- Approximately 20 percent of the source water area is preserved as open space**
- Less than 10% of this source water area is currently developed for commercial or industrial use**

POTENTIAL RISK FACTORS

- Potential contaminant sources in source water area**
- No local aquifer protection regulations**
- 1 contaminant release point in source water area**

Susceptibility Rating

Rating	Environmental Sensitivity	Potential Risk Factors	Source Protection Needs
Low	X		
Moderate		X	
High			X

Overall Susceptibility Rating: Moderate

This rating indicates susceptibility to potential sources of contamination that may be in the wellfield source water area and does not necessarily imply poor water quality.

Detailed information about the specific factors and information used in establishing this rating can be found in Table 1. Information about opportunities to improve protection in the Powder Hollow Wellfield source water area is also presented in Table 2.



Keeping Connecticut Healthy

State of Connecticut Department of Public Health

Drinking Water Division

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OVERVIEW - The Powder Hollow Wellfield is located in an aquifer that is comprised largely of water-bearing sand and gravel deposits. The source water area is delineated by a final Level A aquifer protection mapping area, which encompasses some 1282.6 acres of land in Enfield. Vacant land and residential properties in the Powder Hollow Wellfield source water area presently account for approximately 73.3 percent of the land cover. Commercial development at 5.0 percent and agricultural land use at 21.7 percent, account for the remainder of the land coverage's in the source water area. Information about drinking water quality and treatment is available in the Connecticut Water Company's annual Consumer Confidence Report.

ASSESSMENT METHODS.

The drinking water source assessment methods used by the Department of Public Health Drinking Water Division to evaluate the susceptibility of public drinking water sources to contamination are based on criteria individually tailored to surface water and groundwater sources. The criteria are keyed to sanitary conditions in the source water area, the presence of potential or historic sources of contamination, existing land use coverage's, and the need for additional source protection measures within the source water area. Source-specific data for community and non-community systems were used to determine whether a particular criterion should be rated as low, moderate or high, relative to the risk of potential contamination at the drinking water source. Further, a ranking system was used to compute an average rank for each community drinking water source based on its environmental sensitivity, potential risk of contamination and source protection needs.

Wellfields rated as having a low, moderate or high susceptibility to potential sources of contamination generally exhibit the characteristics summarized in Table 1.

Table 1 – General Source Water Area Characteristics and Susceptibility Ratings

Susceptibility Rating	General Characteristics of the Source Water Area*
Low	Low density of potential contaminant sources Lower intensity of land development
Moderate	Low to moderate density of potential contaminant sources Moderate intensity of land development
High	Moderate to high density of potential contaminant sources Higher intensity of land development No local aquifer protection regulations Detectable nitrates and/or volatile organic chemicals in the untreated source water during the past three years that are below the maximum contaminant levels allowed by state and federal drinking water regulations

** Note: Not all characteristics may be present for a given susceptibility rating*

Readers of this assessment are encouraged to use the attached glossary to assist in the understanding of the terms and concepts used throughout this report.

Maps representing the location and features of the Powder Hollow Wellfield source water area have not been included with this assessment report because of homeland security concerns

POWDER HOLLOW WELLFIELD ASSESSMENT RESULTS.

Based on a combination of current wellfield and source water area conditions, existing potential contaminant sources, and the level of source protection measures currently in place, the source water assessment for this wellfield indicates that it has an overall Moderate risk of contamination from identified potential sources of contamination. It should be noted that this rating does not necessarily imply poor water quality or ongoing violations of the Connecticut Public Health Code. The assessment findings for the Powder Hollow Wellfield are summarized in Table 2, which lists current conditions in the wellfield source water area and recommendations or opportunities to enhance protection of this public drinking water source. A listing of potential contaminant source types in the area can be found in Table 3. A summary of source water area features is shown in Table 4.

The assessment of this and other comparable wellfields throughout Connecticut generally finds that adopting recommendations similar to those presented in Table 2 could reduce the susceptibility of most groundwater sources to potential sources of contamination.

Table 2

**Source Water Assessment Findings and Source Protection Opportunities
Northern Region-Western System Powder Hollow Wellfield**

Assessment Category	Conditions Through June 2002	Recommendations and Source Protection Opportunities
<p>Environmental Sensitivity Factors</p> <p>Contaminants Detected in Untreated Source Water</p>	<p>All wells in the Powder Hollow Wellfield are sited and constructed in accordance with DPH regulations and the most recent DPH sanitary survey of this wellfield indicates that it is free of deficiencies.</p> <p>Nitrate >5mg/L</p> <p>Except where noted above, any detected contaminants listed are below maximum contaminant levels (MCL) established by the federal government or guidance levels established by the Connecticut Department of Public Health. The presence of these contaminants, in general, indicates that this wellfield is sensitive to human activity.</p> <p>Click here to review EPA's current drinking water standardsT</p>	<p>Maintain monitoring levels specified in the Connecticut Public Health Code Section 19-13-B102</p> <p>Encourage homeowners to adopt residential best management practices that minimize the use hazardous materials or generation of hazardous waste.</p>
<p>Potential Risk Factors</p>	<p>Potential contaminant sources in source water area</p> <p>1 contaminant release point in source water area</p> <p>More than 50% of land for this source water area is undeveloped, which could present a risk if developed inappropriately.</p>	<p>Periodically inspect SPCS sites and maintain a water quality monitoring program consistent with the level of potential risk</p> <p>Maintain an adequate level of surveillance around contaminant release point sites to insure that groundwater contamination is not occurring</p> <p>Proactively work with local officials and developers to insure that only low-risk development occurs within the source water area</p> <p>Encourage residential property owners to conduct scheduled inspections and maintenance of underground fuel storage tanks and on-site septic systems.</p>
<p>Source Protection Needs Factors</p>	<p>Level A aquifer mapping completed</p> <p>100 percent ownership or control of sanitary radius around wellheads in wellfield.</p> <p>Local aquifer protection regulations have not been adopted for this source water area</p> <p>Less than 10% of the land in the source water area exists as preserved open space</p>	<p>Develop and adopt local aquifer protection regulations</p> <p>Support and encourage the acquisition of open space land within the source water area</p> <p>Support environmental awareness and education within the community.</p>

Inventoried significant potential contaminant sources in the Powder Hollow Wellfield source water area are listed in Table 3. While these facilities have the potential to cause groundwater contamination, there is no indication that they are doing so at this time.

