



PREPARED FOR: TOWN OF STOW // PREPARED BY: STANTEC CONSULTING SERVICES INC

# Consulting Services for Lower Village Public Water Supply Feasibility Study

AUGUST 3, 2022



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*\* PRICE PROPOSAL INCLUDED IN A SEPARATE SEALED ENVELOPE*



August 3, 2022

**Town of Stow**  
**Planning Department**  
**Attn: Jesse Steadman**  
**Planning Director**  
380 Great Road  
Stow, Massachusetts 01775

**RE:**  
**Request for Proposals Consulting**  
**Services for Lower Village Public**  
**Water Supply Feasibility Study**

Dear Mr. Steadman,

We understand that the Lower Village Business District has the potential to be a significant economic engine for the Town of Stow. That potential has been limited in the past due to the lack of a sufficient public water supply source. Stantec is proud to have resolved drinking water issues for hundreds of our clients. We are pleased to offer this proposal to complete the required groundwater exploration and prepare a feasibility study to establish a Public Water Supply (PWS) for servicing the Lower Village Business District area.

#### **An Experienced Team**

The Stantec Team is led by **Garry McCarthy** as Project Manager and includes our partners **Verdantas (David Harwood)**, **Denis L Maher Company (Ted Morine)**, and **Pioneer Consulting Group (Doug Gardner)** for this assignment. This Team has been working together on public water supply projects for over 20 years.

Garry brings 35 years of public water supply experience and has managed many water supply projects for our municipal clients. Supporting Garry will be a strong technical team primarily based out of Stantec's Burlington, MA office, only 25 minutes away from the Town of Stow. Garry is a resident of Acton and a frequent customer of the businesses in the Lower Village, including the supermarket, Chinese food restaurant, fitness center, hardware store, coffee shop, and pet store.

Dave Harwood, Verdantas, will serve as the prime hydrogeologist. Dave brings over 30 years of local public water supply hydrogeological experience and specific experience in Stow, Maynard, Acton, and Boxborough.

Denis L. Maher Company (DL Maher) and their hydrogeologist, Ted Morine, will complete all drilling activities for this assignment. Ted Morine has been with DL Maher for over 48 years and was directly involved in the test well work at 144 Red Acre Road in 1985. There is no other water supply drilling professional in New England with more experience and knowledge of the local geology in the Stow area than Ted.

Douglas Gardner is President of Pioneer Consulting Group specialized in financial management for local municipalities providing water rate studies and development of water supply accounting systems. Among his other clients, Doug is currently working with the Town of Maynard helping them to implement their funding plan for infrastructure improvements to the water supply and sewer collection systems.

To provide the range of services needed for this project, we have selected additional Stantec Team members that we know and trust from experience on other projects and who have direct relevant experience, several of which we have listed in our qualifications section:

- **Kevin Klein**, our wastewater lead, has 37 years of experience with municipal wastewater projects. Kevin has completed a number of local wastewater projects in The Town of Stow and is currently completing a new wastewater treatment project for the elderly housing development, Plantation Apartments located at 22 Johnston Way in Stow, Massachusetts
- **Joe Salvetti** is a Licensed Site Professional with 37 years of experience and will provide our team with the required services to evaluate local contaminated sites which may serve as a constraint for development of a new public water supply source.
- **Katie Chamberlain**, our water treatment lead, is a Professional Engineer with 20 years of experience assisting municipal water suppliers with their water treatment needs. Katie will be responsible for ensuring that water treatment requirements are identified to comply with current and future Safe Drinking Water Act and MassDEP drinking water regulations.

- **Erica Lotz** is a Professional Engineer with 23 years of experience working with Massachusetts municipal water suppliers. Erica will be the water distribution lead for this project, where her significant experience with water supply system master planning and distribution system analysis will be leveraged for your project.

Our knowledge and expertise individually, combined with our familiarity and experience working together and collaboratively, create the ideal team for your project.

#### **A Team Culture and Approach Focused on Collaboration**

During this Feasibility Study effort, our approach gives you the critical information needed to understand the issues and visualize alternatives, supported by thorough analysis; we will share this information through collaborative workshops to promote discussion and ultimately select the option that best fits the Town of Stow's needs.

Our Team has a demonstrated history of successful collaborative delivery, and this proposal presents our continued commitment to delivering affordable, safe, and reliable solutions to communities like Stow.

We look forward to the opportunity to work with you. Please contact us if you have any questions about our proposal or require additional information.

Sincerely,

**STANTEC CONSULTING SERVICES INC.**



**Garry McCarthy PE**  
Principal  
garry.mccarthy@stantec.com



**Erica Lotz PE**  
Senior Principal  
erica.lotz@stantec.com

#### **RFP ACKNOWLEDGMENTS AND STATEMENTS**

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- Stantec acknowledges Addenda #1
- Stantec understands all sections and provisions in the RFP and have developed our proposal in accordance and have no exceptions.
- Stantec Inc. is a publicly traded entity listed on the New York Stock Exchange (Symbol: STN) and the Toronto Stock Exchange (Symbol: STN). We are required to be financially stable in order to maintain these listings and we are required to adhere to the Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission “(2013 framework)” (the COSO criteria). We are subject to ongoing independent audits that prove our financial stability and credit worthiness.



# Experience & Qualifications

## About Stantec

Stantec's story is the story of our relationships with our clients. It's the story of how we've continued to improve the quality of life in communities around the world while working behind the scenes through our projects. We started in 1954, and today, the Stantec community unites approximately 22,000 employees working in over 350 locations across 6 continents. This includes over 2,300 dedicated water professionals in North America and 700+ diversified staff in New England. In short, we are a full-service engineering firm with the capacity to staff multiple projects when they arise with local staff.

Topping ENR's list of water/wastewater firms, we have become one of the world's largest and most capable water and wastewater infrastructure organizations.

# #1

### Ranked most Sustainable Corporation in North America

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*2021 Corporate Knights Global 100*

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# #2

### Design Firm in Water International Design

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*2021 Engineering News-Record (ENR)*

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For nearly seven decades, we have provided water and wastewater engineering services to improve the quality of life in communities where we work. Over that time, we have added a full complement of engineering and planning disciplines to our portfolio to better serve our client's needs.

## Our Experience

We have provided services to dozens of New England municipalities on projects ranging in scale from major public and private development projects to small-scale projects designed to remedy problems in a localized area. Stantec will draw upon our experience with small to large regional water supply and delivery projects, a broad range of technical expertise, and strong local knowledge and resources to support and advise the Town of Stow. Leveraging our 100-year legacy in New England, we bring a local and global portfolio of expertise in water supply planning and management, water treatment, and distribution systems. We will bring this experience and our lessons learned to the Town of Stow's water supply feasibility study.

With multi-disciplined professionals in New England our staff has provided comprehensive infrastructure planning, evaluation, assessment, design, and construction services to cities, towns, and state agencies. In many instances, our relationships with these communities span several decades, as we are repeatedly retained to plan and design water infrastructure development and upgrades.

On the following page, we present our experience and qualifications on projects of similar size and scope as those being requested by the Town.



## Water System Engineering Services

Town of Maynard, MA

The Town of Maynard, with a population of just over 10,000, manages its water infrastructure through the Town's Public Works Department (PWD). The PWD operates and maintains seven groundwater wells, three treatment facilities, 58 miles of distribution system pipes, and two storage tanks. Stantec has been providing engineering services to the Town of Maynard for over 40 years and has assisted the Town in managing, planning, operating, and maintaining its water supply system. Stantec continues to guide the Town when making critical decisions related to the long-term capital improvement planning of their water system. A highlight of some of the more significant tasks Stantec has delivered for the Town in recent years is discussed below.

### Groundwater Well Development & Rehabilitation

In the Spring of 2018, the Town was forced to issue a water use restriction to preserve the Town's water supply. The water restriction was required due to a mechanical failure of one of its groundwater production wells and water quality limitations on several other groundwater wells. In response, Stantec assisted the Town with developing new groundwater well sources and rehabilitating the failed well, providing technical (hydrogeological, pumping requirements) and permitting assistance. Developing a new groundwater well field included hydrogeological studies, pump tests, and extensive permitting associated with surrounding wetlands and a Blanding turtle protection area that required working closely with state regulators to ensure environmental permitting was properly addressed throughout the life of the project. With a new well source, the existing Well 4 Water Treatment Plant required upgrades for increased capacity and to address aging building systems and process equipment over 20 years old. Stantec designed the wellfield development, which included horizontal directional drilling for the raw water main and electrical utilities. Upgrades to the existing water treatment plant included a new pressure filter, replacing GreensandPlus media in existing filters, replacement of chemical feed bulk tanks and control systems, a flow meter vault structure, and a new backwash waste holding tank equipped with recycling equipment.

### Long Term Water Supply & Demand Planning

After water restrictions and well failures occurred, the Town requested that Stantec evaluate the adequacy of the Town's water supply system to serve current and future water demands to the rapidly developing Town. Stantec reviewed existing water demands and projected future water demands based on anticipated growth in Town. Analysis of current water supply capacity took in consideration mechanical and water quality-related limitations on the existing well sources. The water supply evaluation determined that the Town lacks adequate redundancy in its water supply and treatment facilities to ensure current and future water demands can be met with the existing supply. As part of this long-term planning study, Stantec reviewed various alternatives for future water supply to determine how to best achieve a fully redundant water supply system. Alternatives identified included: enhancing treatment at plants where the groundwater quality degradation was inhibiting the plant's ability to operate at design flows, building a new water treatment plant for a new surface water source, combining treatment from smaller plants into a single larger plant, and developing a new wellfield for treatment at an existing plant. Conceptual level costs were developed for various water supply and treatment scenarios that the Town was able to build into its Capital Improvement Plan.

<b>Client:</b>	<b>Town of Maynard, MA</b>
<b>Project Start:</b>	<b>2018</b>
<b>Project Completion:</b>	<b>Ongoing</b>
<b>Team Members Involved:</b>	<b>Garry McCarthy, Erica Lotz, Katie Chamberlain, Ryan Stackpole</b>





# Town of Sterling Water System Improvements

Town of Sterling, MA

Stantec has been supporting the Town of Sterling with water supply, treatment and distribution system improvements for well over 20 years. Over the last few years the Town of Sterling has been working to improve its water system to plan for the future.

## Water Supply

Stantec and Verdantas have been working together to help address the Town's water supply needs. The Town has a number of groundwater sources and while the existing sources have sufficient capacity to meet demand conditions within the Town, the groundwater sources lack the redundancy and reliability needed for operations. Verdantas is in the process of permitting a new municipal water supply well for the Town. This work includes preliminary well siting, execution of a well test program, pumping test and permitting. The siting of a new groundwater source within the Town of Sterling brings some unique challenges since the majority of the undeveloped land within the Town is owned by the Department of Conservation and Recreation (DCR). This project includes additional coordination and permitting since the proposed well is located on DCR property.

