PROPOSAL FOR PROFESSIONAL SERVICES

# Tank Reconditioning Technical Services and Inspection

Ferndale Tank, Highland #3 and Highland #2

SAINT PAUL REGIONAL WATER RESOURCES | OCTOBER 6, 2021







October 20, 2021

Queenie Tran
Buyer III – Procurement
City of Saint Paul
15 West Kellogg Boulevard, 280 City Hall
St. Paul, MN 55102



RE: Tank Reconditioning Technical Services and Inspection (Ferndale Tank – 2022, Highland #3 – 2023, Highland #2 – 2025) | Event #1067

Dear Ms. Tran:

As the Saint Paul Regional Water Services (SPRWS) moves forward with reconditioning of the Ferndale and Highland Park #2 and #3 elevated storage tanks, it's important to partner with a firm that understands your drinking water system and your priorities. Short Elliott Hendrickson Inc. (SEH®) offers the familiarity of a trusted partner, gained throughout many years and many projects with your staff – most recently, during our assessments of these tanks just last year. While capital intensive, providing safe and reliable drinking water at fair and equitable rates is a critical function of SPRWS. We're ready to implement the solutions we outlined for these tanks in 2020 while operating as an extension of your staff. Here's how:

**OUR WORK HAS ALREADY BEGUN.** SEH's Water Tower Assessments report in 2020 identified the Ferndale and Highland #2 and #3 towers as three of top four priority tanks for reconditioning. We commend SPRWS for acting on these needs. Our familiarity with the specific conditions and needs of each tank will provide an efficient design process that simply picks up where we left off last year, and translates to cost savings for you. With these efficiencies, we are able to complete inspection, plans and specifications in time for a 2022 construction bid.

PROJECT MANAGER WITH COATING EXPERTISE. As your dedicated project manager and primary point of contact, Pat Skodje, NACE, will oversee all aspects of the project, from scope development to closeout. He brings a unique advantage to contractor coordination due to his years working for and with tower rehabilitation contractors. You'll recognize Pat from his leadership on SPRWS's Water Tank Assessments project, as well as the award-winning Sterling/St. Anthony Tower. Working closely with your staff, he'll replicate this proven project management approach for the Ferndale and Highland Park tanks.

**LOCAL PROJECT TEAM.** We're headquartered in St. Paul – just a half-hour drive from Ramsey Public Works. Various team members live even closer, which gives us innate understanding and a vested interest in the project. As community members, we want to see the tank reconditioning completed on time and on budget. And as SPRWS's trusted consulted, it's our job – and commitment – to do just that.

**ALL SERVICES IN-HOUSE.** With a single firm, you have a direct line of communication to the entire project team. This simplifies the amount of project coordination for SPRWS while promoting cost efficiency. Our engineers, certified NACE inspectors, water system operators and technicians work closely with your staff through a tailored approach. That includes assistance with temporary operations planning to maintain service while the tower is offline. Our telecom professionals, while not explicitly involved in this project, are on standby should you require their insights.

We appreciate your consideration and look forward to continuing our working relationship with Saint Paul Regional Water Services. If you have any questions regarding this proposal or the information contained herein, please contact Pat Skodje at 651.318.0360 or pskodje@sehinc.com.

Respectfully submitted,

PATRICK SKODJE, NACE PROJECT MANAGER



MILES JENSEN, PE (MN)
PROJECT PRINCIPAL



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**TAB 5 – COST** (submitted under separate cover)

The specific licenses and credentials of the team members are described in the personnel and/or resume section of this document.

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The information contained in this Proposal was prepared specifically for you and contains proprietary information. We would appreciate your discretion in its reproduction and distribution. This information has been tailored to your specific project based on our understanding of your needs. Its aim is to demonstrate our ideas and approach to your project compared to our competition. We respectfully request that distribution be limited to individuals involved in your selection process.

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# TAB 1 — Description of Proposer's Overall Approach or Solution

Our approach to the scope of services described in your Request for Proposal (RFP) is founded on years of similar experience, combined with our understanding of SPRWS's existing infrastructure. We'll work with SPRWS staff to implement the services for each tank as recommended in our previous assessments and as defined in the following Project Approach.

## APPROACH AND RATIONALE

#### **PROJECT UNDERSTANDING**

**Let's pick up where we left off.** You've already invested in our understanding of this project through the SEH team's completion of the 2020 Water Tower Assessments, We're prepared to leverage this unmatched familiarity with the Ferndale and Highland #2 and #3 tanks into an efficient reconditioning process and a return on your investment. The inherent project knowledge offered by our team translates to quick start-up and collaboration with your staff, where we can continue the dialogue to understand any new and evolving priorities.

Once complete, the reconditioned tanks will continue to serve SPRWS's customers with high quality drinking water well into the future. We understand your project expectations, the work required for these facilities, and the staffing and scheduling needs necessary for a successful project outcome.

#### PROJECT APPROACH

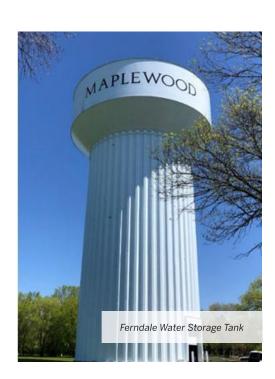
Recommendations to recondition these facilities will be based upon the RFP, American Water Works Association/ Occupational Safety and Health Administration/Minnesota Department of Health (AWWA/OSHA/MDH) standards and Tank Assessments, including the Tank Industry Consultants assessments completed in 2013 and the SEH assessments completed in 2020.

SEH has the resources to complete inspection and develop plans and specifications for a 2022 construction bid.

#### **FERNDALE WATER STORAGE TANK**

#### **EXTERIOR SURFACES**

- Remove and replace the existing obstruction/aviation light and associated conduit
- Install a new roof vent with a frost-free AWWA compliant design and pressure pallet
- Replace the handrail system, with toe-plate, that encompasses the roof vent and bowl access man-way to meet OSHA standards and provide safer conditions when conducting periodic tank maintenance
  - Handrail system is also designed to accommodate existing/future telecommunications equipment



- Install OSHA compliant handrails at roof edge access hatches
- Clean out the existing overflow pipe at the discharge and replace the screen with a corrosion resistant 3/8" or larger mesh screen
- Provide new locks for all roof hatches
- o Replace shell man-way bolts and gaskets
- Complete removal of existing coatings and replacement with a new coating system
  - All surfaces should be prepared to an SSPC SP-6 or equal "Commercial Blast" level of cleanliness
  - Follow with a three-coat zinc/polyamide-epoxy/ acrylic-polyurethane coating system
  - Install a full-containment structure to avoid fugitive dust emissions and/or paint drift

#### **INTERIOR WET SURFACES**

- Seal the following with elastomeric caulk to inhibit the occurrence of rust bleed:
  - Gaps in the lapped plates including the dollar to roof plate and roof to roof radial/torus plates (seams above the normal waterline)
  - At the intermittently welded roof stiffener angles
  - Roof openings and other roof penetrations
- Remove by air arc gouging, cutting torch or grinding all surface imperfections including erection scab marks
- Install a mud-valve as near as possible to the lowest point in the bottom bowl to facilitate tank draining and cleanout
- Install protective bars at the riser pipe opening
- Update any damaged and/or non-OSHA compliant ladder components
- Complete removal and replacement of existing interior wet coating system
  - Abrasive cleaning to meet an SSPC-SP-10 Near White blast to immersion (wet) surfaces
  - Application of a three-coat zinc/polyamide-epoxy coating system in accordance with ANSI/NSF standard 61
  - Dehumidification to allow for controlled environmental conditions

#### **INTERIOR DRY SURFACES**

 Maintenance within the interior dry is limited to the access tube including section seams and ladder standoffs, handrails, platforms, condensate pan, areas of the wet riser and areas of the bottom bowl

SHORT ELLIOTT HENDRICKSON INC.