Table 3 Summary of Significant Potential Contaminant Types in the Powder Hollow Wellfield Source Water Area

Category	Subcategory	Number of SPCS Types
Waste Storage, Handling, Disposal	Hazardous Waste Facilities	1
	Solid Waste Facilities	0
	Miscellaneous	0
Bulk Chemical, Petroleum Storage	Underground Storage Tanks	12
	Tank Farms	0
	Warehouses	0
Industrial Manufacturing / Processing	Chemical & Allied Production	0
	Chemical Use Processing	4
	Miscellaneous	3
Commercial Trades and Services	Automotive and Related Services	2
	Chemical Use Services	0
	Miscellaneous	0
Agriculture and Related	Pesticide Storage, Handling or Application	0
Total Number of Contaminant Types		22

Prominent features of the Powder Hollow Wellfield source water area are summarized in Table 4.

Table 4 Features of the Powder Hollow Wellfield Source Water Area

Number and Type of Public Drinking Water Supply Wells	3 stratified drift wells
Source Water Area Delineation Method ^a	final Level A
DEP Groundwater Classification	GAA - Groundwater used as a public drinking water supply, presumed to be drinkable without treatment
Size of Source Water Area	1282.6 acres
Location of Source Water Area	Enfield
Predominant Land Use and Land Cover in Source Water Area ^b	
-Urban - Commercial or Industrial	5.0 %
-Urban - Residential	22.3 %
-Agricultural	21.7 %
-Undeveloped Land	51.0 %
Preserved Land In Source Water Area ^d	302.2 acres
Significant Potential Contamination Sources	
-Number of inventoried facilities in source water area	14
-Count of inventoried facilities per square mile	6.99 per sq mile
-Number of contaminant sources within inventoried facilities	22
Number of Contaminant Release Points Inventoried by CTDEP ^c	1

^a Source water delineation method depends on data available for the wellfield

^b Based on statewide data layer of land use and land cover developed by UCONN Dept of Natural Resource Management Engineering and Connecticut DEP satellite imagery.

^c Sites or locations with documented accidental spills, leaks or discharges. While these sources, which are cataloged and tracked by the Connecticut DEP, may fall within a public drinking water supply source water area, they may or may not presently be discharging to the environment or causing contamination of a public drinking water source.

^d Any combination of state forest and parklands and municipally or privately held land designated as open space.

SOURCE WATER ASSESSMENT REPORT

AN EVALUATION OF THE SUSCEPTIBILITY OF PUBLIC DRINKING WATER SOURCES TO POTENTIAL CONTAMINATION

APA 44

Connecticut Water Company Northern Region-Western System Windsor Locks Wellfield

The State of Connecticut Department of Public Health (DPH) in cooperation with the Department of Environmental Protection (DEP) recently completed an assessment of the Windsor Locks Wellfield, which is a source of public drinking water that is maintained and operated by the Connecticut Water Company. This one-time assessment is part of a nationwide effort mandated by Congress under the Safe Drinking Water Act Amendments of 1996 to evaluate the susceptibility of all public drinking water sources in Connecticut to potential sources of contamination. DPH began working in partnership with the DEP in 1997 to develop Connecticut's Source Water Assessment Program, which was approved by the U.S. Environmental Protection Agency in 1999. Sources of potential contamination that are of concern to public drinking water supplies here in Connecticut are generally associated with historic waste disposal or commercial, industrial, agricultural and residential properties that store or use hazardous materials like petroleum products, solvents or agricultural chemicals.

The assessment is intended to provide Connecticut Water Company consumers with information about where their public drinking water comes from, sources of potential contamination that could impact it, and what can be done to help protect it. This assessment will also assist the public water supply system, regional planners, local government, public health officials and state agencies in evaluating the degree to which the Windsor Locks Wellfield may be at risk from potential sources of contamination. The assessment can be used to target and implement enhanced source water protection measures such as routine inspections, protective land use regulations, acquisition of critical land, proper septic system maintenance, and public education. General sources of contamination with the potential to impact the Windsor Locks Wellfield include properties with underground fuel storage tanks, improperly maintained on-site septic systems, improper waste disposal, or commercial/industrial sites that store or use chemicals or generate hazardous wastes.

Windsor Locks Wellfield Source Water Assessment Summary

STRENGTHS

Public Water System Source Protection Program

POTENTIAL RISK FACTORS

Potential contaminant sources in source water area
No local aquifer protection regulations in more than 50% of source water area

Susceptibility Rating

Rating	Environmental Sensitivity	Potential Risk Factors	Source Protection Needs
Low			
Moderate			
High	X	X	X

Overall Susceptibility Rating: High

This rating indicates susceptibility to potential sources of contamination that may be in the wellfield source water area and does not necessarily imply poor water quality.

Detailed information about the specific factors and information used in establishing this rating can be found in Table 1. Information about opportunities to improve protection in the Windsor Locks Wellfield source water area is also presented in Table 2.



Keeping Connecticut Healthy

State of Connecticut Department of Public Health

Drinking Water Division

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OVERVIEW - The Windsor Locks Wellfield is located in an aquifer that is comprised largely of water-bearing sand and gravel deposits. The source water area is delineated by a preliminary Level B aquifer protection mapping area, which encompasses some 1418.2 acres of land in Windsor and Windsor Locks. Vacant land and residential properties in the Windsor Locks Wellfield source water area presently account for approximately 66.5 percent of the land cover. Commercial development at 17.6 percent and agricultural land use at 15.9 percent, account for the remainder of the land coverage's in the source water area. Information about drinking water quality and treatment is available in the Connecticut Water Company's annual Consumer Confidence Report.

