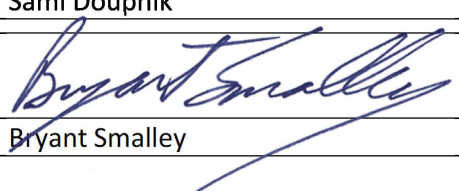


Region 6 - Enforcement & Compliance Assurance Division
INSPECTION REPORT

Inspection Date(s):	08/10/2023	
Media Program:	Water	
Regulatory Program(s)	SDWA	
Company Name:	West Helena Waterworks	
Facility Name:	West Helena Waterworks	
Facility Physical Location:	702 Cherry St.	
(city, state, zip code)	Helena, AR 72342	
Mailing address:	702 Cherry St.	
(city, state, zip code)	Helena, AR 72342	
County/Parish:	Phillips County	
Facility Phone Number	870-261-2849	
Facility Contact:	Calvin Murdock	Utility Manager
	calvin.murdock2011@gmail.com	
FRS Number:	-	
Identification/Permit Number:	PWS ID#: AR0000416	
Media Identifier Number:	-	
NAICS:	-	
SIC:	-	
Personnel participating in inspection:		
Sami Doupnik	EPA Region 6	Lead Inspector
Miguel Moreno	EPA Region 6	Technical Support
Calvin Murdock	West Helena Waterworks	Utility Manager
Randal Jones	West Helena Waterworks	Utility Consultant
EPA Lead Inspector Signature/Date	Doupnik, Samantha Digitally signed by Doupnik, Samantha Date: 2023.09.27 12:12:03 -05'00'	9/27/2023
	Sami Doupnik	Date
Supervisor Signature/Date	 Bryant Smalley	9/27/2023
		Date

Section I – INTRODUCTION

PURPOSE OF THE INSPECTION

EPA Region 6 inspector, Sami Doupnik, and technical support, Miguel Moreno, arrived at the West Helena Waterworks Municipal Building at 9:30 AM on August 10, 2023, for an announced inspection. We met with representatives Mr. Calvin Murdock (Utility Manager) and Mr. Randal Jones (Utility Consultant) of West Helena Waterworks (hereinafter, the System) at the Opening Conference. Devin Moon, a District Engineer from the Arkansas Department of Health (ADH), was also present for the Opening Conference and the first half of the inspection. I presented my credentials to Mr. Murdock and informed him that this was an EPA inspection to evaluate the System's compliance under the Safe Drinking Water Act (SDWA) Section 1433(a) and (b), which requires community water systems that serve more than 3,300 people to develop and certify completion of a Risk and Resiliency Assessment (RRA) and Emergency Response Plan (ERP). The scope of the inspection was to perform an onsite document review of the System's RRA and ERP pursuant to the requirements of the SDWA Section 1433(a) and (b).

FACILITY DESCRIPTION

West Helena Waterworks is a community water system located in West Helena, Arkansas. The System serves a total population of 5,693 people through 2,297 domestic connections, 293 commercial connections, 3 industrial connections, and 3 irrigation connections. The system consists of four groundwater wells that produce water from the Sparta Sands aquifer. Groundwater is disinfected with chlorine gas, in addition to being treated with hydrofluosilicic acid for fluoridation, zinc orthophosphate for corrosion control, and aerated. Due to naturally occurring iron and manganese in the groundwater, water passes through filters prior to entering distribution. The System operates two rapid sand filter pairs that are backwashed three times per week during normal operation. Filtered water then enters a 108,000-gallon clearwell for disinfection contact time. After contact time has been achieved in the clearwell, finished water is sent to a 1.0-million-gallon standpipe and 250,000-gallon elevated storage tank via hydraulic submersible pumps (HSP). The system maintains five HSPs and exercises them on a rotational basis. Finished water enters the distribution system via gravity from the finished water storage tanks. The System has an average daily demand of 0.94 million gallons a day (MGD) and maximum daily demand of 1.84 MGD. The System maintains emergency interconnections with neighboring systems, Helena Waterworks and Barton-Lexa Water Association.