- Failed areas will be prepared to an SSPC SP-11 "Power-Tool Cleaning to Bare Metal" standard of cleanliness and feathered to create a smooth transition
- Exposed and prepared surfaces should be painted with two-coats of a compatible epoxy-polyamide system
- Update any damaged and/or non-OSHA compliant ladder components
- Replace missing/broken light bulbs

#### **HIGHLAND PARK WATER STORAGE TANK #2**

#### **EXTERIOR SURFACES**

- Relocate the existing obstruction/aviation light and associated conduit to new handrail system
- Install a new roof vent with a frost-free AWWA compliant design and pressure pallet
- Replace the handrail system, with toe-plate, that encompasses the roof vent and bowl access man-way to meet OSHA standards and provide safer conditions when conducting periodic tank maintenance
  - Handrail system is also designed to accommodate existing/future telecommunications equipment
- Clean out the existing overflow pipe at the discharge and replace the screen with a corrosion resistant 3/8" or larger mesh screen, or flap valve
- Provide new locks for all roof hatches
- o Replace shell man-way bolts and gaskets
- Complete removal of existing coatings and replacement with a new coating system
  - All surfaces should be prepared to an SSPC SP-6 or equal "Commercial Blast" level of cleanliness

- Follow with a three-coat zinc/polyamide-epoxy/ acrylic-polyurethane coating system
- Install a full-containment structure to avoid fugitive dust emissions and/or paint drift

#### **INTERIOR WET SURFACES**

- Seal the following with elastomeric caulk to inhibit the occurrence of rust bleed:
  - Gaps in the lapped plates including the dollar to roof plate and roof to roof radial/torus plates (seams above the normal waterline)
  - At the intermittently welded roof stiffener angles
  - Roof openings and other roof penetrations at the intermittently welded roof stiffener angles and compression ring to within 1 ft. of the normal waterline
- Remove by air arc gouging, cutting torch or grinding all surface imperfections including erection scab marks
- Install a mud-valve as near as possible to the lowest point in the bottom bowl to facilitate tank draining and cleanout
- o Update any non-OSHA compliant ladder components
- Complete removal and replacement of existing interior wet coating system
  - Abrasive cleaning to meet an SSPC-SP-10 Near White blast to immersion (wet) surfaces
  - Application of a one- or two-coat 100% solids coating system in accordance with NSF 600 Standards
  - Dehumidification to allow for controlled environmental conditions

#### INTERIOR DRY SURFACES

- Maintenance within the interior dry is limited to the access tube including section seams and ladder standoffs, handrails, platforms and the wet riser
- Failed areas should be prepared to an SSPC SP-11
   "Power-Tool cleaning to Bare Metal" standard of cleanliness and feathered to create a smooth transition
- After cleaning, exposed surfaces should be painted with two-coats of a compatible epoxy-polyamide system
- Add a safety ladder extending from the platform to the bottom bowl manway
- Replace missing/broken light bulbs



#### **HIGHLAND PARK WATER STORAGE TANK #3**

#### **EXTERIOR SURFACES**

- Replace the handrail system, with toe-plate, that encompasses the roof vent and bowl access man-way to meet OSHA standards and provide safer conditions when conducting periodic tank maintenance
  - Handrail system is also designed to accommodate existing/future telecommunications equipment
- Install a new roof vent with a frost-free AWWA compliant design and pressure pallet
- Relocate the existing obstruction/aviation light and associated conduit to new handrail system
- Clean out the existing overflow pipe at the discharge and replace the screen with a corrosion resistant 3/8" or larger mesh screen, or flap valve
- Provide new locks for all roof hatches
- o Replace shell man-way bolts and gaskets
- Existing exterior surfaces shall be power washed, spot primed with a complete exterior overcoat
  - Pressure wash with a minimum 3,500 psi to remove dirt and other surface contaminants
  - Spot preparation of areas experiencing abrasion or failure of the coating system to meet an SSPC SP-11 "Power-Tool Cleaning to Bare Metal"
  - Application of a compatible primer to exposed steel with a complete acrylic-polyurethane overcoat system

- New exterior components shall be prepared and receive a shop applied new coating system
  - All surfaces should be prepared to an SSPC SP-6 or equal "Commercial Blast" level of cleanliness
  - Followed by a three-coat zinc/polyamide-epoxy/ acrylic-polyurethane coating system.

#### **INTERIOR WET SURFACES**

- Seal the following with elastomeric caulk to inhibit the occurrence of rust bleed:
  - Gaps in the lapped plates including the dollar to roof plate and roof to roof radial/torus plates (seams above the normal waterline)
  - At the intermittently welded roof stiffener angles
  - Roof openings and other roof penetrations at the intermittently welded roof stiffener angles and compression ring to within 1 ft. of the normal waterline
- Remove by air arc gouging, cutting torch or grinding all surface imperfections including erection scab marks
- Install a mud-valve as near as possible to the lowest point in the bottom bowl to facilitate tank draining and cleanout
- Install a new pressure man-way minimum 12 ft. by 18 in. in the bottom bowl to comply with current AWWA M42 guidelines
- Update any non-OSHA compliant ladder components
- Complete removal and replacement of existing interior wet coating system
  - Abrasive cleaning to meet an SSPC-SP-10 Near White blast to immersion (wet) surfaces
  - Application of a one- or two-coat 100% solids coating system in accordance with NSF 600 Standards
  - Dehumidification to allow for controlled environmental conditions

#### **INTERIOR DRY SURFACES**

- Maintenance within the interior dry is limited to the access tube including section seams and ladder standoffs, handrails, platforms and the wet riser
- Failed areas should be prepared to an SSPC SP-11
   "Power-Tool cleaning to Bare Metal" standard of cleanliness and feathered to create a smooth transition
- After cleaning, exposed surfaces should be painted with two-coats of a compatible epoxy-polyamide system
- Replace missing/broken light bulbs
- Replace the existing insulation on the fill pipe, and include an aluminum jacket
- Update any non-OSHA compliant ladder components

# RECOMMENDED CONTRACT TIME AND CONTRACTOR REQUIREMENTS

SEH is well aware of the costs in completing a reconditioning project both through continued completion of reconditioning projects within the region and through our project manager's past contractor work experience. Today's coating systems are formulated to last 15 to 20 years with periodic maintenance. SEH will require and verify that the contractor is a competent bidder requiring past work experience submittals and other bidder qualification criteria. SEH will also require the contractor provide a monolithic application of the interior immersion coating system to promote long-term system service.

Finally, SEH will incorporate provisions into the specification requiring a two-year contractor warranty.

## DESCRIPTION OF WORK PLAN

Having reviewed our own evaluation reports and those provided by SPRWS for the Ferndale, Highland #2 and Highland #3 water storage tanks, we will adhere to the Project Scope as outlined in your RFP. The Work Plan below reflects your preferred process. Upon Notice to Proceed, Project Manager Pat Skodje will coordinate the pre-design meeting with your staff and stakeholders, during which we will discuss in greater detail a project management and communications plan to include any concerns, anticipated challenges and workflow preferences.

#### **SCOPE OF WORK PLAN**

#### A. Design Services:

The work tasks and deliverables for this section shall include:

#### 1. Pre-design

- a. SPRWS will provide an inspection report from 2013 by Tank Industry Consultants and an inspection report from 2020 by SEH
- b. Meeting to confirm SPRWS's intent to follow/alter the recommendations prescribed
- c. Conduct full inspection and evaluation of tank
- d. Establish overall project requirements and objectives related to contractor procurement and schedule
- e. Provide engineers estimate that will be used for bidding

#### 2. Specifications and Contract Documents

 a. Prepare drawings and specifications, including technical sections as related to facility surface preparation and coating application (Specifying systems in accordance with AWWA D102), and structural modifications (AWWA D100, OSHA, and MDH)

- i. SPRWS' safety officer may provide fall protection and other safety systems/items beyond OSHA requirements
- b. Meet with SPRWS staff to review plans and specifications prior to final completion
- c. Complete and submit permit application and specification to the MDH

#### 3. Bidding Administration as coordinated with SPRWS

- a. Assist in preparing unit price bid form in Microsoft Excel format
  - i. Include an alternate bid for combining Highland #2 and Highland #3 into one project
- b. Provide responses to bidder questions
- c. Attend and facilitate a Pre-Bid Meeting
- d. Review bids and prepare letter of award recommendation to SPRWS

#### B. Cellular/Other Tenants

Required services related to the temporary removal and re-installation of telecommunications equipment at these facilities by the current carriers will not be a part of this project. They will be handled by an existing contract SPRWS has in place for those services.