ASSESSMENT METHODS.

The drinking water source assessment methods used by the Department of Public Health Drinking Water Division to evaluate the susceptibility of public drinking water sources to contamination are based on criteria individually tailored to surface water and groundwater sources. The criteria are keyed to sanitary conditions in the source water area, the presence of potential or historic sources of contamination, existing land use coverage's, and the need for additional source protection measures within the source water area. Source-specific data for community and non-community systems were used to determine whether a particular criterion should be rated as low, moderate or high, relative to the risk of potential contamination at the drinking water source. Further, a ranking system was used to compute an average rank for each community drinking water source based on its environmental sensitivity, potential risk of contamination and source protection needs.

Wellfields rated as having a low, moderate or high susceptibility to potential sources of contamination generally exhibit the characteristics summarized in Table 1.

Table 1 – General Source Water Area Characteristics and Susceptibility Ratings

Susceptibility Rating	General Characteristics of the Source Water Area*
Low	Low density of potential contaminant sources Lower intensity of land development
Moderate	Low to moderate density of potential contaminant sources Moderate intensity of land development
High	Moderate to high density of potential contaminant sources Higher intensity of land development No local aquifer protection regulations Detectable nitrates and/or volatile organic chemicals in the untreated source water during the past three years that are below the maximum contaminant levels allowed by state and federal drinking water regulations

** Note: Not all characteristics may be present for a given susceptibility rating*

Readers of this assessment are encouraged to use the attached glossary to assist in the understanding of the terms and concepts used throughout this report.

Maps representing the location and features of the Windsor Locks Wellfield source water area have not been included with this assessment report because of homeland security concerns

WINDSOR LOCKS WELLFIELD ASSESSMENT RESULTS.

Based on a combination of current wellfield and source water area conditions, existing potential contaminant sources, and the level of source protection measures currently in place, the source water assessment for this wellfield indicates that it has an overall High risk of contamination from identified potential sources of contamination. It should be noted that this rating does not necessarily imply poor water quality or ongoing violations of the Connecticut Public Health Code. The assessment findings for the Windsor Locks Wellfield are summarized in Table 2, which lists current conditions in the wellfield source water area and recommendations or opportunities to enhance protection of this public drinking water source. A listing of potential contaminant source types in the area can be found in Table 3. A summary of source water area features is shown in Table 4.

The assessment of this and other comparable wellfields throughout Connecticut generally finds that adopting recommendations similar to those presented in Table 2 could reduce the susceptibility of most groundwater sources to potential sources of contamination.

Table 2

**Source Water Assessment Findings and Source Protection Opportunities
Northern Region-Western System Windsor Locks Wellfield**

Assessment Category	Conditions Through June 2002	Recommendations and Source Protection Opportunities
<p>Environmental Sensitivity Factors</p> <p>Contaminants Detected in Untreated Source Water</p>	<p>All wells in the Windsor Locks Wellfield are sited and constructed in accordance with DPH regulations and the most recent DPH sanitary survey of this wellfield indicates that it is free of deficiencies.</p> <p>Untreated groundwater concentrations of ethylene dibromide and 1,2,3-trichloropropane above the MCL and DPH guidance level prior to removal by granular activated carbon filters.</p> <p>Except where noted above, any detected contaminants listed are below maximum contaminant levels (MCL) established by the federal government or guidance levels established by the Connecticut Department of Public Health. The presence of these contaminants, in general, indicates that this wellfield is sensitive to human activity.</p> <p>Click here to review EPA's current drinking water standardsT</p>	<p>Maintain monitoring levels specified in the Connecticut Public Health Code Section 19-13-B102</p> <p>Encourage homeowners to adopt residential best management practices that minimize the use hazardous materials or generation of hazardous waste.</p>
<p>Potential Risk Factors</p>	<p>Potential contaminant sources in source water area</p> <p>Ten percent or more of the source water area has been developed for commercial or industrial use</p>	<p>Periodically inspect SPCS sites and maintain a water quality monitoring program consistent with the level of potential risk</p> <p>Monitor activities at commercial and industrial facilities to insure that best management practices are being followed</p> <p>Encourage residential property owners to conduct scheduled inspections and maintenance of underground fuel storage tanks and on-site septic systems.</p>
<p>Source Protection Needs Factors</p>	<p>Level B aquifer mapping completed</p> <p>100 percent ownership or control of sanitary radius around wellheads in wellfield.</p> <p>Less than 25% of this source water area is covered by local aquifer protection regulations</p> <p>Less than 10% of the land in the source water area exists as preserved open space</p>	<p>Complete Level A mapping</p> <p>Expand coverage of local aquifer protection regulations throughout entire source water area</p> <p>Support and encourage the acquisition of open space land within the source water area</p> <p>Support environmental awareness and education within the community.</p>

Inventoried significant potential contaminant sources in the Windsor Locks Wellfield source water area are listed in Table 3. While these facilities have the potential to cause groundwater contamination, there is no indication that they are doing so at this time.

Table 3 Summary of Significant Potential Contaminant Types in the Windsor Locks Wellfield Source Water Area

Category	Subcategory	Number of SPCS Types
Waste Storage, Handling, Disposal	Hazardous Waste Facilities	4
	Solid Waste Facilities	0
	Miscellaneous	0
Bulk Chemical, Petroleum Storage	Underground Storage Tanks	5
	Tank Farms	1
	Warehouses	0
Industrial Manufacturing / Processing	Chemical & Allied Production	0
	Chemical Use Processing	7
	Miscellaneous	12
Commercial Trades and Services	Automotive and Related Services	11
	Chemical Use Services	6
	Miscellaneous	0
Agriculture and Related	Pesticide Storage, Handling or Application	0
Total Number of Contaminant Types		46

Prominent features of the Windsor Locks Wellfield source water area are summarized in Table 4.