Section II – OBSERVATIONS

Upon arrival on August 10, 2023, Mr. Murdock provided Certifications of Completion for both the RRA and ERP (Photos 4 and 5). An Emergency Response Plan was provided for the inspector to review with a most-recent revised date of February 21, 2007 (Photo 3, AOC 1). Mr. Murdock was unaware of if or when the ERP had been updated more recently under previous management. The System did not have a separate RRA document for review (AOC 2), however many RRA components required under SDWA Section 1433(a) were included in various sections of the ERP, and those observations are described below.

Note that West Helena Waterworks was placed under an EPA Administrative Order (Docket #: SDWA-06-2022-1320) on July 14, 2022, for failing to certify an RRA and ERP by the Certification Deadlines. The previous Utility Manager, Tony Scroggins, certified the System's RRA and ERP on September 7, 2022 (Photos 4 and 5). EPA closed the Order following the certification of the RRA and ERP.

The following observations pertain to the SDWA Section 1433(a), Risk and Resilience Assessment:

The Safe Drinking Water Act, Section 1433(a)(1)(A)(i), states that "Risk and resilience assessments shall include an assessment of the risk to the system from malevolent acts and natural hazards."

- The ERP described natural hazards that pose a risk to the system, including tornadoes, earthquakes, and winter weather. Mr. Murdock provided verbal information that the system has not experienced significant impact from flooding events, despite its proximity to the Mississippi River (AOC 3).
- The ERP described malevolent acts that pose a risk to the system, including terrorist attacks, intentional or accidental contamination of drinking water, and explosions as a result of any natural hazard (e.g. earthquake) or malevolent act.

The Safe Drinking Water Act, Section 1433(a)(1)(A)(ii), states that "Risk and resilience assessments shall include the resilience of the pipes and constructed conveyances, physical barriers, source water, water collection and intake, pretreatment, treatment, storage and distribution facilities, electronic, computer, or other automated systems (including the security of such systems) which are utilized by the system."

- The ERP addressed which critical assets would be most at risk from each natural hazard and malevolent act. The critical assets included the System's pipes, constructed conveyances, physical barriers, source water, water collection, pre-treatment, treatment, and storage and distribution facilities.
- The ERP did not address the risk and resilience of the System's electronic, computer, or Supervisory Control and Data Acquisition (SCADA) systems in the event of a natural hazard or malevolent act (AOC 4). However, Mr. Murdock provided verbal information related to the electronic and cybersecurity resiliency of the System.

The Safe Drinking Water Act, Section 1433(a)(1)(A)(iii), states that "Risk and resilience assessments shall include an assessment of the monitoring practices of the system."

- The ERP addressed what monitoring practices may be impacted by each natural hazard and malevolent act. Sampling plans were included by reference.

The Safe Drinking Water Act, Section 1433(a)(1)(A)(iv), states that "Risk and resilience assessments shall include an assessment of the financial infrastructure of the system."

- The ERP did not address the resilience of or impact to the System's financial infrastructure in the event of a natural hazard or malevolent act (AOC 5). However, Mr. Murdock provided verbal information related to the System's billing infrastructure and Information Technology (IT) support.

The Safe Drinking Water Act, Section 1433(a)(1)(A)(v), states that "Risk and resilience assessments shall include an assessment of the use, storage, or handling of various chemicals by the system."

- The ERP addressed the use, storage, and handling of chlorine gas. Other chemicals used to treat the System's water supply were not directly assessed in the ERP (AOC 6).

The Safe Drinking Water Act, Section 1433(a)(1)(A)(vi), states that "Risk and resilience assessments shall include an assessment of the operation and maintenance of the system."

- The ERP referenced the system's Operations and Maintenance Plan, in addition to noting how some operations may be impacted in the event of various emergencies.

The following observations pertain to the SDWA Section 1433(b), Emergency Response Plan:

The Safe Drinking Water Act, Section 1433(b)(1), states that "The emergency response plan shall include strategies and resources to improve the resilience of the system, including the physical security and cybersecurity of the system."