#### C. Construction Services

#### 1. Construction Administration

- a. Review submittals and other pertinent documentation associated with the plans/ specifications
- b. Respond to contractor inquiries
- c. Coordinate/facilitate pre-construction meeting
- d. Review and comment on change orders, as required
- e. Review monthly pay requests
- f. Coordinate and facilitate weekly on-site progress meetings and prepare meeting minutes
- g. Provide bi-weekly status reports (summary) including applicable updating progress for public notification(s)
- h. Prepare punch list at substantial completion
- i. Prepare letter of final review and acceptance in coordination with the on-site inspector
- j. Complete/facilitate project closeout documentation

#### 2. Construction Observation

- a. Inspection and record keeping shall be provided by a NACE Certified Coatings Inspector
- An AWS certified welding inspector shall be required to inspect and oversee any structural or welding repairs as needed

#### 3. Other Tasks

- a. Inspect structural repairs and modifications for conformance to the specifications
- b. Prepare and file copies of construction activity reports
- c. Monitor field operations and testing in accordance with the specifications as related to:
  - i. Surface preparation materials and equipment
  - ii. Surface preparation operations inclusive of coatings removal and approval of samples
  - iii. Coating application materials and equipment
  - iv. Coating operations inclusive of mixing and application
- d. Work directly with residents and property owners, responding to construction related issues
- e. Assist SPRWS with coordination of facility disinfection (contractor initiated)

#### D. Warranty Inspection

The deliverables and work tasks for a two-year warranty inspection shall include:

- Contacting SPRWS approximately 6 months prior to the expiration date to verify proceeding with contracted warranty inspection. Proceed with initial warranty inspection once verified.
- 2. Coordinating with SPRWS and any Proposer subcontractor the schedule for the inspection
  - The ROV method is proposed for wet interior investigation so as not to take the tank out of service
- 3. Proposer notifying the contractor of the inspection date
- 4. Prepare and distribute inspection results and recommended repairs to SPRWS and the contractor
- 5. Coordinate warranty repairs with the contractor and SPRWS
- 6. Inspect warranty repairs and certify completion of the project



YEARS OF EXPERIENCE



#### **REGISTRATIONS/CERTIFICATIONS**

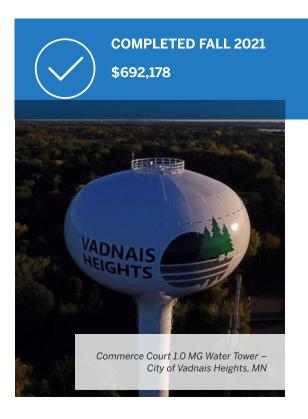
NACE Certified Coating Inspector - Level 3, NACE International

Remote Pilot, Federal Aviation Administration Ground Instructor, Federal Aviation Administration Private Pilot, Federal Aviation Administration



#### **PROFESSIONAL ASSOCIATIONS**

The Society for Protective Coatings, Member NACE International, Member



## PATRICK SKODJE NACE

PROJECT MANAGER

As a protective coatings manager and a NACE Certified Coating Inspector – Level 3 with nearly 30 years of experience, Pat combines coatings knowledge with a keen understanding of effective contractor coordination. He's seen firsthand what makes a reconditioning project efficient, and what can derail it.

With foresight into potential project complications, Pat is able to reduce or eliminate change orders prior to the bid phase and contract work. He brings a trained eye for critical inspection that provides value to the owner in reduction of overall cost. This eye for inspection has been honed through the lens of all current applicable standards and regulations.

Finally, SPRWS has come to trust Pat's leadership and coordination of our SEH team through previous efforts. For the Ferndale and Highland #2 and #3 tank reconditioning, you'll interface primarily with Pat as he once again leads your project to a successful, hasslefree outcome that allows you to continue serving your drinking water customers with fair and equitable rates.

#### **SELECT PROJECT EXPERIENCE**

- o Centerville Tower Rehabilitation City of White Bear Lake, MN
- o Wisconsin Street Tank Rehabilitation City of Hudson, WI
- Alice Court Water Tower Rehabilitation City of South St. Paul, MN
- Gary Street Water Tower Rehabilitation (Elk River Municipal Utilities) – Elk River, MN
- Hoyt Lakes Water Tower Rehabilitation City of Hoyt Lakes, MN
- o Lincoln Avenue Water Tower Rehabilitation Village of Plover, WI

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I'VE BEEN WORKING ALONGSIDE CONTRACTORS AND DESIGN STAFF ON INDUSTRIAL WATER TREATMENT PAINTING SINCE 1990. I'VE FOUND THAT ENGAGING ALL PARTIES EARLY AND OFTEN IS THE KEY TO A SUCCESSFUL OUTCOME.

PAT SKODJE | PROJECT MANAGER

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# TAB 2 — Scope of Services

The organizational chart below demonstrates our comprehensive approach to addressing every component of this project with an eye on your operational objectives. Key project personnel are summarized on the following pages.

Saint Paul Regional Water Services

**MANAGEMENT** 

Pat Skodje NACE

Project Manager

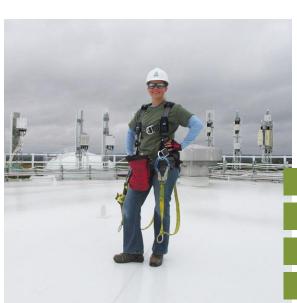
Miles Jensen PE

Project Principal

# DESIGN AND CONSTRUCTION

Jana Nyhagen PE | Project Engineer
Joe Cesarek NACE | Coating Specialist
Jeff Joseph NACE | NACE AWS/CWI and NACE CIP Level II Inspector
Cory Bednar NACE | NACE Inspector/NACE CIP Level I Inspector
Kyle Linscott PE | NACE/Telecom Inspector
Mike Hemstad PE, SE | Structural Engineer
Kory Jorgensen | Operations Specialist

The specific licenses and credentials of the team members are described in the personnel and/or resume section of this document.



To some, climbing to the top of a water

tower would be a harrowing experience. But

for Jana Nyhagen, it's all (a thrilling) part of

the job.

## PROJECT SUPPORT TEAM



MILES JENSEN PE Project Principal/Client Service Manager

As Principal and Client Service Manager, Miles will ensure the tank reconditioning projects are properly staffed and provided the appropriate resources. With a history of successful collaboration with SPRWS, he will ensure our process aligns with your preferences and long-term objectives.



JANA NYHAGEN PE, NACE Project Engineer

As Project Engineer, Jana's responsibilities include specification and plan preparation, feasibility reports, project design and construction administration. Jana brings 19 years experience in water tank design and rehabilitation and currently servces as Operations Manager for SEH Design|Build's Water Tank Maintenace Services program.



**JOE CESAREK** NACE Coating Specialist

Joe will complete the coatings specifications and inspection services. His knowledge from serving 25 years as a Senior Global Coatings Specification Specialist for Sherwin-Williams will provide unique expertise to SPRWS.



JEFF JOSEPH NACE NACE AWS/CWI and NACE CIP Level II Inspector

A certified NACE inspector, Jeff will support welding and coatings inspections. His experience includes a variety of inspections on welds, coatings, hold points, transmission pipelines and hydro tests while adhering to safety guidelines.



CORY BEDNAR NACE NACE Inspector/NACE CIP Level I Inspector

Cory brings on-site construction and coating application experience to SPRWS. With a general construction, industrial coatings and inspection background, he specializes in comprehensive water tower rehabilitation including telecomm installation.



**KYLE LINSCOTT**Technician/Telecomm Inspector

Kyle will support the tower inspection with insight into telecomm impacts. His experience in the wireless telecomm industry includes the installation of tower footings, tower erection and system maintenance/troubleshooting.