Table 4 Features of the Windsor Locks Wellfield Source Water Area

Number and Type of Public Drinking Water Supply Wells	4 Caisson wells
Source Water Area Delineation Method ^a	preliminary Level B
DEP Groundwater Classification	GA-impaired or GAA-impaired- Groundwater that may not be meeting all standards with a goal to restore to drinking water quality
Size of Source Water Area	1418.2 acres
Location of Source Water Area	Windsor and Windsor Locks
Predominant Land Use and Land Cover in Source Water Area ^b	
-Urban - Commercial or Industrial	17.6 %
-Urban - Residential	42.8 %
-Agricultural	15.9 %
-Undeveloped Land	23.7 %
Preserved Land In Source Water Area ^d	275.1 acres
Significant Potential Contamination Sources	
-Number of inventoried facilities in source water area	37
-Count of inventoried facilities per square mile	16.70 per sq mile
-Number of contaminant sources within inventoried facilities	46
Number of Contaminant Release Points Inventoried by CTDEP ^c	0

^a Source water delineation method depends on data available for the wellfield

^b Based on statewide data layer of land use and land cover developed by UCONN Dept of Natural Resource Management Engineering and Connecticut DEP satellite imagery.

^c Sites or locations with documented accidental spills, leaks or discharges. While these sources, which are cataloged and tracked by the Connecticut DEP, may fall within a public drinking water supply source water area, they may or may not presently be discharging to the environment or causing contamination of a public drinking water source.

^d Any combination of state forest and parklands and municipally or privately held land designated as open space.

SOURCE WATER ASSESSMENT REPORT

AN EVALUATION OF THE SUSCEPTIBILITY OF PUBLIC DRINKING WATER SOURCES TO POTENTIAL CONTAMINATION

APA 50

Connecticut Water Company Northern Region-Western System O'Bready Wellfield

The State of Connecticut Department of Public Health (DPH) in cooperation with the Department of Environmental Protection (DEP) recently completed an assessment of the O'Bready Wellfield, which is a source of public drinking water that is maintained and operated by the Connecticut Water Company. This one-time assessment is part of a nationwide effort mandated by Congress under the Safe Drinking Water Act Amendments of 1996 to evaluate the susceptibility of all public drinking water sources in Connecticut to potential sources of contamination. DPH began working in partnership with the DEP in 1997 to develop Connecticut's Source Water Assessment Program, which was approved by the U.S. Environmental Protection Agency in 1999. Sources of potential contamination that are of concern to public drinking water supplies here in Connecticut are generally associated with historic waste disposal or commercial, industrial, agricultural and residential properties that store or use hazardous materials like petroleum products, solvents or agricultural chemicals.

The assessment is intended to provide Connecticut Water Company consumers with information about where their public drinking water comes from, sources of potential contamination that could impact it, and what can be done to help protect it. This assessment will also assist the public water supply system, regional planners, local government, public health officials and state agencies in evaluating the degree to which the O'Bready Wellfield may be at risk from potential sources of contamination. The assessment can be used to target and implement enhanced source water protection measures such as routine inspections, protective land use regulations, acquisition of critical land, proper septic system maintenance, and public education. General sources of contamination with the potential to impact the O'Bready Wellfield include properties with underground fuel storage tanks, improperly maintained on-site septic systems, improper waste disposal, or commercial/industrial sites that store or use chemicals or generate hazardous wastes.

O'Bready Wellfield Source Water Assessment Summary

STRENGTHS

Public Water System Source Protection Program

POTENTIAL RISK FACTORS

Potential contaminant sources in source water area

No local aquifer protection regulations

1 contaminant release point in source water area

Susceptibility Rating

Rating	Environmental Sensitivity	Potential Risk Factors	Source Protection Needs
Low			
Moderate			
High	X	X	X

Overall Susceptibility Rating: High

This rating indicates susceptibility to potential sources of contamination that may be in the wellfield source water area and does not necessarily imply poor water quality.

Detailed information about the specific factors and information used in establishing this rating can be found in Table 1. Information about opportunities to improve protection in the O'Bready Wellfield source water area is also presented in Table 2.



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OVERVIEW - The O'Bready Wellfield is located in an aquifer that is comprised largely of water-bearing sand and gravel deposits. The source water area is delineated by a final Level A aquifer protection mapping area, which encompasses some 665.0 acres of land in Enfield. Vacant land and residential properties in the O'Bready Wellfield source water area presently account for approximately 47.6 percent of the land cover. Commercial development at 13.2 percent and agricultural land use at 39.2 percent, account for the remainder of the land coverage's in the source water area. Information about drinking water quality and treatment is available in the Connecticut Water Company's annual Consumer Confidence Report.

ASSESSMENT METHODS.

The drinking water source assessment methods used by the Department of Public Health Drinking Water Division to evaluate the susceptibility of public drinking water sources to contamination are based on criteria individually tailored to surface water and groundwater sources. The criteria are keyed to sanitary conditions in the source water area, the presence of potential or historic sources of contamination, existing land use coverage's, and the need for additional source protection measures within the source water area. Source-specific data for community and non-community systems were used to determine whether a particular criterion should be rated as low, moderate or high, relative to the risk of potential contamination at the drinking water source. Further, a ranking system was used to compute an average rank for each community drinking water source based on its environmental sensitivity, potential risk of contamination and source protection needs.

Wellfields rated as having a low, moderate or high susceptibility to potential sources of contamination generally exhibit the characteristics summarized in Table 1.