- The ERP did not include strategies and resources to improve the resilience of the system (AOC 7). However, Mr. Murdock provided verbal information related to the System's plans to increase resiliency, including:
 - the need for redundant power source (the System is currently in the process of purchasing and installing portable and permanent generators) (AOC 8),
 - the need to have an accurate inventory of critical components and adequate backup supplies in the event of failures, which are common with the System's aging infrastructure (the System is currently working on increasing their inventory of critical components) (AOC 9),
 - the need to evaluate capacity of the system to supply water during times of high demand (the System is working with Communities Unlimited to conduct a capacity evaluation and is looking into reconditioning wells to increase production capacity) (AOC 10),
 - the need to increase staffing and develop a more robust training and cross-training program for newer, less-experienced staff (AOC 11), and
 - the need to develop written Standard Operating Procedures (SOPs) for staff to supplement institutional knowledge (the System is in the process of developing SOPs) (AOC 11).

The Safe Drinking Water Act, Section 1433(b)(2), states that "The emergency response plan shall include plans and procedures that can be implemented, and identification of equipment that can be utilized, in the event of a malevolent act or natural hazard that threatens the ability of the community water system to deliver safe drinking water."

- The ERP included detailed plans and procedures to be implemented in response to various emergencies that threaten the System's ability to provide safe and reliable drinking water.

The Safe Drinking Water Act, Section 1433(b)(3), states that "The emergency response plan shall include actions, procedures, and equipment which can obviate or significantly lessen the impact of a malevolent act or natural hazard on the public health and the safety and supply of drinking water provided to

communities and individuals, including the development of alternative source water options, relocation of water intakes, and construction of flood protection barriers.”

- The ERP described actions and procedures that would lessen the impact to the System’s drinking water supply and to public health in the event of emergencies, including:
 - the System’s ability to utilize emergency interconnections with neighboring systems if water supply is compromised, in addition to plans for emergency water stations if emergency connections cannot be used,
 - instructions for Boil Water advisories and Do Not Drink advisories if water quality is compromised, including tips and best practices for effective communication with the public,
 - list of critical customers that included schools, nursing homes, hospitals, and other critical care facilities, with the exception of individual customers that may be considered critical (AOC 12), and
 - plans for annual emergency response training exercises to ensure staff are fully trained to respond rapidly and effectively to various emergencies. Mr. Murdock was unsure the last time the System conducted these trainings under previous management (AOC 11).

The Safe Drinking Water Act, Section 1433(b)(4), states that “The emergency response plan shall include strategies that can be used to aid in the detection of malevolent acts or natural hazards that threaten the security or resilience of the system.”

- The ERP included plans for detecting and monitoring the threats, including:
 - leak detection and valve isolation exercises,
 - referenced ADH-approved sampling plans,
 - chlorine leak detection and equipment failure plans, and
 - routine checks by System staff to monitor for unusual activity throughout the System.

The Safe Drinking Water Act, Section 1433I, Coordination, states that “Community water systems shall, to the extent possible, coordinate with existing local emergency planning committees established pursuant to the Emergency Planning and Community Right-To-Know Act of 1986 (42 U.S.C. 11001 et seq.) when preparing or revising an assessment or emergency response plan under this section.”

- The ERP included names, contact information, and communication chains for System personnel, local emergency response personnel, state agencies, federal agencies, and other technical assistance organizations available to the System.
- The ERP included contact information for local plumbing and repair companies.
- The ERP included contact information for chemical vendors and suppliers, and backup vendors in the event of chemical shortages.
- Some System personnel information was outdated in the ERP, and it was unclear if other contact information also needed updating (AOC 1).

Other observations:

- On the drive to the inspection, one of the System’s groundwater wells was visible from the street with an unlocked security fence (Photo 1, AOC 12). The inspector notified Mr. Murdock of the unlocked fence during the inspection. Another groundwater well was visible from a street and the security fence was locked (Photo 2).