MIKE HEMSTAD PE, SE Structural Engineer

Mike will lead structural evaluation and design, drawing from 37 years of structural experience with an emphasis in water and wastewater system infrastructure.



**KORY JORGENSEN**Operations Specialist

Kory will provide water system operations guidance for practical design and ease of maintenance. With 35 years working for local municipal utilities, Kory recently transitioned from serving as Utilities Supervisor for the City of Coon Rapids. Prior to that, he was the Water Dept. Supervisor for the City of Fridley.

# **ESTIMATE OF HOURS**

	Staff Category Hours								
Ferndale Water Tower - 2022	Project Manager Patrick Skodje	Process Engineer Jana Nyhagen	NACE Inspector Jeff Joseph	NACE Inspector Cory Bednar	General Clerical Donna Koontz	Accounting Justin Oschlagher	CAD Tech Dylan Danielson	Structural Mike Hemstad	Total (Hours)
TASK I. PRE DESIGN - FERNDALE									
Meeting to confirm SPRWS's intent to follow/alter the recommendations prescribed.	3								3
Conduct full inspection and evaluation of the Ferndale Tank	3		6	6	2	2			19
Establish overall project requirements and objectives related to contractor procurement and schedule.	6								6
Provide engineers estimate that will be used for bidding.	1				1				2
Task Totals	13	0	6	6	3	2	0	0	30
TASK II. SPECIFICATIONS AND CONTRACT DOCUMENTS - F	ERNDAL	E							
Prepare drawings and specifications	8	2			1	1	6	2	20
Meet with SPRWS staff to review plans and specifications prior to final completion - Maximum of 2 iterations	6	2			1				9
Submit final contract documents to SPRWS for review and approval (Maximum 3 copies)	2	2			2	1	3	1	11
Complete and submit permit application and specification to the Minnesota Department of Health	1	1			1				3
Revised Engineers Estimate	1				1				2
Task Totals	18	7	0	0	6	2	9	3	45
FASK III. BIDDING ADMINISTRATION - FERNDALE									
Assist in preparing unit price bid form in Microsoft Excel format	1				1				2
Attend and facilitate a Pre-Bid Meeting, provide responses to bidder questions and issue Addenda	4		2		1	1			8
Review bids and prepare letter of award recommendation to Saint Paul Regional Water Services	2				1	1			4
Task Totals	7	0	2	0	3	2	0	0	14
TASK IV. FERNDALE CONSTRUCTION ADMINISTRATION 202	2								
Review submittals and other pertinent documentation associated with the plans/specifications	6	2			1			2	11
Respond to contractor inquiries	2								2
Coordinate/facilitate 1 preconstruction meeting	2				1	1			4
Review and comment on change orders	4				1				5
Review monthly pay requests	5				3	3			11
Coordinate and facilitate weekly on-site progress meetings and prepare meeting minutes	10		20		10				40
Provide bi-weekly status reports (summary) including applicable updating progress for public notification(s)	10		10		10	3			33
Prepare punch list at substantial completion	2		3		3				8
Prepare letter of final review and acceptance in coordination with the on-site inspector	2		3		1				6
Complete/facilitate project closeout documentation	4		3		3	3			13

	Staff Category Hours								
Ferndale Water Tower - 2022	Project Manager Patrick Skodje	Process Engineer Jana Nyhagen	NACE Inspector Jeff Joseph	NACE Inspector Cory Bednar	General Clerical Donna Koontz	Accounting Justin Oschlagher	CAD Tech Dylan Danielson	Structural Mike Hemstad	Total (Hours)
TASK V. FERNDALE CONSTRUCTION OBSERVATION 2022									
AWS Certified Weld Inspection and record keeping of structural repairs and modifications			10					1	11
Full time NACE Certified Coating Inspection and record keeping based on an average 30 hour work week for 14 weeks	14			420	7	4			445
Resident and property owner interaction			14		3				17
Assist SPRWS with coordination of facility disinfection (contractor initiated)	2		4						6
Task Totals	16	0	28	420	10	4	0	1	479
TASK VI. FERNDALE WARRANTY INSPECTION 2024									
ROV Tank Inspection	1		4	4	1				10
Prepare Report	2				1	1			4
Inspect warranty repairs and certify completion of the project			8		1	1			10
Task Totals	3	0	12	4	3	2	0	0	24
TOTALS	104	9	87	430	58	22	9	6	725

				Staff	Categor	y Hours			
Highland #3 Water Tower – 2023	Project Manager Patrick Skodje	Process Engineer Jana Nyhagen	NACE Inspector Jeff Joseph	NACE Inspector Cory Bednar	General Clerical Donna Koontz	Accounting Justin Oschlagher	CAD Tech Dylan Danielson	Structural Mike Hemstad	Total (Hours)
TASK I. PRE DESIGN - HIGHLAND PARK #3									
Meeting to confirm SPRWS's intent to follow/alter the recommendations prescribed.	3								3
Conduct full inspection and evaluation of the tank	3		6	6	2	2			19
Establish overall project requirements and objectives related to contractor procurement and schedule.	6								6
Provide engineers estimate that will be used for bidding.	1				1				2
Task Totals	13	0	6	6	3	2	0	0	30
TASK II. SPECIFICATIONS AND CONTRACT DOCUMENTS - H	IIGHLAN	D PARK #	<b>#</b> 3						
Prepare drawings and specifications	6	2			1	1	4	2	16
Meet with SPRWS staff to review plans and specifications prior to final completion - Maximum of 2 iterations	6	2			1				9
Submit final contract documents to SPRWS for review and approval (Maximum 3 copies)	2	2			2	1	3	1	11
Complete and submit permit application and specification to the Minnesota Department of Health	1	1			1				3
Revised Engineers Estimate	1				1				2
Task Totals	16	7	0	0	6	2	7	3	41
TASK III. BIDDING ADMINISTRATION - HIGHLAND PARK #3									
Assist in preparing unit price bid form in Microsoft Excel format	1				1				2
Attend and facilitate a Pre-Bid Meeting, provide responses to bidder questions and issue Addenda	4		2		1	1			8
Review bids and prepare letter of award recommendation to Saint Paul Regional Water Services	2				1	1			4
Task Totals	7	0	2	0	3	2	0	0	14
TASK IV. HIGHLAND #3 CONSTRUCTION ADMINISTRATION	2023								
Review submittals and other pertinent documentation associated with the plans/specifications	6	2			1			2	11
Respond to contractor inquiries	2								2
Coordinate/facilitate 1 preconstruction meeting	2				1	1			4
Review and comment on change orders	4				1				5
Review monthly pay requests	5				3	3			11
									40
Coordinate and facilitate weekly on-site progress meetings and prepare meeting minutes	10		20		10				40
	10		20		10	3			33
and prepare meeting minutes  Provide bi-weekly status reports (summary) including						3			
and prepare meeting minutes  Provide bi-weekly status reports (summary) including applicable updating progress for public notification(s)	10		10		10	3			33
and prepare meeting minutes  Provide bi-weekly status reports (summary) including applicable updating progress for public notification(s)  Prepare punch list at substantial completion  Prepare letter of final review and acceptance in coordination	10 2		10		10	3			33

	Staff Category Hours								
Highland #3 Water Tower – 2023	Project Manager Patrick Skodje	Process Engineer Jana Nyhagen	NACE Inspector Jeff Joseph	NACE Inspector Cory Bednar	General Clerical Donna Koontz	Accounting Justin Oschlagher	CAD Tech Dylan Danielson	Structural Mike Hemstad	Total (Hours)
TASK V. HIGHLAND #3 CONSTRUCTION OBSERVATION 2023	3								
AWS Certified Weld Inspection and record keeping of structural repairs and modifications			10					1	11
Full time NACE Certified Coating Inspection and record keeping based on a 30 hour work week for 10 weeks	10			300	6	3			319
Resident and property owner interaction			10		2				12
Assist SPRWS with coordination of facility disinfection (contractor initiated)	2		4						6
Task Totals	12	0	24	300	8	3	0	1	348
TASK VI. HIGHLAND #3 WARRANTY INSPECTION 2025									
ROV Tank Inspection	1		4	4	1				10
Prepare Report	2				1	1			4
Inspect warranty repairs and certify completion of the project			8		1	1			10
Task Totals	3	0	12	4	3	2	0	0	24
TOTALS	98	9	83	310	56	21	7	6	590