## Water Treatment

The Town of Sterling has had difficulty complying with the Lead and Copper Rule in recent years. Stantec has been assisting the Town with these corrosion control challenges by completing a corrosion control treatment study. Working closely with the Town and MassDEP, Stantec evaluated alternatives to improve the corrosion control strategies for the Town's groundwater sources. This work included collecting samples for water quality analysis from each of the Town's well sources, finished water entry points, and multiple locations in the distribution system and a desktop study to determine the best options for corrosion control. The Town is currently working to implement chemical feed modifications recommended by Stantec to improve its finished water quality and optimize corrosion control.

## Water Distribution and Master Plan

In addition to planning for water supply and treatment improvements, the Town of Sterling includes a water distribution piping system with one main pressure zone and three water storage tanks. Stantec recently completed a 20-year Water Distribution System Master Plan to identify and summarize the water supply, treatment and distribution system improvements that are recommended to improve the water system. These improvements include an annual water main replacement program to address undersized water mains along with improvement of fire flow availability. For the water supply and treatment improvements, in addition to addressing water supply reliability and compliance with the Lead and Copper Rule, Stantec also completed an assessment of the Town of Sterling's compliance with current and future water treatment requirements to make recommendations over the 20-year planning period.

<b>Client:</b>	<b>Town of Sterling, MA</b>
<b>Project Start:</b>	<b>2019</b>
<b>Project Completion:</b>	<b>Ongoing</b>
<b>Team Members Involved:</b>	<b>David Harwood, Chris Griffin, Katie Chamberlain, Erica Lotz, Paul Paone, Ryan Stackpole</b>



## Lunenburg Water District

Lunenburg, MA

Stantec has provided On-Call Engineering Services to the Lunenburg Water District for over 30 years. Typical services include master planning, test well exploration, water supply development, pump station design, water treatment plant design, distribution system and storage tank improvements.

<b>Client:</b>	<b>Lunenburg, MA</b>
<b>Project Start:</b>	<b>2017</b>
<b>Project Completion:</b>	<b>Ongoing</b>
<b>Team Members Involved:</b>	<b>David Harwood, Garry McCarthy</b>

Over the years, we have identified and developed multiple water sources, two (2) water storage tanks, and miles of distribution water mains. We recently completed the new Water District office and maintenance garage to serve as a central facility for all water operations.

Our partner, Verdantas is in the process of permitting new municipal water supply wells for the Lunenburg Water District, MA. These sites were identified during test well investigations and the MassDEP permitting is in progress. These projects include the following tasks:

- Planning and executed a test well program to identify well sites,
- Evaluated test well data, predicting ultimate production well yields and selecting a site for production well permitting,
- Preparing and submittal of a BRP WS 17 Application (Approval to Site a Source and Conduct a Pumping Test),
- Permitting with the Conservation Commission for conducting the pumping test,
- Directing a drilling subcontractor to install the test wells and observation wells,
- Preparing and submittal of a BRP WS 19 Application (Source Final Report),
- Preparing and submittal of a BRP WM 02 Application (Water Management Act Permit Amendment), and
- Preparing and submittal of a Massachusetts Environmental Policy Act (MEPA) Environmental Notification Form (ENF).

The table below highlights the breadth of our water system project experience throughout Massachusetts that exemplifies successful projects completed on time and within budget.

Client	Project	New Source Approval	Replacement	Test Well Investigation	Permitting/ Pump Test	Zone II / WHPA	Yield (gpm)	Completion
Acton Water District	Kennedy Well #2				✓		300	1998
Acton Water District	Conant Well					✓		2000
Acton Water District	Scribner Wellfield		✓					2002
Acton Water District	Clapp Wells		✓					2003
Acton Water District	Assabet #2		✓					2001
Acton Water District	Conant II	✓			✓	✓	300	2000
Acton Water District	Assabet # 1		✓				450	2004
Bellingham	Well #3		✓				400	2003
Boxborough	Blanchard School Well	✓		✓	✓		280	2000
Bridgewater Water Department	Carvers Pond Wells					✓	300	2007
Bridgewater Water Department	Well #10	✓				✓	500	2001
Carlisle	Town Bedrock Well	✓			✓		10	1997
Chelmsford Water District	Mill Road Well #1		✓					2021
Chelmsford Water District	Meadowbrook #3	✓			✓	✓	800	2004
Grafton Water District	Worcester Street Wells					✓	700	2004
Grafton Water District	Town-wide test Wells			✓				2008
Grafton Water District	Lake Ripple Well	✓			✓	✓	600	2008
Grafton Water District	Follette Street Well			✓	✓	✓	800	1998
Groveland Water Department	Well #1					✓	400	1997
Groveland Water Department	Well #4	✓				✓	215	1997
Lunenburg Water District	Wells #1, #2, #4 and #5				✓	✓	677	1996
Lunenburg Water District	Keating Well	✓			✓	✓	600	2010
Mashpee Water District	Well #5			✓	✓	✓	600	1999
Mashpee Water District	Turner Road Well #2	✓			✓	✓	400	2010

Client	Project	New Source Approval	Replacement	Test Well Investigation	Permitting/ Pump Test	Zone II / WHPA	Yield (gpm)	Completion
Maynard Department of Public Works	Rockland Avenue Wellfield	✓		✓	✓		1000	2003
Maynard Department of Public Works	Well #1		✓				250	1995
Maynard Department of Public Works	Well #4A	✓	✓	✓	✓	✓	240	2021
Maynard Department of Public Works	Old Marlboro Road Wells	✓		✓	✓		700	2021
Norfolk Water Department	Gold Street Well	✓				✓	300	1996
Norfolk Water Department	Mill River Site	✓		✓	✓	✓	750	1997
Norfolk Water Department	Site 5			✓				1995
North Raynham Water District	King Philip Wellfield #3	✓	✓	✓	✓	✓	200+	2000
North Raynham Water District	First Street Well					✓		1998
North Raynham Water District	Rock Site			✓				2003
North Raynham Water District	Noblin Site	✓		✓	✓	✓	450	2006
North Sagamore Water Dept.	Church Lane Well	✓		✓	✓	✓	1000	1999
North Sagamore Water Dept.	Black Pond Well					✓	800	1999
Norton Water Department	Norton Well #1	✓		✓	✓	✓	200	1996
Norton Water Department	Town-wide			✓				1997
Orange	Town-wide			✓				2003
Plainville Water Department	Lake Mirimichi wellfield	✓		✓	✓	✓	278	1998
Plymouth Water Department	Savery Pond Well	✓			✓	✓	1050	1999
Plymouth Water Company	Well #2				✓		350	2002
Raynham Center Water District	Gushee Pond #1 Well					✓	300	2003
Raynham Center Water District	Gushee Pond #2 Well	✓			✓	✓	550	2000
Raynham Center Water District	Gushee Pond #3 Well			✓	✓	✓	300	2003
Raynham Center Water District	Fountain Well	✓		✓	✓	✓	1,200	2011
Stow	Hale School Well					✓	500	1997

# References

Client: Town of Maynard, MA

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Client Representative:  
Justin DeMarco  
Director of Public Works

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Address: 195 Main Street, Maynard, MA 01754

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Telephone: 978-897-1317

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Email: dpw@townofmaynard.net

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Client: Lunenburg Water District, MA

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Client Representative:  
Fran McNamara  
Superintendent of Water District

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Address: 496 Massachusetts Ave. Lunenburg, MA  
01462

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Telephone: 978-582-4532

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Email: fmcnamara@lunenburgwater.net

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Client: Town of Sterling, MA

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Client Representative:  
Ryan Mouradian  
Superintendent Department of Public Works

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Address: 171 Worcester Road, Sterling, MA 01564

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Telephone: 978-422-6767

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Email: rmouradian@sterling-ma.gov

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# Project Team

## Stantec Team

Engaging the right people in a true team environment is the cornerstone of any successful project. We have identified staff that has worked together in the past and with experience on similar municipal water main projects. Our Team will work in close partnership with the Town's staff in a spirit of collaboration, flexibility, and seamless communication.

### SUBCONSULTANT PARTNERSHIPS

We are proud of our record of developing large and small business partnerships within the communities we serve. Our philosophy has always been to work with local firms as part of an integrated project delivery team. We do not consider such relationships as contractual obligations but rather an essential part of how we do business and contribute to the community. We have developed trusted partners with whom we have worked previously. We have augmented our Team with carefully selected local sub-consultants with specific technical expertise.



Verdantas is an engineering consulting firm with expertise in environmental assessment, remediation, and civil infrastructure for the built environment. Led by Senior Hydrogeologist David Harwood, Verdantas will support Stantec's Team with well exploration services. Over the last 25 years, David has completed more than three dozen new water supply well development projects for municipalities throughout New England. These projects have included the design and final production wells with a yield of .5 to 1.5 million gallons per day. With his vast New England experience, David will bring his expertise in completing required permitting with Massachusetts agencies, including the Massachusetts DEP New Source Approval, Massachusetts DEP Water Management Act, Massachusetts Environmental Policy Act Compliance, and the Massachusetts Wetlands Protection Act.

### Denis L. Maher Co.

Adding breadth and knowledge of the area, we are teaming with Denis L. Maher to support drilling operations. Since 1941, Denis L. Maher has provided well drilling and pump services throughout New England. Leading the drilling will be Ted Morine, who has over 50 years of experience as a hydrogeologist and has been responsible for developing more than 200+ ground water sources. Ted was also part of the Town's first well exploration and will bring his knowledge of the area to this project.

### Pioneer Consulting Group, Inc.

Pioneer Consulting Group, Inc. (PCG) is a small firm that serves only municipal government and public utilities. Pioneer Consulting Group, Inc. was established to provide financial, software, and information systems consulting to municipal agencies and utilities. Led by the President of PCG, Doug Gardner will bring his specialized expertise in water and sewer rate studies to the Stantec Team.