Table 1 – General Source Water Area Characteristics and Susceptibility Ratings

Susceptibility Rating	General Characteristics of the Source Water Area*
Low	Low density of potential contaminant sources Lower intensity of land development
Moderate	Low to moderate density of potential contaminant sources Moderate intensity of land development
High	Moderate to high density of potential contaminant sources Higher intensity of land development No local aquifer protection regulations Detectable nitrates and/or volatile organic chemicals in the untreated source water during the past three years that are below the maximum contaminant levels allowed by state and federal drinking water regulations

** Note: Not all characteristics may be present for a given susceptibility rating*

Readers of this assessment are encouraged to use the attached glossary to assist in the understanding of the terms and concepts used throughout this report.

Maps representing the location and features of the O'Bready Wellfield source water area have not been included with this assessment report because of homeland security concerns

O'BREADY WELLFIELD ASSESSMENT RESULTS.

Based on a combination of current wellfield and source water area conditions, existing potential contaminant sources, and the level of source protection measures currently in place, the source water assessment for this wellfield indicates that it has an overall High risk of contamination from identified potential sources of contamination. It should be noted that this rating does not necessarily imply poor water quality or ongoing violations of the Connecticut Public Health Code. The assessment findings for the O'Bready Wellfield are summarized in Table 2, which lists current conditions in the wellfield source water area and recommendations or opportunities to enhance protection of this public drinking water source. A listing of potential contaminant source types in the area can be found in Table 3. A summary of source water area features is shown in Table 4.

The assessment of this and other comparable wellfields throughout Connecticut generally finds that adopting recommendations similar to those presented in Table 2 could reduce the susceptibility of most groundwater sources to potential sources of contamination.

Table 2

**Source Water Assessment Findings and Source Protection Opportunities
Northern Region-Western System O'Bready Wellfield**

Assessment Category	Conditions Through June 2002	Recommendations and Source Protection Opportunities
<p>Environmental Sensitivity Factors</p> <p>Contaminants Detected in Untreated Source Water</p>	<p>All wells in the O'Bready Wellfield are sited and constructed in accordance with DPH regulations and the most recent DPH sanitary survey of this wellfield indicates that it is free of deficiencies.</p> <p>Nitrate >5mg/L and concentrations of ethylene dibromide and 1,2,3-Trichloropropane that are above the MCL and DPH guidance level in untreated groundwater prior to removal by granular activated carbon filters.</p> <p>Except where noted above, any detected contaminants listed are below maximum contaminant levels (MCL) established by the federal government or guidance levels established by the Connecticut Department of Public Health. The presence of these contaminants, in general, indicates that this wellfield is sensitive to human activity.</p> <p>Click here to review EPA's current drinking water standardsT</p>	<p>Maintain monitoring levels specified in the Connecticut Public Health Code Section 19-13-B102</p> <p>Encourage homeowners to adopt residential best management practices that minimize the use hazardous materials or generation of hazardous waste.</p>
<p>Potential Risk Factors</p>	<p>Potential contaminant sources in source water area</p> <p>1 contaminant release point in source water area</p> <p>Ten percent or more of the source water area has been developed for commercial or industrial use</p>	<p>Periodically inspect SPCS sites and maintain a water quality monitoring program consistent with the level of potential risk</p> <p>Maintain an adequate level of surveillance around contaminant release point sites to insure that groundwater contamination is not occurring</p> <p>Monitor activities at commercial and industrial facilities to insure that best management practices are being followed</p> <p>Encourage residential property owners to conduct scheduled inspections and maintenance of underground fuel storage tanks and on-site septic systems.</p>
<p>Source Protection Needs Factors</p>	<p>Level A aquifer mapping completed</p> <p>100 percent ownership or control of sanitary radius around wellheads in wellfield.</p> <p>Local aquifer protection regulations have not been adopted for this source water area</p> <p>Very little or no public/private preserved open space lands are present in the source water area</p>	<p>Develop and adopt local aquifer protection regulations</p> <p>Support and encourage the acquisition of open space land within the source water area</p> <p>Support environmental awareness and education within the community.</p>

Inventoried significant potential contaminant sources in the O'Bready Wellfield source water area are listed in Table 3. While these facilities have the potential to cause groundwater contamination, there is no indication that they are doing so at this time.

Table 3 Summary of Significant Potential Contaminant Types in the O'Bready Wellfield Source Water Area

Category	Subcategory	Number of SPCS Types
Waste Storage, Handling, Disposal	Hazardous Waste Facilities	1
	Solid Waste Facilities	1
	Miscellaneous	0
Bulk Chemical, Petroleum Storage	Underground Storage Tanks	2
	Tank Farms	0
	Warehouses	0
Industrial Manufacturing / Processing	Chemical & Allied Production	0
	Chemical Use Processing	3
	Miscellaneous	0
Commercial Trades and Services	Automotive and Related Services	2
	Chemical Use Services	0
	Miscellaneous	2
Agriculture and Related	Pesticide Storage, Handling or Application	0
Total Number of Contaminant Types		11

Prominent features of the O'Bready Wellfield source water area are summarized in Table 4.

Table 4 Features of the O'Bready Wellfield Source Water Area

Number and Type of Public Drinking Water Supply Wells	1 stratified drift well
Source Water Area Delineation Method ^a	final Level A
DEP Groundwater Classification	GA-impaired or GAA-impaired- Groundwater that may not be meeting all standards with a goal to restore to drinking water quality
Size of Source Water Area	665.0 acres
Location of Source Water Area	Enfield
Predominant Land Use and Land Cover in Source Water Area ^b	
-Urban - Commercial or Industrial	13.2 %
-Urban - Residential	17.0 %
-Agricultural	39.2 %
-Undeveloped Land	30.6 %
Preserved Land In Source Water Area ^d	18.2 acres
Significant Potential Contamination Sources	
-Number of inventoried facilities in source water area	8
-Count of inventoried facilities per square mile	7.70 per sq mile
-Number of contaminant sources within inventoried facilities	11
Number of Contaminant Release Points Inventoried by CTDEP ^c	1

^a Source water delineation method depends on data available for the wellfield

^b Based on statewide data layer of land use and land cover developed by UCONN Dept of Natural Resource Management Engineering and Connecticut DEP satellite imagery.