				Staff	Categor	y Hours			
Highland #2 Water Tower – 2025	Project Manager Patrick Skodje	Process Engineer Jana Nyhagen	NACE Inspector Jeff Joseph	NACE Inspector Cory Bednar	General Clerical Donna Koontz	Accounting Justin Oschlagher	CAD Tech Dylan Danielson	Structural Mike Hemstad	Total (Hours)
TASK I. PRE DESIGN - HIGHLAND PARK #2									
Meeting to confirm SPRWS's intent to follow/alter the recommendations prescribed.	3								3
Conduct full inspection and evaluation of the tank	3		6	6	2	2			19
Establish overall project requirements and objectives related to contractor procurement and schedule.	6								6
Provide engineers estimate that will be used for bidding.	1				1				2
Task Totals	13	0	6	6	3	2	0	0	30
TASK II. SPECIFICATIONS AND CONTRACT DOCUMENTS - H	IIGHLAN	D PARK #	<b>#2</b>						
Prepare drawings and specifications	6	2			1	1	4	2	16
Meet with SPRWS staff to review plans and specifications prior to final completion - Maximum of 2 iterations	6	2			1				9
Submit final contract documents to SPRWS for review and approval (Maximum 3 copies)	2	2			2	1	3	1	11
Complete and submit permit application and specification to the Minnesota Department of Health	1	1			1				3
Revised Engineers Estimate	1				1				2
Task Totals	16	7	0	0	6	2	7	3	41
TASK III. BIDDING ADMINISTRATION - FERNDALE, HIGHLAN	D PARK	#2 & HIG	HLAND	PARK #3	3				
Assist in preparing unit price bid form in Microsoft Excel format	1				1				2
Attend and facilitate a Pre-Bid Meeting, provide responses to bidder questions and issue Addenda	4		2		1	1			8
Review bids and prepare letter of award recommendation to Saint Paul Regional Water Services	2				1	1			4
Task Totals	7	0	2	0	3	2	0	0	14
TASK IV. HIGHLAND #2 CONSTRUCTION ADMINISTRATION	2025								
Review submittals and other pertinent documentation associated with the plans/specifications	6	2			1			2	11
Respond to contractor inquiries	2								2
Coordinate/facilitate 1 preconstruction meeting	2				1	1			4
Review and comment on change orders	4				1				5
Review monthly pay requests	5				3	3			11
Coordinate and facilitate weekly on-site progress meetings and prepare meeting minutes	10		20		10				40
Provide bi-weekly status reports (summary) including applicable updating progress for public notification(s)	10		10		10	3			33
Prepare punch list at substantial completion	2		3		3				8
Prepare letter of final review and acceptance in coordination with the on-site inspector	2		3		1				6
Complete/facilitate project closeout documentation	4		3		3	3			13
Task Totals	47	2	39	0	33	10	0	2	133

	Staff Category Hours								
Highland #2 Water Tower – 2025	Project Manager Patrick Skodje	Process Engineer Jana Nyhagen	NACE Inspector Jeff Joseph	NACE Inspector Cory Bednar	General Clerical Donna Koontz	Accounting Justin Oschlagher	CAD Tech Dylan Danielson	Structural Mike Hemstad	Total (Hours)
TASK V. HIGHLAND #2 CONSTRUCTION OBSERVATION 202	5								
AWS Certified Weld Inspection and record keeping of structural repairs and modifications			10					1	11
Full time NACE Certified Coating Inspection and record keeping based on a 30 hour work week for 14 weeks	14			420	7	4			445
Resident and property owner interaction			14		3				17
Assist SPRWS with coordination of facility disinfection (contractor initiated)	2		4						6
Task Totals	16	0	28	420	10	4	0	1	479
TASK VI. HIGHLAND #2 WARRANTY INSPECTION 2027			•			•			
ROV Tank Inspection	1		4	4	1				10
Prepare Report	2				1	1			4
Inspect warranty repairs and certify completion of the project			8		1	1			10
Task Totals	3	0	12	4	3	2	0	0	24
TOTALS	102	9	87	430	58	22	7	6	721

				Staff	Category	y Hours			
Highland #2 & #3 Water Tower – 2023	Project Manager Patrick Skodje	Process Engineer Jana Nyhagen	NACE Inspector Jeff Joseph	NACE Inspector Cory Bednar	General Clerical Donna Koontz	Accounting Justin Oschlagher	CAD Tech Dylan Danielson	Structural Mike Hemstad	Total (Hours)
TASK I. PRE DESIGN - HIGHLAND PARK #2 & HIGHLAND PA	RK #3 C	OMBINE							
Meeting to confirm SPRWS's intent to follow/alter the recommendations prescribed.	3								3
Conduct full inspection and evaluation of the 2 tanks	6		12	2	2	2			24
Establish overall project requirements and objectives related to contractor procurement and schedule.	8								8
Provide engineers estimate that will be used for bidding.	2				1				3
Task Totals	19	0	12	2	3	2	0	0	38
TASK II. SPECIFICATIONS AND CONTRACT DOCUMENTS - H			#2 & HIG	HLAND					
Prepare drawings and specifications	12	3			1	1	9	2	28
Meet with SPRWS staff to review plans and specifications prior to final completion - Maximum of 2 iterations	6	2			1				9
Submit final contract documents to SPRWS for review and approval (Maximum 3 copies)	2	2			2	1	3	1	11
Complete and submit permit application and specification to the Minnesota Department of Health	1	1			1				3
Revised Engineers Estimate	1				1				2
Task Totals	41	8	0	0	6	2	12	3	53
TASK III. BIDDING ADMINISTRATION - HIGHLAND PARK #2	& HIGHL	AND PAF	RK #3 C0	DMBINE	D				
Assist in preparing unit price bid form in Microsoft Excel format	1				1				2
Attend and facilitate a Pre-Bid Meeting, provide responses to bidder questions and issue Addenda	4		2		1	1			8
Review bids and prepare letter of award recommendation to Saint Paul Regional Water Services	4				1	1			6
Task Totals	9	0	2	0	3	2	0	0	16
TASK IV. HIGHLAND #3 CONSTRUCTION ADMINISTRATION	2023								
Review submittals and other pertinent documentation associated with the plans/specifications	6	2			1			2	11
Respond to contractor inquiries	2								2
Coordinate/facilitate 1 preconstruction meeting	2				1	1			4
Review and comment on change orders	4				1				5
Review monthly pay requests	5				3	3			11
Coordinate and facilitate weekly on-site progress meetings and prepare meeting minutes	10		20		10				40
Provide bi-weekly status reports (summary) including applicable updating progress for public notification(s)	10		10		10	3			33
Prepare punch list at substantial completion	2		3		3				8
Prepare letter of final review and acceptance in coordination with the on-site inspector	2		3		1				6
Complete/facilitate project closeout documentation	4		3		3	3			13
Task Totals	47		39		0	0			10