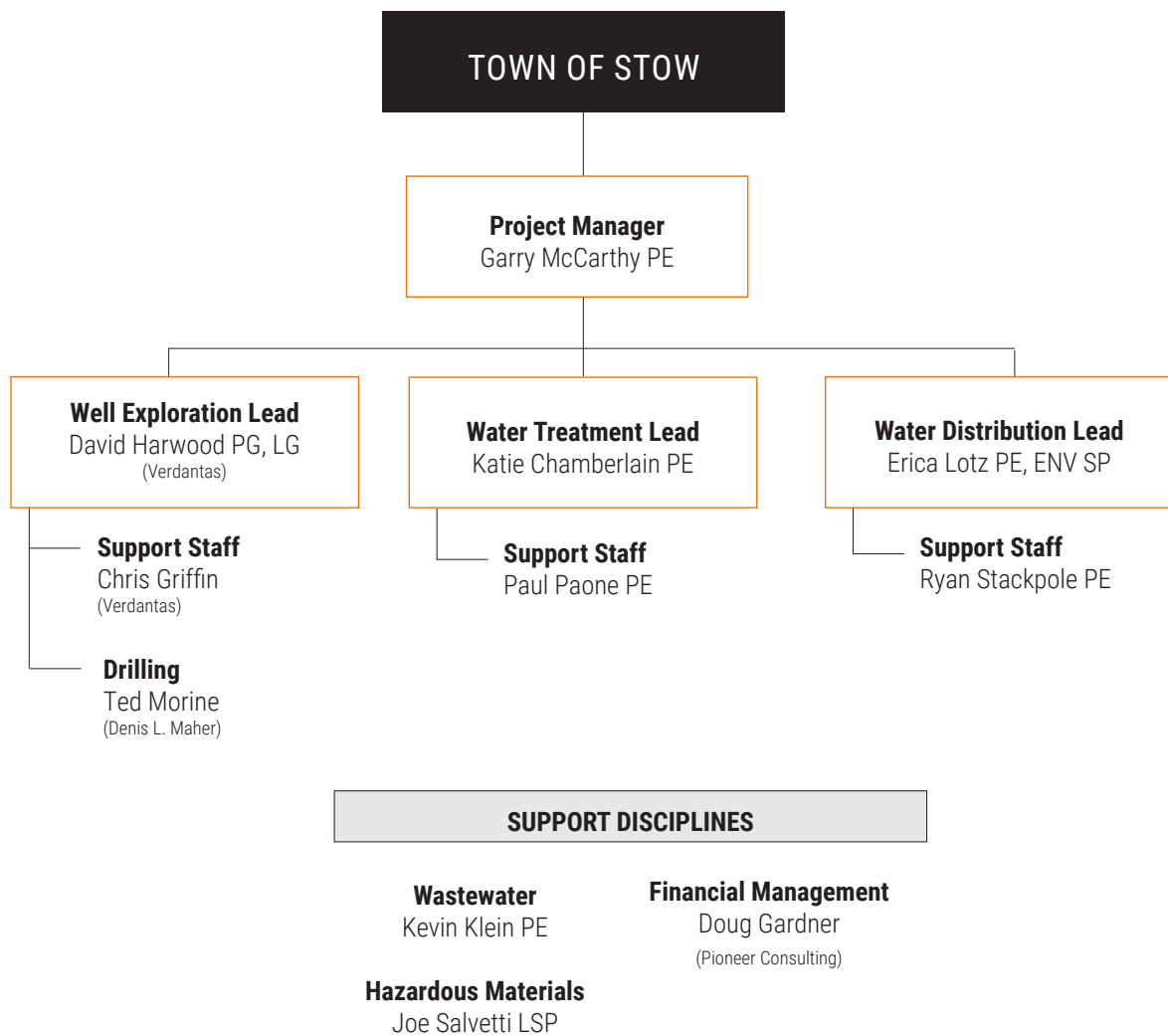
## Team Management

How your project is developed is just as important as how it's engineered. Our **Project Manager, Garry McCarthy** will lead our technical team to maintain the standard of excellence and execution our clients have come to expect. As a seasoned civil engineer with 35 years of experience, Garry has been working for communities throughout his entire career. In his role as leader of New England's water infrastructure practice, Garry manages water facility planning, design, permitting, and construction administration.

Serving as our **Project Technical Leads, Katie Chamberlain (Water Treatment), David Harwood (Well Exploration), and Erica Lotz (Water Distribution)** will focus on the technical aspects of the feasibility study digging into the details of your specific needs.

# Team Organization

Key persons and their roles are identified in our organization chart. Resumes for each key person follow this section.





# Garry McCarthy PE

## Project Manager

### Availability for Project

30%

### Years of Experience

35 years

### Office Location

Burlington, Massachusetts

### Education

B.S., Civil Engineering, University of Massachusetts, 1986

ACEC Program for Emerging Leaders, Boston, Massachusetts, 2007

### Registrations/Certifications

Professional Engineer – (#36812) MA, RI, CT

### Memberships

New England Water Works Association

American Water Works Association

American Council of Engineering Companies

Garry is a Project Manager with 35 years of experience in the engineering field. He is active in numerous organizations, and his experience includes the management, planning, design, permitting, and construction efforts for all types of water facilities. These facilities include water transmission and distribution mains and pumping, storage, and treatment facilities. He has managed these multi-disciplined projects for both private and municipal clients.

## PROJECT EXPERIENCE

### Rockland Avenue Rock Wells | Maynard, Massachusetts | Project Manager

Provided permitting, design, and construction services for a new 1.2 MGD water supply well field for the Town of Maynard.

### Old Marlboro Road Water Treatment Facility Modifications | Maynard, Massachusetts | Project Manager

Provided design and construction administration of treatment facility modifications including the addition of a new filter vessel and the replacement of chemical storage tanks.

### Water Treatment Facilities | Maynard, Massachusetts | Project Manager

Provided piloting and design of two treatment facilities to remove iron and manganese from four existing wells using pressure filters.

### Test Well Exploration Program, Harrisville, Rhode Island | Project Manager

As Project Manager, Garry provided test well exploration services which resulted in the permitting a new drinking water supply for the Harrisville Fire District through the Rhode Island Department of Health.

### Aquaria Pipeline, Southeastern Massachusetts | Project Manager

Garry provided design review services for new water supply pipeline to four communities – Taunton, Raynham, Easton and West Bridgewater. The proposed 85,000 linear feet 20-inch pipeline is proposed to be routed through the communities to serve the water supply needs of the City of Brockton. Technical review of the proposal was provided to minimize impacts on the communities during construction and operation of the pipeline.

### Savery Pond Well, Plymouth, Massachusetts | Project Manager

Garry provided permitting, design, and construction services for a new 1.5 MGD water supply well for the southern most village in Plymouth, Cedarville.

### Test Well Exploration Program, Norfolk, Massachusetts | Project Manager

In his role, Garry provided town-wide test well exploration services to locate one new water supply source with a capacity of 500 gpm or greater.



## David Harwood PG, LG

Technical Lead, Well Exploration

### Availability for Project

50%

### Years of Experience

29 years

### Education

M.S., Geology, Texas A&M University, 1993

B.S., Physics and Geology, St. Lawrence University, 1990

### Registrations

Professional Geologist - NH, FL

Licensed Geologist - ME

David has completed more than three dozen new water supply well development and permitting for municipalities throughout New England since 1997. These projects include planning test well investigations through interpretation of published geologic maps, evaluation of test well logs and geologic cross-sections, well site selection, pumping test design, implementation, and data analysis which includes determination of aquifer properties, well safe yield, and environmental impact to wetlands, streamflow, and other surface water bodies. The contribution zone of the production wells is delineated using complex numerical modeling (MODFLOW), which accounts for spatial variability of aquifer properties, groundwater-surface water interaction through wetlands, streams, and ponds, and variable precipitation recharge. Most of these projects included the design of the final production wells with typical yields from 0.5 to 1.5 million gallons per day. The permitting process is highly regulated, undergoes rigorous review by several regulatory agencies and environmental groups, and can often take several years to complete.

## PROJECT EXPERIENCE

### Municipal Groundwater Supply Permitting, Various Towns, Massachusetts | Project Hydrogeologist/Project Manager

Completed the state new source approval permitting process including preparation of the MassDEP Request for Site Exam, Pumping Test Proposal and Source Final Report, local Conservation Commission permitting, MEPA, and Water Management Act Permits. Well sites were selected through test well investigations or had been previously identified. Pumping test durations were from 5-days to as long as 15-days. Zone II delineations were either analytical or numerical (MODFLOW) depending on complexity of the aquifer and the need for evaluation of potential impacts. Specific individual projects include:

- Stepinski Well, Westford, approved for 1 MGD
- Keating Well, Lunenburg, approved for 1 MGD
- Hannegan Brook Well, Turners Falls, approved for 1.4 MGD.
- Assabet No. 3, Acton, approved for 0.5 MGD
- Savory Pond Well, Plymouth approved for 1.5 MGD
- Church Lane Well, Sagamore Beach, approved for 1.4 MGD
- Gushee Pond Well No. 3, Raynham, approved for 0.5 MGD
- Country Road Well No. 2, Westford, approved for 0.75 MGD
- Noblin Wellfield, North Raynham, approved for 0.5 MGD
- Bedrock Well, North Raynham, approved for 0.75 MGD
- Well No.4, Groveland, approved for 0.6 MGD
- Conant II Wellfield, Acton, approved for 0.5 MGD
- Lake Ripple Well, Grafton, approved for 0.5 MGD
- Meadowbrook No. 3 Wellfield, Chelmsford, approved for 1 MGD
- Rockland Avenue Bedrock Wellfield, Maynard, approved for 1 MGD
- Fountain Well, Raynham, approved for 1 MGD
- Well No. 10, Bridgewater, approved for 0.5 MGD



# Katie Chamberlain PE

Technical Lead, Water Treatment

## Availability for Project

30%

## Years of Experience

20 years

## Office Location

Burlington, Massachusetts

## Education

M.S., Environmental Science and Engineering, Colorado School of Mines, 2006

B.S., Chemical Engineering, Rensselaer Polytechnic Institute, 2002

## Registrations/Certifications

Professional Engineer – (#54667) MA

## Memberships

New England Water Works Association

American Water Works Association

Massachusetts Water Works Association

With 20 years of experience, Katie is a registered professional engineer with a focus on providing water treatment process solutions for municipalities. She serves as Stantec's Regional Practice Lead for drinking water treatment in the North. Katie's areas of specialty include iron and manganese treatment, water treatment alternatives analysis, water treatment plant optimization, and water treatment plant basis of design planning. Additionally, she is a technical expert in asset management and helps clients implement programs and utilization of risk-based decision-making principles for long-term capital planning.

## PROJECT EXPERIENCE

### Town of Sterling Water System Improvements, Sterling Massachusetts | Project Manager

Working closely with the Town and MassDEP, Stantec evaluated alternatives to improve the corrosion control strategies for the Town's groundwater sources. This work included collection of samples for water quality analysis from each of the Town's well sources, finished water entry points, and multiple locations in the distribution system and a desktop study to determine the best options for corrosion control.

### Maynard Well #4 Water Treatment Plant Upgrades & Wellfield Development, Maynard, Massachusetts | Design Manager

Katie led the project's interdisciplinary design team from the early planning stage all the way through bidding and award. The design included development of a new wellfield, horizontal directional drilling of a new raw water transmission main, access road improvements, a new flow meter vault, filtration system upgrades, chemical feed upgrades, a new filter backwash holding tank and recycling system, and upgrades to the building's roof, electrical, plumbing, and mechanical components. This project required a rigorous permitting process, which included MassDEP permits for New Source Approval and Treatment Facility Modification, RDA, NOI, Site Plan Approval, and NHESP Blanding's Turtle Protection Plan. This project was recently awarded and construction will commence later this summer, when Katie will manage the construction services tasks.

### Old Marlboro Road Water Treatment Plant Upgrades, Maynard, Massachusetts | Design Manager

Performed a full-scale pilot study at the Old Marlboro Road Water Treatment Plant (WTP), which utilizes greensand plus pressure filtration for iron and manganese removal, to evaluate treatment alternatives and determine the best path forward for reducing disinfection byproducts (DBP) in the finished water. The pilot study evaluated (1) the addition of coagulant prior to greensand filters for TOC removal and (2) the use of potassium permanganate for oxidation as a replacement for sodium hypochlorite, to reduce the potential of DBP formation.