^c Sites or locations with documented accidental spills, leaks or discharges. While these sources, which are cataloged and tracked by the Connecticut DEP, may fall within a public drinking water supply source water area, they may or may not presently be discharging to the environment or causing contamination of a public drinking water source.

^d Any combination of state forest and parklands and municipally or privately held land designated as open space.

Connecticut Water Company Northern Region - Western System

Well Name	Well Location	Well Type	DEP Groundwater Classification	Source Water Area (acres)
Ellsworth Well 3	East Windsor	Gravel	GAA-Well	43

Factor	Source Water Assessment Ratings For This Well	Rating
I	Environmental Sensitivity	Moderate
II	Potential Risk Factors	Low
III	Source Protection Needs	High
Overall Susceptibility to Potential Sources of Contamination		Moderate
This rating is intended to indicate susceptibility to potential sources of contamination that may be in the wellfield source water area and does not necessarily imply poor water quality.		

Assessment Factor	Initial Assessment Findings	Recommendations for Enhanced Source Protection
I Contaminants Detected in Source Water	Nitrate >5 mg/L	Maintain monitoring levels specified in the Connecticut Public Health Code Section 19-13-B102
I General condition of well and related equipment	Good	Maintain well and equipment according to best management practices
II DEP-inventoried Contaminant Release Points	There are no DEP-inventoried contaminant release points in the well's source water area	
II Potential Sources of Contamination	There are no potential sources of contamination present in this well's source water area	
II Source Water Area Land Use In The Town Of: East Windsor <i>(Based on Satellite Imagery developed by University of Conn.)</i>	Commercial/Industrial 1.0% Residential 48.8% Agricultural 32.2% Open or Undeveloped 18.0%	Proactively work with local officials and developers to insure that only low risk development occurs within the source water area. Support and encourage the acquisition of open space land within the source water area.
III Land Area Around Wellhead	Public water system owns or controls entire 200 foot sanitary radius around well	
III Local Aquifer Protection Regulations	There are no local aquifer protection regulations for this source water area	Support the development of local aquifer protection regulations
III Local Government Source Protection Initiatives	Comprehensive drinking water source protection policies do not exist at the local governmental level	Promote the development of drinking water source protection policies at the local governmental level
III Water System Source Protection Initiatives	Public water system maintains a comprehensive source protection program	



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Well Name	Well Location	Well Type	DEP Groundwater Classification	Source Water Area (acres)
Mapleton Ave Well 1	Suffield	Bedrock	GAA-Well	300

Factor	Source Water Assessment Ratings For This Well	Rating
I	Environmental Sensitivity	Moderate
II	Potential Risk Factors	Moderate
III	Source Protection Needs	High
Overall Susceptibility to Potential Sources of Contamination		High
This rating is intended to indicate susceptibility to potential sources of contamination that may be in the wellfield source water area and does not necessarily imply poor water quality.		

Assessment Factor	Initial Assessment Findings	Recommendations for Enhanced Source Protection
I	Contaminants Detected in Source Water Nitrate >5 mg/L	Maintain monitoring levels specified in the Connecticut Public Health Code Section 19-13-B102
I	General condition of well and related equipment Good	Maintain well and equipment according to best management practices
II	DEP-inventoried Contaminant Release Points There are no DEP-inventoried contaminant release points in the well's source water area	
II	Potential Sources of Contamination There is one potential source of contamination present in this well's source water area	Periodically inspect these sites and maintain a water quality monitoring program consistent with the level of potential risk
II	Source Water Area Land Use In The Town Of: Suffield (Based on Satellite Imagery developed by University of Conn.) Commercial/Industrial 0.9% Residential 15.8% Agricultural 68.4% Open or Undeveloped 14.9%	Proactively work with local officials and developers to insure that only low risk development occurs within the source water area. Support and encourage the acquisition of open space land within the source water area.
III	Land Area Around Wellhead Public water system does not own or control entire 200 foot sanitary radius around well	Where feasible, increase ownership or control of 200 foot sanitary radius around the wellhead
III	Local Aquifer Protection Regulations There are no local aquifer protection regulations for this source water area	Support the development of local aquifer protection regulations
III	Local Government Source Protection Initiatives Comprehensive drinking water source protection policies do not exist at the local governmental level	Promote the development of drinking water source protection policies at the local governmental level
III	Water System Source Protection Initiatives Public water system maintains a comprehensive source protection program	



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Well Name	Well Location	Well Type	DEP Groundwater Classification	Source Water Area (acres)
Mapleton Ave Well 2	Suffield	Bedrock	GAA-Well	18

Factor	Source Water Assessment Ratings For This Well	Rating
I	Environmental Sensitivity	Low
II	Potential Risk Factors	Low
III	Source Protection Needs	High
Overall Susceptibility to Potential Sources of Contamination		Moderate
This rating is intended to indicate susceptibility to potential sources of contamination that may be in the wellfield source water area and does not necessarily imply poor water quality.		