				Staff	Category	/ Hours			
Highland #2 & #3 Water	Project Manager Patrick Skodje	Process Engineer Jana Nyhagen	NACE Inspector Jeff Joseph	NACE Inspector Cory Bednar	General Clerical Donna Koontz	Accounting Justin Oschlagher	CAD Tech Dylan Danielson	Structural Mike Hemstad	Total
Tower - 2023		Pro Jan	NA Jef	Co	Ger	Ac	S P P	Str	(Hours)
TASK V. HIGHLAND #3 CONSTRUCTION OBSERVATION 2023	3								
AWS Certified Weld Inspection and record keeping of structural repairs and modifications			10					1	11
Full time NACE Certified Coating Inspection and record keeping based on a 30 hour work week for 10 weeks	10			300	6	3			319
Resident and property owner interaction			10		2				12
Assist SPRWS with coordination of facility disinfection (contractor initiated)	2		4						6
Task Totals	12	0	24	300	8	3	0	1	348
TASK VI. HIGHLAND #3 WARRANTY INSPECTION 2025									
ROV Tank Inspection	1		4	4	1				10
Prepare Report	2				1	1			4
Inspect warranty repairs and certify completion of the project			8		1	1			10
Task Totals	3	0	12	4	3	2	0	0	24
TASK VII. HIGHLAND #2 CONSTRUCTION ADMINISTRATION	2025								
Review submittals and other pertinent documentation associated with the plans/specifications	6	2			1			2	11
Respond to contractor inquiries	2								2
Coordinate/facilitate 1 preconstruction meeting	2				1	1			4
Review and comment on change orders	4				1				5
Review monthly pay requests	5				3	3			11
Coordinate and facilitate weekly on-site progress meetings and prepare meeting minutes	10		20		10				40
Provide bi-weekly status reports (summary) including applicable updating progress for public notification(s)	10		10		10	3			33
Prepare punch list at substantial completion	2		3		3				8
Prepare letter of final review and acceptance in coordination with the on-site inspector	2		3		1				6
Complete/facilitate project closeout documentation	4		3		3	3			13
Task Totals	47	2	39	0	33	10	0	2	133
TASK VIII. HIGHLAND #2 CONSTRUCTION OBSERVATION 20	25								
AWS Certified Weld Inspection and record keeping of structural repairs and modifications			10					1	11
Full time NACE Certified Coating Inspection and record keeping based on a 30 hour work week for 14 weeks	14			420	7	4			445
Resident and property owner interaction			14		3				17
Assist SPRWS with coordination of facility disinfection (contractor initiated)	2		4						6
Task Totals	16	0	28	420	10	4	0	1	479

				Staff	Categor	y Hours			
Highland #2 & #3 Water Tower – 2023 TASK IX. HIGHLAND #2 WARRANTY INSPECTION 2027	Project Manager Patrick Skodje	Process Engineer Jana Nyhagen	NACE Inspector Jeff Joseph	NACE Inspector Cory Bednar	General Clerical Donna Koontz	Accounting Justin Oschlagher	CAD Tech Dylan Danielson	Structural Mike Hemstad	Total (Hours)
ROV Tank Inspection	1		4	4	1				10
Prepare Report	2				1	1			4
Inspect warranty repairs and certify completion of the project			8		1	1			10
Task Totals	3	0	12	4	3	2	0	0	24
TOTALS	197	12	168	730	102	37	12	9	1,248

# PROPOSED SCHEDULE

EVENT	DATE
Consultant Selection	Early December 2021
Ferndale – Initial recommendation and review with SPRWS	Week of January 10, 2022
Ferndale – Conduct full Inspection and evaluation of the Ferndale tank	Week of January 17, 2022
Ferndale – Follow-up meeting with SPRWS to discuss construction recommendations, draft plans and specifications	Week of February 14, 2022
Ferndale – Bid Opening	Week of April 4, 2022
Ferndale – Construction Contract Award	Week of May 2, 2022
Ferndale – Preconstruction Meeting	Week of May 16, 2022
Ferndale – Construction Start	Week of June 6, 2022
Ferndale –Construction Substantial Completion	Week of September 12, 2022
Highland #3 – Furnish bid ready specification and plan documents to SPRWS and the MDH	September 2022
Highland #3 – Bid Opening	November 2022
Highland #3 – Construction Start	Week of May 15, 2023
Highland #3 – Construction Substantial Completion	Week of July 31, 2023
Highland #2 – Furnish bid ready specification and plan documents to SPRWS and the MDH	September 2024
Highland #2 – Bid Opening	November 2024
Highland #2 – Construction Start	Week of May 19, 2025
Highland #2 – Construction Substantial Completion	Week of August 25, 2025

## **DELIVERABLES**

- Bid ready construction documents including technical specifications relating to facility surface preparation and coating application and structural modifications in accordance with AWWA, OSHA and MDH regulations
- o Engineers Estimates
- o Unit price bid form in Microsoft Excel format
- o Minnesota Department of Health permit application
- Written response to bidder questions
- Letter of award recommendation

- Construction progress and activity reports
- Monthly pay application recommendations
- o Substantial Completion punch list
- Letter of final review and acceptance
- o All project close-out documentation
- o Warranty notification letter to the contractor
- Warranty inspection results letter

# CITY RESPONSIBILITIES

SPRWS will assist SEH in the following manner:

- Provide timely direction and policy decisions as required to complete the work
- Coordinate communications with other integral City Departments or Divisions
- Provide access to each tank
- Have the tanks filled as close to overflow as possible for the entire length of the ROV inspection
- Provide onsite staff, as may be required, to operate the facility during the evaluation
- Provide background information on each tank; including maintenance (painting/reconditioning) records and previous inspection reports, as may be applicable
- Provide timely review of the prepared documents prior to distribution



SEH knows tanks. The examples in this section are a snapshot of our team's recent successes relevant to the Highland and Ferndale tanks – including award-winning projects in the Twin Cities Metro.

# CENTERVILLE TOWER REHABILITATION

WHITE BEAR LAKE, MN

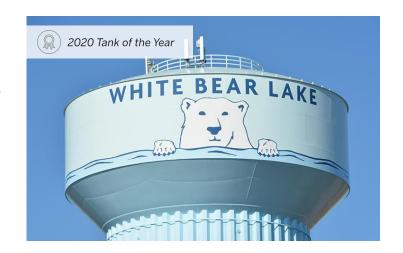
The City of White Bear Lake turned to SEH to perform the needed reconditioning work for its 1.0 million gal. water tower. This included scheduling the draining of the water tank; surface preparation and coatings specifications, administration and inspection both inside and outside; and coordination of structural appurtenances, telecommunications and containment.

This project was coordinated with SEH Telecom to relocate all antennas to temporary pole adjacent to the tower. Work was completed on a small site resting between an occupied assisted living facility, a parking lot and a retail center.

The water tower on Centerville Road is one of three water reservoirs in White Bear Lake, a city with a population of 25,000+ situated on the northeastern outskirts of the Minneapolis-St. Paul metropolitan area. Located in a highly developed area near Hwy. 96 and I-35E, the water tower provides these important functions:

- Storing and pressurizing drinking water for delivery to community taps
- o Providing a high perch for telecommunication utilities
- Showing civic identity and pride in a most eyecatching way
- The water tower was due for a regularly scheduled reconditioning to extend the life of this crucial infrastructure

SHORT ELLIOTT HENDRICKSON INC.





#### **CLIENT**

City of White Bear Lake Paul Kauppi, PE, Public Works Director/ City Engineer 651.429.8531



#### COST

\$897,420



#### YEAR COMPLETED

2020

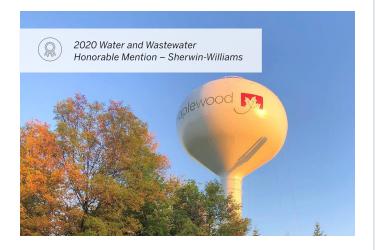


#### KEY PERSONNEL

Pat Skodje Jeff Joseph Kyle Linscott Mike Hemstad

## STERLING AND ST. ANTHONY TOWER

ST. PAUL, MN



SEH provided design, bidding and inspection services for interior and exterior restoration of a 500,000 gal. water tower for St. Paul Regional Water Services. SEH also provided construction administration and warranty inspection services under separate contract. Inside the tower, a zinc/epoxy/epoxy lining system was installed that recently secured industry approval for potable water storage, making this the first tower to feature this interior lining. The project received the Sherwin-Williams Impact Award, which recognizes application contractors, specifiers and owners for excellence on North American water and wastewater projects that have a compelling effect on the industry regarding public safety, asset protection and infrastructure life cycle improvement.

# WISCONSIN STREET TANK REHABILITATION

HUDSON, WI



SEH provided rehabilitation of a 300,000 gal. elevated legged style water tower in the City of Hudson, including the complete removal and replacement of the exterior coating system implementing a full-containment system, complete removal and replacement of the interior immersion (wet) coating system, as well as structural modifications inclusive of the roof top platform and handrail replacement and access ladder modifications to meet current standards.