### High Street Water Treatment Plant Design and Construction Services, Bridgewater, Massachusetts | Design Manager

As the treatment process lead engineer, led the preliminary design, permitting and final design tasks for the greenfield 2 MGD filtration plant. High Street Water Treatment Plant is designed to remove iron and manganese from four groundwater wells, adjust pH for corrosion control, and to provide disinfection of treated water. Design includes work at three sites: the new water treatment plant site upgrades to the existing maintenance garage, and upgrades to the existing three well-houses.





## Erica Lotz PE, ENV SP

### Technical Lead, Water Distribution

#### Availability for Project

30%

#### Years of Experience

23 years

#### Office Location

Burlington, Massachusetts

#### Education

M.B.A, Strategy & Business  
Analytics, Boston University, 2010

B.S., Civil Engineering, Worcester  
Polytechnic Institute,  
Massachusetts, 1998

#### Registrations/Certifications

Professional Engineer –  
(#45192) MA

Envision™ Sustainability  
Professional

Water Distribution System  
Modeling and Water Quality  
Analysis Seminars, Haestad  
Methods

Risk Assessment Methodology  
for Water Utilities (RAM-W)  
Training

#### Memberships

New England Water Works  
Association

Plymouth County Water Works  
Association

Barnstable County Water  
Utilities Association

As a Project Manager in water resources and with 23 years of experience, Erica has gained significant recognition in water supply engineering. Versatility is one of Erica's most powerful assets as her many responsibilities include evaluating water systems, permitting, design, and construction phase services for drinking water infrastructure throughout New England. Erica also brings strong qualifications with public participation efforts. She conducted multiple public meetings with affected homeowners, two local public water systems, Town Council members, local legislators, the Department of Public Health, the Department of Environmental Management, and the Rhode Island Infrastructure Bank. Most recently, she worked with residents impacted by PFAS contamination in Burriville, RI.

### PROJECT EXPERIENCE

#### Town of Sterling Water System Improvements, Sterling Massachusetts | Principal in Charge

Working closely with the Town and MassDEP, Stantec evaluated alternatives to improve the corrosion control strategies for the Town's groundwater sources. This work included collection of samples for water quality analysis from each of the Town's well sources, finished water entry points, and multiple locations in the distribution system and a desktop study to determine the best options for corrosion control.

#### Water System Master Plan, Holliston, Massachusetts | Project Manager

Project Manager for the completion of a water system master plan study. Work included evaluating the water supply, treatment, and distribution facilities within the Town. Identified required water main improvements to meet figure flow requirements. Evaluated water supply capabilities to meet demand projections. Conducted preliminary evaluation of existing treatment facilities to meet water quality goals and objectives.

#### Water Supply Master Plan, Connecticut Water Company, New Hartford, Connecticut | Project Manager

Erica prepared a hydraulic analysis and Well Head Protection Plan. Included computer model to analyze distribution system. Population and consumption projections determined the impacts these would have on the existing supply and distribution system. Developed and modeled system improvements based on the system's ability to meet required fire flows and maximum and peak hour consumption demands. Demands were calculated and allocated according to meter billing records. Stantec and Town of New Hartford personnel conducted Flow tests were used to calibrate the model. EPS and standard runs served to evaluate system deficiencies. System improvements were modeled to demonstrate the impacts of proposed improvements. The Well Head Protection Plan served to protect two Town wells from sources of contamination.

#### Water Supply Master Plan, Stoneham, Massachusetts | Project Manager

Erica prepared a master plan and water quality analysis, which included a computer model to analyze the distribution system, synchronized into WaterCAD from Town's existing GIS database. Population and consumption projections were made to see the impacts on the supply and distribution system. System improvements were developed based on the system's ability to meet required fire flows and present and future maximum and peak hour consumption demands.



## Chris Griffin

### Support, Well Exploration

#### Availability for Project

50%

#### Years of Experience

7 years

#### Education

B.S., Geo-science, University of Lowell

#### Training

OSHA 40-hour HAZWOPER

OSHA-8 Hour Refresher

Nuclear Density Gauge  
Operation Certification

American Concrete Institute  
– Concrete Field-Testing  
Technician – Grade I

Certified in Underground  
Storage Tank Decommissioning  
by ICC

Asbestos Inspector certified

Asbestos Disposal Site Worker

Chris is a staff geologist with considerable field environmental and construction experience. He has been responsible for various project tasks, including but not limited to construction oversight and testing, geotechnical, water supply, and environmental investigations, and environmental remediation projects. Chris' field oversight experiences include impacted soil excavations, monitoring well installations and sampling, PCB sampling of soil and building materials, underground storage tank removals, phase II site investigations and reporting, performing materials testing such as soil compaction, concrete, grout, and pavement; and direct communications with contractors and senior project engineers.

### PROJECT EXPERIENCE

#### Initial Site Characterization and Groundwater Quality Assessment, Various Locations, New Hampshire | Staff Geologist

Conducted initial site characterizations and corresponding groundwater quality assessments for several residential and commercial spill sites throughout New Hampshire. Tasks included sub-slab source investigations; extensive field screening of impacted soil and air; installation of recovery and monitoring wells; product recovery; collection of soil, groundwater, and drinking water samples; and site elevation surveys.

#### Water Supply System Siting and Installations, Various Locations, New Hampshire, Massachusetts and New York | Staff Geologist

Conducted various phases of water supply siting and installation oversight activities for drinking water supply systems with capacities of up to 1,750 gallons per minute. Reviewed information to identify potential groundwater resources. Oversaw installation of supply wells, logged supply well installations, assessed well screen alternatives, and conducted pump tests. Oversaw installation of water supply distribution systems. Coordinated with project team members and parties, including engineers, state agencies, town personnel and contractors.

#### Hooksett Village Water Precinct Diversion Modeling, Hooksett, New Hampshire | Staff Geologist

Installed gauging equipment, flow equipment and monitored stream diversions to a pond adjacent to water supply wells. Diversion involves monitoring of flows over 1,000 gallons per minute to the pond and tracking the effects on stream flows over multiple diversions per year. Coordinated activities with water utility staff so that impacts to the stream are adequately documented and regulatory permit requirements are met. Responsible for on-site health and safety during installation.



Denis L. Maher Co.

## Ted Morine

Support, Well Exploration - Drilling

### Availability for Project

50%

### Years of Experience

48 years

### Education

B.S., Geology, Tufts University,  
1963

### Training

University of Wisconsin  
Ground Water Short Course  
Well Design

University of Wisconsin  
Advanced Well Hydraulics

University of Wisconsin  
Ground Water Flow in  
Fractured Bedrock

University of Missouri - Rolla  
Augering, Coring and Drilling  
Techniques

National Water Well  
Association  
Aquifer Analysis  
Containment Transport and in  
Situ Treatment  
Fracture Trace Analysis

Miser and Earl - State College,  
PA, Fracture Trace Analysis

Ted joined the D.L. MAHER CO. in May 1965. He was the Vice President and Senior Hydrogeologist for the firm. Included within his responsibilities is the overall management of the Geology Department. During his 48-year association with D.L. MAHER CO., he has been responsible for the development of more than 200 + high-yielding groundwater sources. Prior to joining the D.L. MAHER CO., Ted worked as a Geologist for Whitman & Howard, Consulting Engineers, Camp, Dresser & McKee, Consulting Engineers, and Universal Engineering, Inc. For each of these firms, his duties involved aspects of geology and related sanitary engineering. When the D.L. MAHER CO was sold to the Boart Longyear Company in 2002, Ted continued his assignments as Senior Hydrogeologist of that office. In September of 2009, the Denis L. Maher Company was reformed when Boart Longyear exercised certain drilling and maintenance operations from their services offered. Ted rejoined the Denis L. Maher Company as Vice President and Hydrogeologist.

## PROJECT EXPERIENCE

### Reading Massachusetts

In coordination with the D.P.W. representatives have selected numerous test well sites after a complete review of previous well work. Managed test well crews and conducted prolonged pump tests. Reviewed the data and recommended the design of the permanent well design. Recently has completed Town wide fracture trace study and geophysical analysis for the drilling of potential rock well water supplies.

### Rockport, Massachusetts

Conducted Fracture Trace Study to select drilling sites for two high yielding bedrock wells to be used for augmentation of Cape Pond, a surface water supply source. Yield of each well reached 350 GPM.

### Westerly, Rhode Island

Consulting Geologist for numerous test wells, at least seven of which have become Public Water Supplies. Prepared the Hydraulic Yield Analysis of each source which was submitted to the State of Rhode Island D.O.H.

### West Newbury, MA

Consulting Geologist in the location of a new municipal water supply in unconsolidated sediments. Reviewed seismic profiles, staked out test sites and supervised drilling program. Augmented shallow aquifer with a fracture trace study for bedrock wells.

### Lunenburg, MA

Ground water study for Planning Board, Conservation Commission and Water District, evaluating both unconsolidated and bedrock aquifers.

### Maynard, MA

Conducted the Fracture Trace Study of a potential rock well drilling site. Supervised the drilling of six rock wells and a combined pumping test on three of the wells at a flow rate of 1080 GPM.



## Paul Paone PE

### Support, Water Treatment

#### Availability for Project

40%

#### Years of Experience

10 years

#### Office Location

Burlington, Massachusetts

#### Education

B.S., Civil Engineering, Wenworth  
Institute of Technology

#### Registrations/Certifications

Professional Engineer –  
(#56013) MA

Paul is a civil engineer whose work at Stantec has focused on inspection and design for sewer collection systems, wastewater treatment facilities and pumping stations, water distribution systems and water treatment facilities projects throughout New England.

### PROJECT EXPERIENCE

#### Water System Improvements, Stoneham, Massachusetts | Project Engineer

Project included the evaluation of the existing water system and designing/choosing the best method for upgrades. Paul's responsibilities included reviewing and evaluating existing conditions via field investigation and record plans, developing the plan for upgrading the system and then preparing the contract drawings, specifications and cost estimate for the related work.

#### Champlain Water District, South Burlington, Vermont | Project Engineer

Project Engineer for development of \$20 million concept design report for VTDEC DWSRF including new 6,000 sf chemical and 3,500 sf administration office building additions to replace all eight chemical storage and feed systems in a new centralized building for 20 MGD WTP.

#### Deep River Water Treatment Plant, Sodium Hypochlorite Feed System, Norwich, Connecticut | Project Engineer

Project Engineer for the design of upgrading the existing chlorine gas feed system to a sodium hypochlorite feed system. Paul's responsibilities included reviewing existing conditions via field investigation and record plans, designing the new feed system and then preparing the contract drawings, specifications and cost estimate for the related work.

#### Newington Booster Pump Station Upgrades, Newington, Massachusetts | Project Engineer

Project included the design of upgrading and modifying an existing booster pump station. Upgrades involved designing an addition onto the existing booster pump station as well as designing the modifications to the existing booster pump station pumps and piping. Designed upgrades to the sodium hypochlorite feed system as well. Responsibilities included reviewing existing conditions via photos and record plans, coordinating drawings/Revit model, and then preparing the contract drawings and specifications for the related work.