Assessment Factor	Initial Assessment Findings	Recommendations for Enhanced Source Protection								
I Contaminants Detected in Source Water	None									
I General condition of well and related equipment	Good	Maintain well and equipment according to best management practices								
II DEP-inventoried Contaminant Release Points	There are no DEP-inventoried contaminant release points in the well's source water area									
II Potential Sources of Contamination	There are no potential sources of contamination present in this well's source water area									
II Source Water Area Land Use In The Town Of: Suffield (Based on Satellite Imagery developed by University of Conn.)	<table> <tr> <td>Commercial/Industrial</td> <td>0.0%</td> </tr> <tr> <td>Residential</td> <td>9.5%</td> </tr> <tr> <td>Agricultural</td> <td>35.4%</td> </tr> <tr> <td>Open or Undeveloped</td> <td>55.1%</td> </tr> </table>	Commercial/Industrial	0.0%	Residential	9.5%	Agricultural	35.4%	Open or Undeveloped	55.1%	Proactively work with local officials and developers to insure that only low risk development occurs within the source water area. Support and encourage the acquisition of open space land within the source water area.
Commercial/Industrial	0.0%									
Residential	9.5%									
Agricultural	35.4%									
Open or Undeveloped	55.1%									
III Land Area Around Wellhead	Public water system does not own or control entire 200 foot sanitary radius around well	Where feasible, increase ownership or control of 200 foot sanitary radius around the wellhead								
III Local Aquifer Protection Regulations	There are no local aquifer protection regulations for this source water area	Support the development of local aquifer protection regulations								
III Local Government Source Protection Initiatives	Comprehensive drinking water source protection policies do not exist at the local governmental level	Promote the development of drinking water source protection policies at the local governmental level								
III Water System Source Protection Initiatives	Public water system maintains a comprehensive source protection program									



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Well Name	Well Location	Well Type	DEP Groundwater Classification	Source Water Area (acres)
Pine Knob Well	South Windsor	Bedrock	GAA-Well	810

Factor	Source Water Assessment Ratings For This Well	Rating
I	Environmental Sensitivity	Low
II	Potential Risk Factors	Moderate
III	Source Protection Needs	High
Overall Susceptibility to Potential Sources of Contamination		Moderate
This rating is intended to indicate susceptibility to potential sources of contamination that may be in the wellfield source water area and does not necessarily imply poor water quality.		

Assessment Factor	Initial Assessment Findings	Recommendations for Enhanced Source Protection
I	Contaminants Detected in Source Water Nitrate >1 mg/L	Maintain monitoring levels specified in the Connecticut Public Health Code Section 19-13-B102
I	General condition of well and related equipment Good	Maintain well and equipment according to best management practices
II	DEP-inventoried Contaminant Release Points There are no DEP-inventoried contaminant release points in the well's source water area	
II	Potential Sources of Contamination There are 3 potential sources of contamination present in this well's source water area	Periodically inspect these sites and maintain a water quality monitoring program consistent with the level of potential risk
II	Source Water Area Land Use In The Town Of: South Windsor (Based on Satellite Imagery developed by University of Conn.) Commercial/Industrial 0.8% Residential 33.7% Agricultural 18.4% Open or Undeveloped 47.1%	Proactively work with local officials and developers to insure that only low risk development occurs within the source water area. Support and encourage the acquisition of open space land within the source water area.
III	Land Area Around Wellhead Public water system does not own or control entire 200 foot sanitary radius around well	Where feasible, increase ownership or control of 200 foot sanitary radius around the wellhead
III	Local Aquifer Protection Regulations There are no local aquifer protection regulations for this source water area	Support the development of local aquifer protection regulations
III	Local Government Source Protection Initiatives Comprehensive drinking water source protection policies do not exist at the local governmental level	Promote the development of drinking water source protection policies at the local governmental level
III	Water System Source Protection Initiatives Public water system maintains a comprehensive source protection program	



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Well Name	Well Location	Well Type	DEP Groundwater Classification	Source Water Area (acres)
Torry Road Well 3	Tolland	Bedrock	GAA-Well	18

Factor	Source Water Assessment Ratings For This Well	Rating
I	Environmental Sensitivity	Low
II	Potential Risk Factors	Low
III	Source Protection Needs	Moderate
Overall Susceptibility to Potential Sources of Contamination		Low
This rating is intended to indicate susceptibility to potential sources of contamination that may be in the wellfield source water area and does not necessarily imply poor water quality.		

Assessment Factor	Initial Assessment Findings	Recommendations for Enhanced Source Protection								
I	Contaminants Detected in Source Water	None								
I	General condition of well and related equipment	Good								
II	DEP-inventoried Contaminant Release Points	There are no DEP-inventoried contaminant release points in the well's source water area								
II	Potential Sources of Contamination	There are no potential sources of contamination present in this well's source water area								
II	Source Water Area Land Use In The Town Of: Tolland <i>(Based on Satellite Imagery developed by University of Conn.)</i>	<table border="0"> <tr> <td>Commercial/Industrial</td> <td>2.2%</td> </tr> <tr> <td>Residential</td> <td>86.4%</td> </tr> <tr> <td>Agricultural</td> <td>0.0%</td> </tr> <tr> <td>Open or Undeveloped</td> <td>11.4%</td> </tr> </table> Proactively work with local officials and developers to insure that only low risk development occurs within the source water area. Support and encourage the acquisition of open space land within the source water area.	Commercial/Industrial	2.2%	Residential	86.4%	Agricultural	0.0%	Open or Undeveloped	11.4%
Commercial/Industrial	2.2%									
Residential	86.4%									
Agricultural	0.0%									
Open or Undeveloped	11.4%									
III	Land Area Around Wellhead	Public water system owns or controls entire 200 foot sanitary radius around well								
III	Local Aquifer Protection Regulations	There are no local aquifer protection regulations for this source water area								
III	Local Government Source Protection Initiatives	Comprehensive drinking water source protection policies exist at the local governmental level								
III	Water System Source Protection Initiatives	Public water system maintains a comprehensive source protection program								



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Connecticut Water Company Northern Region - Western System

Well Name	Well Location	Well Type	DEP Groundwater Classification	Source Water Area (acres)
Vernon Well 5	Vernon	Bedrock	GAA-Well	18

Factor	Source Water Assessment Ratings For This Well	Rating
I	Environmental Sensitivity	Low
II	Potential Risk Factors	Low
III	Source Protection Needs	High
Overall Susceptibility to Potential Sources of Contamination		Low
This rating is intended to indicate susceptibility to potential sources of contamination that may be in the wellfield source water area and does not necessarily imply poor water quality.		