#### **CLIENT**

Saint Paul Regional Water Services Issac Y. Afwerk, Project Engineer 651.266.6267



#### COST

\$836,300



#### YEAR COMPLETED

2019



#### **KEY PERSONNEL**

Pat Skodje Jana Nyhagen Jeff Joseph Cory Bednar Kyle Linscott



#### **CLIENT**

City of Hudson Kip Peters, Utility Director 715.386.4760



#### COST

\$328,228



#### YEAR COMPLETED

2020



#### **KEY PERSONNEL**

Pat Skodje Jana Nyhagen Jeff Joseph Cory Bednar Kyle Linscott

# WOODLAND HILLS WATER TOWER REHABILITATION

#### MINNETONKA, MN

SEH provided full-service design, inspection and contract administration services for the reconditioning of the City of Minnetonka's Woodland Hills water tower. Design services included specifications and contract documents for exterior/interior repairs and modifications as well as coating rehabilitation to extend the tower's useful life cycle. The coating rehabilitation involved removal and replacement of the tank exterior coating system, involving application of a three-coat zinc/epoxy/urethane system. Interior immersion (wet) rehabilitation included abrasive cleaning followed by another three-coat application of a zinc/epoxy-polyamide system meeting ANSI/NSF Standard 61.

During construction, SEH oversaw inspection and record keeping for surface preparation with in-house NACE Certified Coatings Inspectors. Following construction, SEH provided final inspection and warranty inspection to the City.





#### **CLIENT**

City of Minnetonka Mike Kuno, PE, Utility Operations Engineer 952.988.8410



#### COST

\$696,080



#### YEAR COMPLETED

2021



#### **KEY PERSONNEL**

Pat Skodje Jana Nyhagen Jeff Joseph Cory Bednar Kyle Linscott

#### WATER TANK MAINTENANCE SERVICES PROJECTS

SEH holds contracts with several of our water tank clients to provide scheduled maintenance as well as on-call services as needed. Some of our recent clients include:

- o Brighton, CO
- o Barnum, MN
- o Biwabik, MN (2 tanks)
- o Brainerd, MN (2 tanks)
- o Cottage Grove, MN (2 tanks)
- Eagle River, WI
- o Hammond, WI
- Hopkins, MN (2 tanks)
- o Little Canada, MN
- Madrid, IA
- Melrose, MN

- o Montello, WI
- Mora, MN
- o Oconomowoc, WI (4 tanks)
- Orono, MN
- o Roseville, MN
- o Rush City, MN (2 tanks)
- o Virginia, MN (2 tanks)
- o Waite Park, MN (2 tanks)
- West Allis, WI (2 tanks)
- Woodbury, MN



# TAB 4 — Organizational Qualifications

The personnel described in this section each fulfill a critical role for SPRWS. For the Ferndale and Highland Tanks, we have enlisted individuals with strong backgrounds working within the SPRWS distribution system. Their local knowledge (and proximity to the project sites) ensures efficient start-up and rapid availabilty. Their technical expertise and certifications, gained through hundreds of water tank projects nationwide, will enhance your staff with industry leading professionals.

Our comprehensive knowledge will result in a project with seamless execution, and very few surprises for SPRWS. Beginning with the inspection, our National Association of Corrosion Engineers (NACE) certified inspectors will review the existing conditions and determine the required project scope. Our Protective Coatings team is up to date on the latest regulations for materials that can be used in drinking water applications, and will provide the City with optional coatings systems, budgetary costs, and advantages and disadvantages of each coating system.

SEH's water system operational experts can assist with planning for temporary operations while the water tower is offline. Our professional engineer and project manager will bring it all together in a bidding document and project management services that often result in a smooth process and a finished product that SPRWS will be proud of.

While not included with this contract, our telecom professionals are available to provide insights to our team regarding project impacts. If desired in a later contract, they will have the institutional project knowledge to begin immediately reviewing tank conditions to maximize the lease potential of the structure while protecting the valuable resource stored inside, with minimal interruption to SPRWS staff and operations.



ON A NATIONWIDE SCALE, THIS INCESSANT CORROSION IS A BIG PROBLEM. THE PRICE TAG TO PREVENT AND REMEDY DAMAGE TO CONCRETE, METALS AND OTHER MATERIALS IS ESTIMATED AT TENS OF BILLIONS OF DOLLARS A YEAR.

PATRICK SKODJE | PROJECT MANAGER

# PAT SKODJE NACE PROJECT MANAGER

Patrick is a Protective Coatings Manager with extensive experience helping communities throughout the Midwest ensure long-term asset protection of facilities, water storage tanks and equipment. Patrick coordinates coating related evaluations, design services, construction administration and NACE inspections. Patrick holds several certifications including NACE Level III Coatings Inspector and Society for Protective Coatings (SSPC) Quality Control Supervisor. A former Chair of the SSPC-North Central Region Chapter and President of the North Dakota Construction Council, Patrick is actively involved in the industry and is knowledgeable of evolving technologies and trends.

#### **EXPERIENCE**

- o Water Tank Assessments St. Paul Regional Water
- o Gary Street Water Tower Rehabilitation City of Elk River, MN
- West Water Tower Rehabilitation City of Little Falls, MN
- Alice Court Water Tower Rehabilitation City of South Saint Paul, MN
- o Marie Avenue Water Tower St. Paul Regional Water Services
- o Water Tank Assessments St. Paul Regional Water Services
- o Commerce Tank Reconditioning City of Vadnais Heights, MN
- o Tank Inspections City of Eau Claire, WI
- 75,000 Gallon South Zone Water Tower City of Hamburg, MN



27 YEARS OF EXPERIENCE



#### **EDUCATION**

FMI Construction Executive Institute FMI Leadership Institute



#### **REGISTRATIONS/CERTIFICATIONS**

NACE Certified Coating Inspector -Level 3, NACE International

Remote Pilot, Federal Aviation Administration

Ground Instructor, Federal Aviation Administration

Private Pilot, Federal Aviation Administration



Miles will provide overall quality control for the project. He brings more than 35 years of engineering experience specializing in the design and construction of water treatment plants; specifically advanced water treatment facility process design, construction management and plant start-up. His experience with nearly 70 water treatment design and construction projects, including the award-winning plant in Marshfield, Wisconsin, and the nationally recognized North Station facility in South Bend, Indiana make him a valuable resource for this project team. Miles' experience with and enthusiasm for water treatment is unparalleled in our industry. Miles has previous experience with Robbinsdale's water system with the 2008 Water Facilities Needs Study. Miles will lead the QA/QC effort for this project.

#### **EXPERIENCE**

- o Dale Street Reservoir (Saint Paul Regional Water Services) St. Paul, MN
- Stillwater Road Water Storage Tank Rehabilitation (Saint Paul Regional Water Services) – St. Paul, MN
- Water Tower Reconditioning City of New Ulm, MN
- Water Treatment Plant, Elevated Storage Tank Rehabilitation and New Well 4 – City of Plummer, MN



37
YEARS OF EXPERIENCE



#### **EDUCATION**

Bachelor of Science Civil Engineering University of Minnesota-Minneapolis



#### **REGISTRATIONS/CERTIFICATIONS**

Professional Engineer in MN, AZ, CO, IA, IL, ND, IN, MD, MI, NE, NM, OH, SD, VA and WI

### JANA NYHAGEN PE, NACE

#### PROJECT ENGINEER

Jana is a project manager/engineer with extensive water tower related experience with SEH, including project management for water tower construction, evaluation, inspection, and reconditioning projects. Examples of her responsibilities include performing inspections for determining the scope of repairs and reconditioning, annual, 5-year and 10-year Wisconsin Department of Natural Resources (DNR) inspections, bidding documents, agency submittals and owner/engineer/inspector/contractor communications. Jana is also the Operations Manager for the Water Tank Maintenance Services program, overseeing the reconditioning, annual inspection and maintenance of over 30 municipal water storage tanks. Her hands-on role with tank inspection contributes to a thorough understanding of field conditions for determination of project scope to meet DNR, OSHA and American Water Works Association (AWWA) standards.