#### Parker Colorado Water Resource Centralization Project, Parker, Colorado | Project Engineer

This project was a progressive design build which included the design of two water purification facilities, upgrades and modifications to remote peaking wells, and conveyance piping to and from the new water purification facilities. The water purification facilities were designed to centralize water sources from local wells while providing iron and manganese removal through filtration and provide chemical treatment to the water. Paul's responsibilities included reviewing existing conditions via record plans, site visits and photos, designing the water purification facilities, designing the peaking wells upgrades, attending weekly progress meetings, coordinating drawings/Revit model, coordinating and corresponding with the client, contractor and other teams in charge of designing other elements of the project, and then preparing the contract drawings, specifications and cost estimate for the related work.



## Ryan Stackpole PE

Support, Water Distribution

### Availability for Project

40%

### Years of Experience

10 years

### Office Location

Burlington, Massachusetts

### Education

B.S., Civil Engineering, University of New Hampshire, 2012

### Registrations/Certifications

Professional Engineer – (#53008) MA

With 20 years of experience, Katie is a registered professional engineer with a focus on providing water treatment process solutions for municipalities. She serves as Stantec's Regional Practice Lead for drinking water treatment in the Northeast. Katie's areas of specialty include iron and manganese treatment, water treatment alternatives analysis, water treatment plant optimization, and water treatment plant basis of design planning. Additionally, she is a technical expert in asset management and helps clients implement programs and utilization of risk-based decision-making principles for long-term capital planning.

## PROJECT EXPERIENCE

### Oakland Water Association and Oakland Village Area-Water System Expansion Evaluation, Harrisville, Rhode Island | Project Engineer

As Project Engineer, analyzed capacity of the Harrisville Fire District (HFD) water system to support the additional demand of the Oakland Water Association (OWA). Reviewed recent water demand information and coordinated with Town Planning Director to project other future water system demands in the HFD water system. Reviewed current pumping capacities for existing water supply wells to determine the ability of HFD water system to meet future demands. Completed hydraulic modeling simulations to determine the effects additional demand had on pressures and fire flows available in the existing system and proposed OWA expansion area. Prepared technical memorandum indicating the results of the supply versus demand and hydraulic modeling analysis

### Water System Master Plan, Stoneham, Massachusetts | Project Engineer

Project Engineer for the preparation master plan, including water quality analysis. Included updated computer model to analyze distribution system, coordinated with Town's existing GIS database. Conducted flow tests with Stoneham DPW personnel to calibrate the model. Calculated population and consumption projections to determine future impacts on the supply and distribution system.

### Water System Master Plan, Northborough, Massachusetts | Project Engineer

Project Engineer for the preparation of hydraulic model and master plan. Developed hydraulic model to analyze distribution system. Upon completion, the hydraulic model will serve as the Town's GIS data layer. Conducted flow tests with Town personnel to calibrate the model. Calculated population and consumption projections to determine future impacts on the supply and distribution system.

### Water System Master Plan, Fall River, Massachusetts | Project Engineer

As Project Engineer, Ryan helped strengthen the existing model's accuracy to reflect ongoing construction. In his role, he created an updated water distribution map in GIS and generated population and consumption projections to evaluate the water system's capacity to meet current and future demands.





## Kevin Klein PE

Support, Wastewater

### Availability for Project

30%

### Years of Experience

37 years

### Office Location

Hyannis, Massachusetts

### Education

M.S., Environmental Engineering,  
Northeastern University, 1994

B.S., Chemical Engineering,  
University of New Hampshire,  
1985

### Registrations/Certifications

Professional Engineer –  
(#37808) MA

Commonwealth of  
Massachusetts, Title 5 System  
Inspector

Commonwealth of  
Massachusetts, Certified Soil  
Evaluator

### Memberships

American Society of Civil  
Engineers

Boston Society of Civil  
Engineers

Kevin is an environmental engineer who has completed work throughout his engineering/consulting career for various local, state, and federal governmental entities and private clients. He has a strong background in water supply and pollution control, focusing on designing, permitting, and constructing wastewater treatment plants and innovative/alternative wastewater treatment and disposal systems.

## PROJECT EXPERIENCE

### Town of Tisbury, Martha's Vinyard, Massachusetts | Project Manager

Responsible for planning, permitting, design, and construction bidding services associated with the construction of the sewage collection, treatment, and disposal facilities to serve the downtown and coastal areas of the Town of Tisbury. The 104,000 gallons per day Sequencing Batch Reactor treatment plant includes tertiary filtration and disinfection before subsurface effluent disposal via two separate leaching chamber effluent disposal facilities. Treatment facility design incorporates septage receiving and treatment processes and odor control facilities. It includes provisions for the future addition of on-site dewatering facilities to be added in conjunction with the potential construction of regional sludge compost facilities. The sewage collection system includes a combination of gravity and low-pressure collection systems connected to a pumping station to deliver wastewater to the remotely sited treatment plant.

### Hyannis Water Pollution Control Facility, Town of Barnstable, Massachusetts | Project Manager

Kevin was responsible for overseeing the evaluation, design and construction bidding of upgrades to primary and secondary clarifiers at the Hyannis Water Pollution Control Facility. This project involved the completion of an engineering evaluation and condition survey, as well as the preparation of design plans, specifications and bid documents for a 4.2mgd wastewater treatment facility. He was also responsible for completing a performance evaluation and condition survey at the Old Colony Pump Station in Hyannis.

### New Seabury Resort, Mashpee, Massachusetts | Project Manager

Responsible for planning, permitting, design, and construction phase services associated with completion of the Master Plan Gold and Residential Development at the New Seabury Resort in Mashpee, MA. Initial phases of the project involves infrastructure improvements including hydrogeologic assessments and design, permitting and construction of wastewater collection system and 300,000 GPD tertiary level wastewater treatment and disposal facilities with subsurface discharge to serve the commonly-owned commercial, recreational, and residential elements of the development. State and local agency reviews included filings under the Massachusetts Environmental Policy Act, the Massachusetts Ground Water Discharge Permit Program, the Massachusetts Wetlands Protection Act, the Mashpee Board of Health Regulations, the Mashpee Wetlands Regulations, the Mashpee Water District Rules and Regulations, and the Cape Cod Commission.



## Joe Salvetti LSP

Support, Hazardous Materials

### Availability for Project

30%

### Years of Experience

37 years

### Office Location

Quincy, Massachusetts

### Education

M.S., Soil and Water Science,  
University of Arizona, 1984

B.S., Plant and Soil Science,  
University of Maine, 1980

### Registrations/Certifications

Licensed Site Professional  
— (#9546) MA

### Memberships

Licensed Site Professionals  
Association

Joe has 37 years of experience in environmental consulting. He is a soil and water scientist with a strong background in hydrogeology and geology. Joe manages remedial actions and serves as a Licensed Site Professional (LSP) for waste site cleanup activities pursuant to the Massachusetts Contingency Plan (MCP). Joe has been a LSP since the inception of the program in 1993. He served as a Technical Adviser to the LSP Board reviewing technical challenges to the LSP test. His areas of expertise include remedial investigations, assessment and remediation of residential and commercial petroleum releases, hydrogeologic studies relating to aquifer protection, septic system impacts, water supply development, and landfills.

## PROJECT EXPERIENCE

### New Source Approval, Cole Property, Carver, Massachusetts | LSP Advisor

Joe managed and oversaw the performance of site investigation that included the exploration for water supply sites, aquifer pump testing, and regulatory approval for the first Town owned public water supply.

### East Boston Sewer Separation Phase III, Boston, Massachusetts | LSP Advisor

Provided LSP services for planning, design and construction of installing 9,000 feet of new water main, 4,000 feet of new sewer and 7,300 feet of new storm drain. The project also included rehabilitating 2,300 feet of existing wastewater piping with Cast-in-Place Pipe (CIPP) lining systems. Provided oversight of data collection and analyses, selection of boring locations, sampling, and laboratory analyses. Prepared a technical memorandum summarizing laboratory results and provided input on specification language and quantities for the construction cost estimate.

### New Boston Main Interceptor Rehabilitation Design, Boston, Massachusetts | LSP Advisor

Provided LSP services for trenchless rehabilitation of approximately 3,000 linear feet of 102" reinforced concrete combined sewer, two (2) badly degraded siphon chambers and five (5) large junction chambers. Conducted data research for proposed three jacking pit locations in a densely populated urban neighborhood. Provided planning and technical oversight to collect soil and groundwater samples at one location on private property that had reportable concentrations of PCB contamination. Sampling and testing of soil and ground water were performed in accordance with EPA Toxic Substance Control Act (TSCA) protocols. Prepared and submitted a technical memorandum summarizing laboratory results and providing recommendations to mitigate soil handling and costs.

### Hydrogeologic Investigation, Weymouth, Massachusetts | LSP Advisor

Joe managed and oversaw the performance of a site investigation that included the installation of observation wells, step-drawdown testing to evaluate potential well yields and the exploration for a water supply. Aquifer pump testing and data analysis was performed to determine groundwater availability in support of a 9-hole golf course and a residential subdivision.



Pioneer Consulting Group

## Doug Gardner

Support, Financial Management

### Availability for Project

30%

### Years of Experience

30 years

### Education

B.S., Finance and Accounting,  
Nichols College, 1987

### Memberships

American Water Works  
Association

New England Water Works  
Association

Doug Gardner is President of Pioneer Consulting Group, Inc., a firm that assists municipalities and utilities with financial management, rate design, information systems, and software. He has 30 years of varied experience with municipal government, utility management, and public service. Doug has assisted more than 200 municipalities and utilities nationwide throughout his career.

## PROJECT EXPERIENCE

### Utility and Rates Studies Experience, Nationwide | Financial Advisor

- Designed and completed more than 200 Utility Rate Studies and Cost of Service Studies in which equitable rate structures were designed and implemented.
- Designed a propriety computer system to design Water and Wastewater rates. Allows "What If" calculations to evaluate rate design.
- Completed, designed and implemented more than 150 GASB 34 Depreciation Studies.
- Created, designed and implemented Fixed Asset Accounting Systems.
- Created, designed and implemented Enterprise Fund Accounting Systems.
- Prepared water and wastewater System Development Charges and the Rule and Regulations Manual for municipalities.
- Created and designed departmental rules and regulations for water departments.
- Completed Technology Studies in which the objectives of the community were developed, the current level of technology was evaluated, recommendations made to determine which hardware and software could be used in the new PC configuration, creation of RFP documents, evaluation of vendors, oversight of hardware and software installation and designed software training programs for municipal employees.
- Completed indirect cost studies to determine the level of support provided to the Enterprise Fund by supporting departments.
- Implemented Utility Billing Systems ranging from 500 to 40,000 customers.
- Designed and implemented PC based budgeting and expenditure control systems.

# Project Understanding & Approach

The Lower Village Business District in Stow has the potential to be a significant economic engine for the Town. Stow's Lower Village functions as a historic gateway to Stow and serves as the Town's primary service and retail district. It is also designated a regional "Priority Development Area" in the 495 Compact. Past studies have concluded that the district's development potential has been limited due to the lack of a sufficient public water supply source. With a sufficient public water supply, the quality and density of the Lower Village could be improved to increase the viability of the business district.