Assessment Factor	Initial Assessment Findings	Recommendations for Enhanced Source Protection								
I Contaminants Detected in Source Water	None									
I General condition of well and related equipment	Good	Maintain well and equipment according to best management practices								
II DEP-inventoried Contaminant Release Points	There are no DEP-inventoried contaminant release points in the well's source water area									
II Potential Sources of Contamination	There are no potential sources of contamination present in this well's source water area									
II Source Water Area Land Use In The Town Of: Vernon <i>(Based on Satellite Imagery developed by University of Conn.)</i>	<table border="0"> <tr> <td>Commercial/Industrial</td> <td>0.0%</td> </tr> <tr> <td>Residential</td> <td>46.7%</td> </tr> <tr> <td>Agricultural</td> <td>1.2%</td> </tr> <tr> <td>Open or Undeveloped</td> <td>52.1%</td> </tr> </table>	Commercial/Industrial	0.0%	Residential	46.7%	Agricultural	1.2%	Open or Undeveloped	52.1%	Proactively work with local officials and developers to insure that only low risk development occurs within the source water area. Support and encourage the acquisition of open space land within the source water area.
Commercial/Industrial	0.0%									
Residential	46.7%									
Agricultural	1.2%									
Open or Undeveloped	52.1%									
III Land Area Around Wellhead	Public water system does not own or control entire 200 foot sanitary radius around well	Where feasible, increase ownership or control of 200 foot sanitary radius around the wellhead								
III Local Aquifer Protection Regulations	There are no local aquifer protection regulations for this source water area	Support the development of local aquifer protection regulations								
III Local Government Source Protection Initiatives	Drinking water source protection policies exist at the local governmental level									
III Water System Source Protection Initiatives	Public water system maintains a comprehensive source protection program									



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Well Name	Well Location	Well Type	DEP Groundwater Classification	Source Water Area (acres)
West Suffield Well	Suffield	Bedrock	GAA-Well	108

Factor	Source Water Assessment Ratings For This Well	Rating
I	Environmental Sensitivity	Low
II	Potential Risk Factors	Low
III	Source Protection Needs	High
Overall Susceptibility to Potential Sources of Contamination		Moderate
This rating is intended to indicate susceptibility to potential sources of contamination that may be in the wellfield source water area and does not necessarily imply poor water quality.		

Assessment Factor	Initial Assessment Findings	Recommendations for Enhanced Source Protection
I	Contaminants Detected in Source Water Nitrate >1 mg/L	Maintain monitoring levels specified in the Connecticut Public Health Code Section 19-13-B102
I	General condition of well and related equipment Good	Maintain well and equipment according to best management practices
II	DEP-inventoried Contaminant Release Points There are no DEP-inventoried contaminant release points in the well's source water area	
II	Potential Sources of Contamination There is one potential source of contamination present in this well's source water area	Periodically inspect these sites and maintain a water quality monitoring program consistent with the level of potential risk
II	Source Water Area Land Use In The Town Of: Suffield (Based on Satellite Imagery developed by University of Conn.) Commercial/Industrial 9.2% Residential 25.7% Agricultural 58.0% Open or Undeveloped 7.1%	Proactively work with local officials and developers to insure that only low risk development occurs within the source water area. Support and encourage the acquisition of open space land within the source water area.
III	Land Area Around Wellhead Public water system does not own or control entire 200 foot sanitary radius around well	Where feasible, increase ownership or control of 200 foot sanitary radius around the wellhead
III	Local Aquifer Protection Regulations There are no local aquifer protection regulations for this source water area	Support the development of local aquifer protection regulations
III	Local Government Source Protection Initiatives Comprehensive drinking water source protection policies do not exist at the local governmental level	Promote the development of drinking water source protection policies at the local governmental level
III	Water System Source Protection Initiatives Public water system maintains a comprehensive source protection program	



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Well Name	Well Location	Well Type	DEP Groundwater Classification	Source Water Area (acres)
Woodland Park Well	South Windsor	Bedrock	GAA-Well	18

Factor	Source Water Assessment Ratings For This Well	Rating
I	Environmental Sensitivity	Low
II	Potential Risk Factors	Low
III	Source Protection Needs	High
Overall Susceptibility to Potential Sources of Contamination		Low
This rating is intended to indicate susceptibility to potential sources of contamination that may be in the wellfield source water area and does not necessarily imply poor water quality.		

Assessment Factor	Initial Assessment Findings	Recommendations for Enhanced Source Protection
I	Contaminants Detected in Source Water Nitrate >1 mg/L	Maintain monitoring levels specified in the Connecticut Public Health Code Section 19-13-B102
I	General condition of well and related equipment Good	Maintain well and equipment according to best management practices
II	DEP-inventoried Contaminant Release Points There are no DEP-inventoried contaminant release points in the well's source water area	
II	Potential Sources of Contamination There are no potential sources of contamination present in this well's source water area	
II	Source Water Area Land Use In The Town Of: South Windsor (Based on Satellite Imagery developed by University of Conn.) Commercial/Industrial 0.0% Residential 2.5% Agricultural 2.7% Open or Undeveloped 94.7%	Proactively work with local officials and developers to insure that only low risk development occurs within the source water area. Support and encourage the acquisition of open space land within the source water area.
III	Land Area Around Wellhead Public water system does not own or control entire 200 foot sanitary radius around well	Where feasible, increase ownership or control of 200 foot sanitary radius around the wellhead
III	Local Aquifer Protection Regulations There are no local aquifer protection regulations for this source water area	Support the development of local aquifer protection regulations
III	Local Government Source Protection Initiatives Comprehensive drinking water source protection policies do not exist at the local governmental level	Promote the development of drinking water source protection policies at the local governmental level
III	Water System Source Protection Initiatives Public water system maintains a comprehensive source protection program	



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