#### **EXPERIENCE**

- o Wisconsin Street Tank Rehabilitation City of Hudson, WI
- o Woodland Hills Water Tower Rehabilitation Minnetonka, MN
- o Damon Street Reservoir City of Eau Claire, W
- o Oakwood Tank Rehabilitation City of Eau Claire, WI
- Sycamore Water Tower Rehabilitation (River Falls Municipal Utilities) River Falls, WI



YEARS OF EXPERIENCE



#### **EDUCATION**

Bachelor of Science Environmental Engineering University of Wisconsin-Platteville



#### **REGISTRATIONS/CERTIFICATIONS**

Professional Engineer in MN, IA, IN, ND, SD and WI

NACE Coating Inspector Level 1 - Certified –NACE International



Joe is a coating specialist with extensive paint, coatings and linings experience. He retired after 38 years with Sherwin-Williams Protective and Marine Division, spending the last 25 years as their Senior Global Coatings Specification Specialist. Joe's main focus was aiding engineering firms with coatings and linings specifications. This position also had responsibilities for internal advance training of protective coatings representatives, site facility surveys, feasibility assessment and chemical resistance and technical assistance to all fields.

#### **EXPERIENCE**

- o Oakwood Tank Rehabilitation City of Eau Claire, WI
- Water Treatment Plant and Tower Rehabilitation City of Waldorf, MN
- Noerenberg Water Tower Rehabilitation (Three Rivers Park District) Orono, MN
- o Water Tower Interior Rehabilitation City of Chamberlain, SD
- o Jones Park Reservoir Rehabilitation City of Fort Atkinson, WI
- o Golfview Tank Rehabilitation (River Falls Municipal Utilities) River Falls, WI



YEARS OF EXPERIENCE



#### REGISTRATIONS/CERTIFICATIONS

NACE Coating Inspector Level 3 - Certified – NACE International

SSPC1 – Society of Protective Coatings

## **JEFF JOSEPH NACE**

#### NACE INSPECTOR

Jeff is a field technician experienced in performing a variety of inspections on welds, coatings, hold points, transmission pipelines and hydro tests while adhering to safety guidelines. He has also documented the inspections and testing progress.

12
YEARS OF EXPERIENCE



#### **EDUCATION**

Bachelor of Science Business Administration Northestern University - St. Paul, MN



#### **REGISTRATIONS/CERTIFICATIONS**

NACE Coating Inspector Level 2 – NACE International

Welding Inspector – American Welding Society

#### **EXPERIENCE**

- Centerville Tower Rehabilitation City of White Bear Lake, MN
- Wisconsin Street Tank Rehabilitation City of Hudson, WI
- Marie Avenue Water Tower Reconditioning (Saint Paul Regional Water Services) – St. Paul, MN
- Sterling and St. Anthony Water Tower (Saint Paul Regional Water Services) St. Paul, MN
- Commerce Court Water Tower Reconditioning City of Vadnais Heights, MN
- Centerville Tower Rehabilitation City of White Bear Lake, MN

# CORY BEDNAR NACE

**NACE INSPECTOR** 

Cory is a technician and resident project representative with extensive experience in civil and transportation engineering projects. His role includes construction engineer and inspector responsible for construction staking and paving, storm sewer and pipe inspections, materials testing, field surveys, design and quantity estimations and environmental remediation. Over the last few years, Cory has expanded his construction background to include coating related inspections of water tank rehabilitation, and has received additional training through National Association of Corrosion Engineers (NACE) International, where he has achieved NACE certification status. Cory uses his general construction background, industrial coatings experience and inspection experience to provide comprehensive services for water tower rehabilitation including telecommunication equipment installation.

#### ·

**EXPERIENCE** 

- Woodland Hills Water Tower Rehabilitation Minnetonka, MN
- Wisconsin Street Tank Rehabilitation City of Hudson, WI
- o Oakwood Tank Rehabilitation City of Eau Claire, WI
- Water Tower Interior Rehabilitation City of Chamberlain, SD
- 250,000 Gallon Water Tank Rehabilitation (Black River Falls Municipal Utilities) – Black River Falls, WI



29
YEARS OF EXPERIENCE



#### **REGISTRATIONS/CERTIFICATIONS**

NACE Coating Inspector Level 1 - Certified – NACE International

#### KYLE LINSCOTT PE

#### NACE/TELECOM INSPECTOR

Kyle is a technician with extensive experience in the wireless telecommunications industry. His experience includes the installation of tower footings, tower erection, project scheduling, antenna installations, trouble shooting, and maintaining systems in the Midwest region. He routinely works with CDMA, PCS, UMTS, GSM, LTE, AWS, Microwave and Network Vision. Kyle is certified in Tower Rescue, Passive Intermodulation (PIM) testing, Anritsu sweep testing and is a CPR First Responder. He also has extensive electrical experience related to FAA tower lighting systems, including the conversion of incandescent to LED or Halogen for modern updates. To add to these skill sets, Kyle will provide services in site plan review, tower mapping, site audits, overseeing installation of telecom on water storage facilities and inspection of the overall install.

#### **EXPERIENCE**

- Sterling and St. Anthony Tower St. Paul, MN
- o Woodland Hills Water Tower Rehabilitation Minnetonka, MN
- o Centerville Tower Rehabilitation City of White Bear Lake, MN
- o Wisconsin Street Tank Rehabilitation City of Hudson, WI
- Ridgedale Water Storage Tank Rehabilitation City of Minnetonka, MN



23
YEARS OF EXPERIENCE



#### **REGISTRATIONS/CERTIFICATIONS**

Certified Instructor, Basic Tower Climbing Safety and Rescue, ComTrain

Tower Rescue, ComTrain

Passive Intermodulation (PIM) Certified, Kealus

Anritsu and Forklift/Rigging, Omni

Connectors, Andrew & Eupen

#### MIKE HEMSTAD PE, SE STRUCTURAL ENGINEER

Mike has 37 years of experience in structural design and analysis on projects for water and wastewater treatment; industrial, municipal and private building design; retaining walls; bridges; and numerous other structures. He leads the St. Paul Building Structural group, which performs review of telecom installations on tanks belonging to SEH's municipal clients.

#### **EXPERIENCE**

- o Centerville Tower Rehabilitation City of White Bear Lake, MN
- Water Treatment Plant Water Tower Repair (Eau Claire Water Utility) –
   Eau Claire, WI
- Water Treatment Plant Rehabilitation (Eau Claire Water Utility) –
   Eau Claire, WI
- o Historic Concrete Water Tower Repair City of Brainerd, MN
- Water Tower Footing Design Review City of Lake Elmo, MN
- Water Tower Railing and Antenna Mount Repair City of Burnsville, MN
- New Ground Storage Tank and Water Treatment Plant Rehabilitation City of Jackson, MN



37
YEARS OF EXPERIENCE



#### **EDUCATION**

Master of Civil Engineering Civil Engineering University of Minnesota-Minneapolis

Bachelor of Civil Engineering Civil Engineering University of Minnesota-Minneapolis



#### **REGISTRATIONS/CERTIFICATIONS**

Professional Engineer in MN, IA, ND, SD, VA, WI, Alberta

Structural Engineer in IL

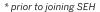
#### **KORY JORGENSEN**

#### **OPERATIONS SPECIALIST**

Kory is an operations specialist with experience overseeing daily municipal water department and plant operations. During his career as a water treatment plant operator, Kory's duties included supervising daily operations of a municipal utility system, repairing water main breaks and service leaks, and inspecting plant renovations and filter media replacements. He has also supervised and inspected the painting and refurbishing of several water towers.

#### **EXPERIENCE**

- Water Tower Rehabilitation City of Moose Lake, MN
- o Commerce Court Water Tower Reconditioning City of Vadnais Heights, MN
- o Water Treatment Plant City of Faribault, MN
- Utilities Supervisor City of Coon Rapids, MN\*
- Water Department Supervisor City of Fridley, MN\*







#### **EDUCATION**

Associate Degree Marketing/Management Anoka-Ramsey County Community College - Coon Rapids, MN

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