The Lower Village Revitalization Subcommittee's Final Report recommends that the Town conduct a water system feasibility analysis to provide for development consistent with aspects of a pedestrian-oriented, traditional New England village center. Stantec is pleased to offer this proposal to complete work associated with groundwater exploration and document the feasibility of establishing a Public Water Supply (PWS) for servicing the Lower Village Business District area of Stow.

We are proud to offer you our Stantec Team, including our partners Verdantas (David Harwood), Denis L. Maher Company (Ted Morine), and Pioneer Consulting Group (Doug Gardner) for this assignment. This Team has worked on public water supply projects for over 20 years. Dave Harwood, Verdantas, will serve as the prime hydrogeologist. He brings over 30 years of local public water supply hydrogeological experience and specific experience in Stow, Maynard, Acton, and Boxborough.

Denis L. Maher Company and their hydrogeologist, Ted Morine, will complete all drilling activities for this assignment. DL Maher Company was the same drilling company that performed the original test well work on the Kunelius property at 144 Red Acre Road in 1985. Over the years, the company has grown and changed names; the Denis L. Maher Company is the current name. Ted Morine has been with DL Maher for over 48 years and was directly involved in the work at 144 Red Acre Road in 1985. There is no other water supply drilling professional in New England with more experience and knowledge of the local geology in the Stow area than Ted.

Doug Gardner is a longterm Stantec partner providing financial management services and rate studies to our municipal clients. He will assist us in identifying the most economically feasible method of short-term and long-term funding for development and operation of the proposed water system.

The Town selected two nearby town-owned parcels for test wells investigation. These parcels are located at 144 Red Acre Road, approximately 0.5 miles north of the Lower Village area, and the open space associated with the development at Heritage Lane adjacent to the south of Lower Village.

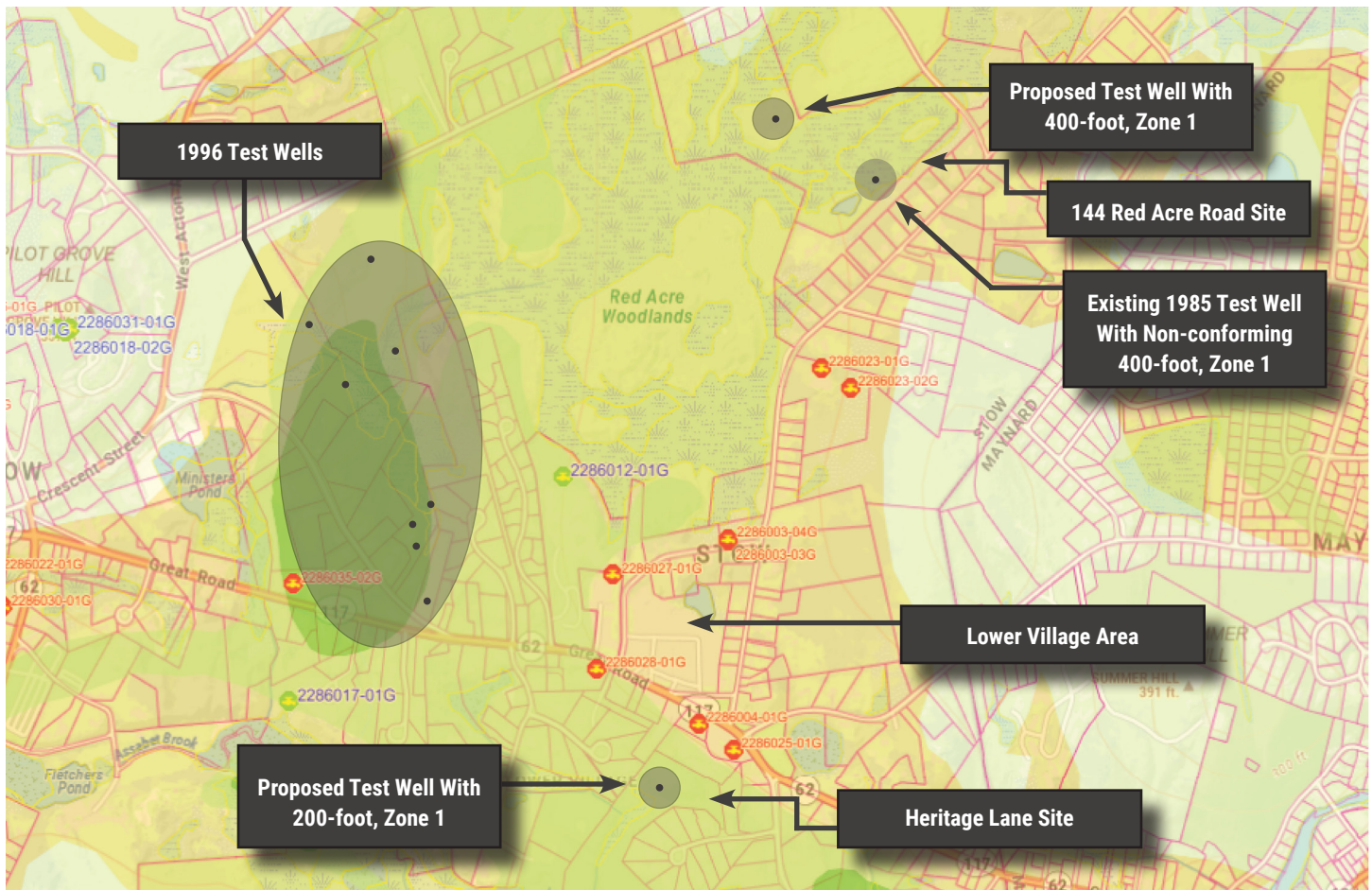
The parcel at 144 Red Acre Road is relatively large and could accommodate a 400-foot Zone I protective radius; however, much of the parcel is wetlands which constrains potential well locations. The area is not mapped as underlain by a high yield aquifer, but DL Maher installed a favorable test well in 1985. DL Maher reported that the site could support a production well yielding 300 to 350 gallons per minute (GPM). However, this well site only has an available Zone I radius of perhaps 200- to 250 feet. This would limit its permissible yield to approximately 3 to 7 GPM or 4,642 to 10,000 gallons per day (GPD). It is possible that a wellfield of three wells could be developed at this site, allowing the full potential yield to be utilized since wellfields are allowed a Zone I radius of 250 feet. A single additional test well in the uplands near the center of the property is recommended. This area would have an undeveloped 400-foot Zone I radius, which would not limit permissible yields. Access to this area would be through the town property from Tuttle Lane.

The parcel at Heritage Lane is relatively small, and the largest Zone I that would fit on it is approximately 235 feet. However, multiple wells spaced more than 50 feet apart could be sited, each having a Zone I as shown in the RFP document "r29-85b\_zone\_1\_estimations.pdf". The four radii could provide 12,678 GPD — approximately 8.8 GPM. Four additional wells with radii of 190-, 180-, 235- and 175 feet could also be located, providing an additional 18,501 GPD for a total of approximately 31,179 GPD or 22 GPM. The individual maximum permissible yields for wells with these radii range from 1.5 to 5.5 GPM.

The Heritage Lane area is mapped as a high-yield aquifer, and the Massachusetts Water Well Database shows the domestic wells at Heritage Lane were approximately 45 to 65 feet to bedrock. Considering the maximum permissible yields from individual wells at this site, we can be confident that wells at these locations are viable from a yield perspective without conducting test wells. Regardless, we recommend a single test well at this location to verify favorable geologic deposits and, more importantly, to verify water quality.



## Potential Public Water Supply Sources for Lower Village



After the test wells are completed and preliminary water quality testing results are received from a certified laboratory, a report with results and recommendations will be provided. After discussions with the town, one or both sites would be selected for further feasibility analysis. Well development and the MassDEP permitting process would be undertaken in a future phase. The MassDEP permitting process is a step-wise process generally consisting of the following: A BRP WS 13 or BRP WS 17 application depending on whether the expected yield is less than or more than 70 GPM. Then after MassDEP approval, a pumping test is conducted on either a larger test well or sometimes the final production well.

After the pumping test, a BRP WS 15 or BRP WS 19 application is submitted, again depending on whether the yield is less than or more than 70 GPM. In the case of the BRP WS 19 application, a Zone II delineation is completed.

The other tasks associated with this project include Defining the Primary Service Area and preparing a Water System Development Feasibility Analysis.

The Lower Village includes all parcels within the Business District, including several residential parcels, along Route 117 (Great Road) roughly between Bradley Lane to the west, White Pond Road to the east, and Samuel Prescott Road to the north.

We will work closely with town planning staff to:

- Better define the Primary Service Area,
- Understand the water demands for existing and potential development,
- Confirm constraints such as existing drinking water sources, existing wastewater treatment systems, and potential soil contamination sites, and

Describe water system management structures including a municipal Water Department, a Special Water District or a Private Company for ownership and/or operation.

The Water System Development Feasibility Analysis will present estimated costs for all components of the proposed water system including source development, pumping, treatment, distribution, storage and operations/maintenance. Additionally, fee structure alternatives will be presented to ensure the financial viability of the water supply development and annual operation.



## Leveraging years of working together and on multiple projects within the project area enables the Stantec Team to support the Town with unparalleled efficiency.

We understand the importance of this feasibility study to the Town. The ability to provide the resources and ease for a growing residential community is a top factor. The Stantec Team has been working on public water supply projects for over 20 years and providing similar studies to towns and municipalities throughout New England. We bring an intimate knowledge of the area through past work with the Town – as shown on the map below. Our local knowledge, coupled with our lessons learned from past studies and explorations will allow us to bring the Town a thorough and successful analysis of the service area. Additionally, we will leverage our relationships with MassDEP's Central Region regulators to engage with them as a collaborative partner early on in the project.



Garry McCarthy

GM



David Harwood

DH



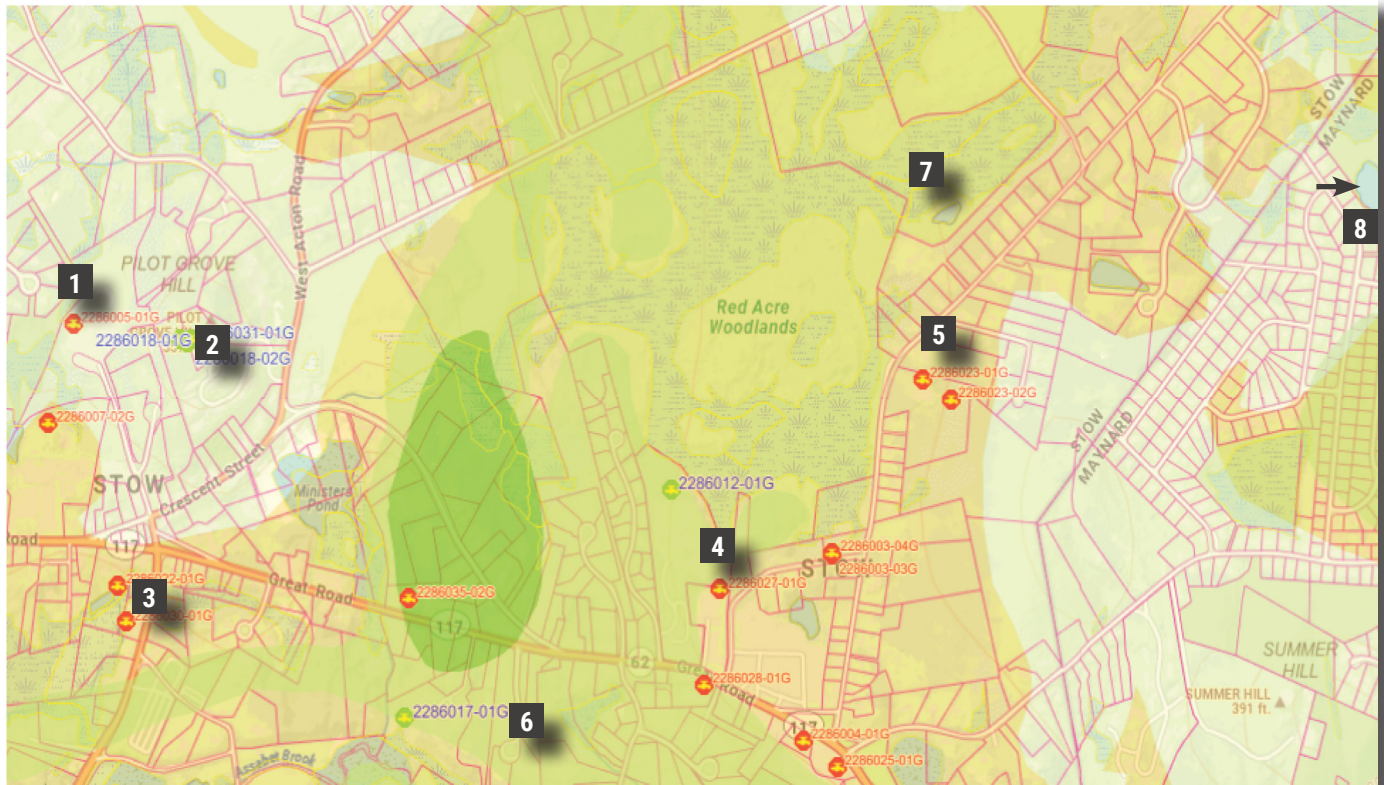
Ted Morine

TM



Kevin Klein

KK



1 Hale School Well, Zone 2

DH GM

2 Pilot Groves Wells

DH

3 Stow Town Hall

DH

4 Gymnastic Academy Well

DH

5 Kids-A-Lot Well

DH GM

6 Plantation Apartments WWTP

KK

7 144 Red Acre Road Test Well

TM

8 Maynard Municipal Wells

TM GM DH

# Scope of Services

The project tasks consist of a threefold analysis of groundwater exploration, definition of Primary Service Area and submission of a Water System Development Options Report. The following is a detailed Scope of Work based on our understanding of the project.

## Task 1 – Groundwater Exploration

Design, coordinate and implement a groundwater exploration and test well program. Data gained through the exploration will be utilized for determining feasibility recommendations associated with Task 2 and Task 3.

### A. Data Collection and Review

1. Review and collect all applicable information related to the Subject Parcels, including but not limited to the Geosphere Environmental Management, Inc. "Groundwater Resource Evaluation," dated December 6, 2006, for the 144 Red Acre Road parcels, applicable Conservation Restrictions, Town Meeting land acceptance information, and surficial geology information as applicable;
2. Identify permits necessary to implement a Test Well Program. At this time it is assumed that an RDA will be required by the Stow Conservation Commission for test well drilling at the 144 Red Acre Road parcel. It is also assumed that Conservation Commission permitting will not be required at the Heritage Lane parcel, but this will be verified. MassDEP permitting is not required for test well investigations.
3. Prepare a Test Well Program Memo for the purpose of identifying and defining recommended program parameters, including but not limited to permitting requirements, pump testing requirements and restoration of test well sites disturbed in program implementation. Details will include GPS survey staking of precise test well locations based on Zone I mapping. As described in the Project Understanding above, at this time we recommend a single test well at the 144 Red Acre Road parcel and a single test well at the Heritage Lane parcel.
4. Workshop #1 - Project Manager, and groundwater exploration Subcontractor to attend in-person meeting with Town Project Team to discuss findings and recommendations.

### B. Submit Required Permits for Test Well Program Implementation

1. Apply to the Stow Conservation Commission for test well approvals in accordance with the Wetlands Protection Act and Town of Stow Wetlands Bylaw, Conservation land regulations and the terms of the Conservation Restriction, dated July 29, 2019.
2. Attend Site Visit #1: Project Manager, and groundwater exploration Subcontractor with Town Project Team and members of the Conservation Commission and Stow Municipal Affordable Housing Trust (as applicable/necessary).
3. Attend one Conservation Commission public hearing to support a permit application.

### C. Implement Test Well Program

1. Implement Test Well Program that will, at a minimum, provide for information on soil composition, water quality, and potential yields in accordance with the Department of Environmental Protection's Drinking Water Regulations 310 CMR 22;
2. Establish a subconsultant contract with Denis L Maher Company to install test wells at permitted locations on the Subject Parcels;
3. The Stantec Team will direct and monitor the drilling operation. It is expected that 4-hour short-term pumping tests will be conducted on favorable test wells and samples collected for preliminary water quality testing. Lab testing will be for MassDEP Secondaries, nitrate & nitrite, VOCs and PFAS. The test well at the 144 Red Acre Road site will have a 2-foot observation well for measuring drawdown. A 2-foot observation well is not needed at the Heritage Lane site. Monitoring of resource areas is not typically conducted for the proposed short-term pumping tests as impacts would not be apparent. Long-term pumping tests will include monitoring of resource areas and will be conducted in the next phase of testing, as required by MassDEP permitting.
4. Complete restoration of affected lands as required by the Conservation Commission.

#### **D. Prepare and Submit Test Well Report to Project Team**

1. Test Well Report will outline the work performed at the Subject Parcels, results of applicable sampling and pump testing, and findings related to potential yields.

##### ***Deliverables and Meetings***

- Submit necessary permits required for implementing the Test Well Program;
- Submission of Test Well Program Memo;
- Workshop #1;
- Attend 1 Conservation Committee meeting
- Submission of Test Well Report

### **Task 2 – Define Primary Service Area**

#### **A. Identify and Review Water Use and Buildout Data for Lower Village**

1. Review available water use statistics and Title V flows for commercially active parcels in the Lower Village Business District;
2. Determine potential buildout/water usage based on existing and proposed zoning for the Lower Village Business District. Coordinate with Stow Planning Department Staff for relevant draft zoning proposals that may affect future buildout and water usage.

#### **B. Review Public Water Supply Constraints**

1. Review current Zone II and/or Interim Wellhead Protection Areas, and other existing protective radii in the preliminary study area and provide information on potentially conflicting land uses;
2. Review available MassDEP information related to relevant contaminant releases in applicable locations within or adjacent to the Lower Village Business District, including but not limited to 124 Great Road, site of former Mobil service station;
3. Provide guidance on potential wastewater treatment options, including but not limited to individual on-site treatment or shared systems and information as to preferred locations of such systems within the District, based upon information on existing constraints;

#### **C. Analyze/Review Public Water Supply Management Alternatives**

1. Pioneer Consulting will assess requirements related to Town Water Utilities, Special Water Districts, Private Utility Owner/Operator, and provide guidance on potential rate structures to support new water supply infrastructure.

#### **D. Prepare Primary Service Area Memo**

1. Workshop #2 to gain feedback on preferred management alternatives, Public Water Supply constraints and buildout estimates to prepare recommendations for Primary Service Area Technical Memorandum;
2. Prepare Primary Service Area Technical Memorandum utilizing information gained at Workshop #2

##### ***Deliverables and Meetings***

- Workshop #2: Project Manager and Project Engineer to attend 2-hour in-person meeting.
- Submission of Primary Service Area Technical Memorandum

### **Task 3 – Water System Development Feasibility Analysis**

Compile information and data gained during Tasks 1 and Task 2 to determine cost estimations for servicing Primary Service Area through the submission of a Water System Development Options Report.

#### **A. Estimate Fixed Costs**

1. Estimate the costs associated with initial development of a public water supply source, including but not limited to:
  - Production well permitting in accordance with Source Approvals for Groundwater Supply Protection and other requirements of 310 CMR 22;
  - Well construction and drilling;
  - Distribution lines and customer water services (costs presented per linear foot);
  - Treatment facilities and/or systems (if required based on test well water quality); and
  - Construction of pump houses, access roads, water storage and other applicable facilities related to the development of a public water supply.

## **B. Estimate Annual Operating Costs**

1. Identify estimates for annual costs associated with the maintenance and operation of a public water supply under the identified management alternatives.

## **C. Identify and Define Applicable Regulatory Requirements**

1. Provide information on Water Management Act Requirements, including any costs associated with the requirements based upon the identified management alternatives.

## **D. Prepare Draft Water System Development Options Report**

1. Prepare a draft Water System Development Options Report based upon the data collected in each of the three study Tasks to allow the Town to determine which public water supply management alternatives are best suited to delivering a viable public water supply to users in the Primary Service Area. The Report will include but not be limited to information on the following:
  - Delineation of Primary Service Area and identification of any alternative service area delineations that may provide for increased economic feasibility;
  - Identification of proposed source protection areas for providing service to the Primary Service Area and any associated alternatives, including Zone 1 protective radii, Zone II's, and Interim Wellhead Protection Areas;
  - Estimations on financial feasibility, including summarizing associated fixed and annual maintenance and operations costs, as well as proposed fee structures for each of the preferred management alternatives, as such information relates to delivery of service to the Primary Service Area and proposed alternative service areas;
  - Identification of recommended wastewater treatment options for users in the Primary Service Area, including type and location of facilities;
  - Identification of applicable regulatory requirements

## **E. Submit Final Water System Development Options Report**

1. Workshop #3 to present draft report findings and recommendations and gain feedback and recommendation from the Project Team regarding final comments and considerations for submission of the final Water System Development Options Report.

2. Present summary of final Water System Development Options Report at joint boards Public Meeting #4.

### ***Deliverables and Meetings***

- Workshop #3: Project Manager and Project Engineer to attend 2-hour in-person meeting.
- Public Presentation at Meeting #4;
- Submittal of Draft Water System Development Options Report
- Submittal of Final Water System Development Options Report

## **Task 4 – Project Management, QA/QC, and Coordination**

Provide Project Management Services as needed throughout the duration of the project. The Project Manager for the Consultant shall:

1. Coordinate with the Town.
2. Monitor and manage workload, staffing, subconsultants, schedules and budgets.
3. Coordinate and monitor quality control and quality assurance of project deliverables
4. Maintain lines of communication with Town staff to ensure the understanding and achievement of the project goals.
5. Prepare and submit monthly invoices to the Town.

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### **ASSUMPTIONS**

1. It is anticipated that appropriate staff will be made available to assist with access to project locations.
2. All deliverables will be in electronic PDF format.
3. Engineering preliminary design, final design, bidding and award, and construction phase services are not included.
4. For the purposes of cost estimating and feasibility analysis, the service area is considered to be the Lower Village Business District, as geographically defined in the RFP.



# Project Management & Quality Management

## Stantec Project Management Framework

Stantec will use proven management techniques to identify overall project issues and apply appropriate controls. We leverage a flexible approach that allows us to adapt and modify our management strategy as the project progresses and meet individual project requirements.

Stantec's robust project management system is aligned with the Project Management Institute's Project Management Body of Knowledge. Referred to as Stantec's Ten-Point Project Management Framework, we provide project managers with guidance on various tasks through the full life cycle of the project from initiation to close out. Particularly relevant are requirements in the framework for performing and documenting quality and independent reviews of project deliverables. Projects are subject to internal audits to ensure the project managers comply with the various elements of the Project Management Framework, including quality/independent reviews.

In summary, the plan provides guidelines for consistency across all disciplines with regard to:

- Overseeing and coordinating all the activities required to perform assigned tasks;
- Developing detailed task work plans;
- Monitoring and tracking all project execution tasks and activities, conducting on-site status meetings and preparing monthly progress status reports;
- Performing and coordinating all quality control plans and risk and issue management plans;
- Executing a change control management plan;
- Facilitating deliverable review and approval processes; and
- Overseeing and coordinating project communications.

Stantec's Ten-point Project Management Framework provides best practice guidelines from project initiation to close out. Early planning in the initiation phase sets the foundation to establish project needs, expectations, and protocols for successful implementation.

## Quality Management

Stantec is one of the few architect/engineer consultants certified to the internationally-recognized ISO 9001:2015 standard, and all of our projects are delivered under this standard. We will start each project with a Quality Management Plan (QMP) prepared by a team consisting of the Project Manager and key technical staff on the assignment.

The QMP will define QA/QC procedures and responsibilities that align with the Town's process and standards. At each stage of project development, work products will be reviewed by the appropriate technical reviewer and approved by the Project Manager before submission to the Town.

### QUALITY CONTROL PLAN

Stantec has developed and implemented a thorough and complete Quality Assurance and Quality Control (QA/QC) program to ensure quality work products are consistently produced. As part of our standard project management procedures (PXP, discussed earlier in this section), Stantec requires a formal QA/QC Plan to be prepared in the initial stages of every project. The QA/QC Plan identifies the milestones for review, individuals who will participate, and the Project Manager overseeing the review and ensuring all activities are properly completed.

Our quality management process ensures consistently delivering high-quality services and work products. First, team quality reviews are performed by each discipline within the technical team before transmittal to the Quality Manager. This helps make sure that work is done right the first time. Second, the Project Manager implements the QA/QC Plan with review using independent senior members of the firm with experience in each work area. Team members are required to respond and incorporate comments received from reviewers. All review comments are back-checked before release to the Project Manager for formal submittal to the Town. Our Project Manager, Garry McCarthy, is ultimately responsible for maintaining the quality process.



# Schedule



Meeting and/or Milestone

Task	2022				2023			
	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
<b>Notice to Proceed</b>	●							
<b>Task 1: Groundwater Exploration</b>								
Workshop #1 with Town								
Data Collection and Review & Test Well Program Memo								
Test Well Program Permitting								
Test Well Program Implementation								
Test Well Report								
<b>Task 2: Define Primary Service Area</b>								
Identify and Review Water Use and Buildout Data								
Review Public Water Supply Constraints								
Analyze/Review Public Water Supply Management Alternatives								
Workshop #2 with Town								
Prepare Primary Service Area Memo								
<b>Task 3: Water System Development Feasibility Analysis</b>								
Estimate Fixed costs								
Estimate Annual Operating Costs								
Identify and Define Applicable Regulatory Requirements								
Prepare Draft Water System Options Report								
Workshop #3 with Town								
Final Water System Development Options Report								
Workshop #4 with Public Presentation								

**Town of Stow**

**STATEMENT OF TAX COMPLIANCE**

Pursuant to M.G.L. c.62C, S.49A, I certify under the penalties of perjury that, to the best of my knowledge and belief, I am in compliance with all the laws of the Commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting child support.

NAME OF PROPOSER(S): **Stantec Consulting Services Inc.**

---

SIGNATURE(S):



PRINTED NAME(S): **Garry McCarthy**

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NAME OF BUSINESS: **Stantec Consulting Services Inc.**

---

ADDRESS: **45 Network Drive, 3rd Floord, Burlington, MA 01803**

---

SOCIAL SECURITY NUMBER(S) OR FEDERAL ID NUMBER: **11-2167170**

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**Town of Stow**

**CERTIFICATE OF NON-COLLUSION**

The undersigned certifies under the penalties of perjury that this quote has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certification, the word "person" shall mean any natural person, business, partnership, corporation, union, club, or other organization, entity, or group of individuals.



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(Signature of individual submitting Quote)







# CERTIFICATE OF LIABILITY INSURANCE

10/1/2022

DATE (MM/DD/YYYY)

9/16/2021

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Lockton Companies 444 W. 47th Street, Suite 900 Kansas City MO 64112-1906 (816) 960-9000	CONTACT NAME:	
	PHONE (A/C, No, Ext):	FAX (A/C, No):
INSURED 1414100 STANTEC CONSULTING SERVICES INC. 370 INTERLOCKEN BOULEVARD, SUITE 300 BROOMFIELD CO 80021-8012	E-MAIL ADDRESS:	
	INSURER(S) AFFORDING COVERAGE	
	INSURER A: Berkshire Hathaway Specialty Insurance Company	NAIC # 22276
	INSURER B: AIG Specialty Insurance Company	26883
	INSURER C:	
	INSURER D:	
INSURER E:		
INSURER F:		

## COVERAGES

CERTIFICATE NUMBER: 14181323

REVISION NUMBER: XXXXXXXX

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADOL SUBR INSD WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
	<b>COMMERCIAL GENERAL LIABILITY</b> <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR  GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PROJECT <input type="checkbox"/> LOC OTHER:		NOT APPLICABLE			EACH OCCURRENCE \$ XXXXXXXX DAMAGE TO RENTED PREMISES (Ea occurrence) \$ XXXXXXXX MED EXP (Any one person) \$ XXXXXXXX PERSONAL & ADV INJURY \$ XXXXXXXX GENERAL AGGREGATE \$ XXXXXXXX PRODUCTS - COMPIOP AGG \$ XXXXXXXX \$
	<b>AUTOMOBILE LIABILITY</b> <input type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY		NOT APPLICABLE			COMBINED SINGLE LIMIT (Ea accident) \$ XXXXXXXX BODILY INJURY (Per person) \$ XXXXXXXX BODILY INJURY (Per accident) \$ XXXXXXXX PROPERTY DAMAGE (Per accident) \$ XXXXXXXX \$
	<b>UMBRELLA LIAB</b> <input type="checkbox"/> OCCUR <b>EXCESS LIAB</b> <input type="checkbox"/> CLAIMS-MADE DED <input type="checkbox"/> RETENTION \$		NOT APPLICABLE			EACH OCCURRENCE \$ XXXXXXXX AGGREGATE \$ XXXXXXXX \$
	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N <input type="checkbox"/> N/A	NOT APPLICABLE			PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ XXXXXXXX E.L. DISEASE - EA EMPLOYEE \$ XXXXXXXX E.L. DISEASE - POLICY LIMIT \$ XXXXXXXX
A	Professional Liab	N	47-EPP-308810 NO RETROACTIVE DATE	10/1/2021	10/1/2022	\$3,000,000 PER CLAIM/AGG INCLUSIVE OF COSTS
B	Contractors Pollution Liab		CPO8085428	10/1/2021	10/1/2023	\$3,000,000 PER LOSS/AGG

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

## CERTIFICATE HOLDER

14181323  
TO WHOM IT MAY CONCERN

## CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

*Joseph M. Agnello*



# CERTIFICATE OF LIABILITY INSURANCE

5/1/2023

DATE (MM/DD/YYYY)

4/22/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

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<b>PRODUCER</b> Lockton Companies 444 W. 47th Street, Suite 900 Kansas City MO 64112-1906 (816) 960-9000		<b>CONTACT NAME:</b> <b>PHONE (A/C, No, Ext):</b> <b>FAX (A/C, No):</b> <b>E-MAIL ADDRESS:</b>	
<b>INSURED</b> 1415077 STANTEC CONSULTING SERVICES INC. 370 INTERLOCKEN BLVD SUITE 300 BROOMFIELD CO 80021-8012		<b>INSURER(S) AFFORDING COVERAGE</b> <b>INSURER A:</b> Berkshire Hathaway Specialty Insurance Company <b>INSURER B:</b> Travelers Property Casualty Co of America <b>INSURER C:</b> <b>INSURER D:</b> <b>INSURER E:</b> <b>INSURER F:</b>	
		<b>NAIC #</b> 22276 25674	

**COVERAGES** **CERTIFICATE NUMBER:** 14193567 **REVISION NUMBER:** XXXXXXXX


THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> <b>COMMERCIAL GENERAL LIABILITY</b> <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> <b>CONTRACTUAL/CROSS</b> <input checked="" type="checkbox"/> <b>XCU COVERED</b> GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input checked="" type="checkbox"/> LOC OTHER:	N	N	47-GLO-307584-04	5/1/2022	5/1/2023	EACH OCCURRENCE \$ 2,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 1,000,000 MED EXP (Any one person) \$ 25,000 PERSONAL & ADV INJURY \$ 2,000,000 GENERAL AGGREGATE \$ 4,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 \$
B	<b>AUTOMOBILE LIABILITY</b> <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY <input type="checkbox"/>	N	N	TC2J-CAP-8E086819 (AOS) TJ-BAP-8E086820	5/1/2022 5/1/2022	5/1/2023 5/1/2023	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ XXXXXXXX BODILY INJURY (Per accident) \$ XXXXXXXX PROPERTY DAMAGE (Per accident) \$ XXXXXXXX \$ XXXXXXXX
A	<input checked="" type="checkbox"/> <b>UMBRELLA LIAB</b> <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> <b>EXCESS LIAB</b> <input type="checkbox"/> CLAIMS-MADE DED RETENTION \$	N	N	47-UMO-307585-04	5/1/2022	5/1/2023	EACH OCCURRENCE \$ 5,000,000 AGGREGATE \$ 5,000,000 \$ XXXXXXXX
B	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N N	N/A	UB-3P635310 (AOS) UB-3P533004 (MA, WI) EXCEPT FOR OH ND WA WY	5/1/2022 5/1/2022	5/1/2023 5/1/2023	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required) TO WHOM IT MAY CONCERN.

## CERTIFICATE HOLDER

**CANCELLATION** See Attachment

<b>14193567</b> TO WHOM IT MAY CONCERN FL	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.  AUTHORIZED REPRESENTATIVE 
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