Recent implementation of the Emergency Response Plan:

From July 3 to July 18, 2023, ADH placed the System under a Boil Water Advisory due to an interruption of the treatment system. Due to numerous leaks in the distribution system caused by aging pipes and conveyances (AOC 9), there was not enough water at the treatment plant to provide for the hydraulic head needed for the filters to be backwashed. As a result of not backwashing the filters, the filter media clogged, and the system could not produce enough water to keep up with the demand and ran out of water in certain parts of the city (AOC 10). In addition, a storm caused a capacitor to go out which took the system's SCADA system offline (AOC 8). Declining storage tank levels during the treatment upset were noticed by operators conducting manual storage tank monitoring as a result of the telemetry interruption. Operators and System staff drove throughout the distribution system to look and listen for major leaks. Arkansas Rural Water Association (ARWA) was called to the system to assist with locating and repairing leaks. The System chose to not utilize their emergency interconnections during the water outage as to not drain neighboring systems' water supply while leaks were being located and repaired. Alternative drinking water was provided to customers via bottled water and water tankers. The Boil Water Advisory was lifted by ADH on July 18, 2023.

Section III – AREAS OF CONCERN (AOC)

1. The ERP listed a most-recent revised date of February 21, 2007, contained some outdated System personnel information, and it was unclear if other contact information needed updating. Although systems subject to SDWA Section 1433(a) and (b) are required to recertify an RRA and ERP every five years, Systems are encouraged to treat the ERP as a living document and update it regularly as information changes.
2. The System did not have a separate RRA document for review. SDWA Section 1433(a) requires all community water systems serving over 3,300 people to conduct a Risk and Resiliency Assessment of their system.
3. The System did not have documentation evaluating the risk of flooding to the System's critical assets and operations. EPA recommends assessing this as a natural hazard in the completed RRA due to the proximity of the System to the Mississippi River and high probability of floods in the region.
4. The System did not have documentation addressing the risk and resiliency of electronic, computer, or automated systems. SDWA Section 1433(a)(1)(A)(ii) requires this information be included in the completed RRA.
5. The System did not have documentation addressing the risk and resiliency of the System's financial infrastructure. Section 1433(a)(1)(A)(iv) requires this information be included in the completed RRA.
6. The System did not have documentation assessing the use, storage, and handling of all chemicals used by the System. Section 1433(a)(1)(A)(v) requires this information be included in the completed RRA. If chemical use, storage, and handling information is already available in sampling plans, operations and maintenance plans, or other formal documents developed by the System, they may be cited by reference, as appropriate.
7. The ERP did not document strategies and resources to improve the resilience of the system. Section 1433(b)(1) requires this information be included in the ERP.

8. The System lacks a redundant power source. EPA recommends having a redundant power source that can be used in the event of power outages and telemetry interruptions.
9. The System's inventory of critical components may not be sufficient for the current condition of the System's aging infrastructure that is prone to failure. EPA recommends increasing inventory of critical components and improving condition of critical infrastructure.
10. The System has recently experienced numerous leaks in the distribution system which resulted in a water demand that the System could not supply. EPA recommends a capacity evaluation of the System, as well as improving the condition of critical infrastructure to prevent failures, as addressed in AOC 8.
11. The System is understaffed and lacks a robust training and cross-training program and written SOPs. EPA recommends developing written SOPs to supplement institutional knowledge for less-experienced staff, and to ensure all staff receive regular training and cross-training for adequate operation and maintenance of the System.
12. The ERP did not contain a list of individual customers that may be considered critical. EPA recommends updating the ERP with contact information for all critical customers supplied by the System.
13. A security fence surrounding one of the System's groundwater wells was unlocked. EPA recommends maintaining physical security of critical assets to mitigate risk from malevolent acts.

Section IV – CLOSING

EPA Region 6 inspector Sami Doupnik conducted a closing conference with Mr. Murdock and Mr. Jones at West Helena Waterworks at 12:15 PM on August 10, 2023. During the closing conference, Sami Doupnik reviewed the Areas of Concern noted during the inspection and provided Mr. Murdock with EPA resources to aid in addressing the Areas of Concern. The resources included a SDWA Section 1433(a) and (b) fact sheet, templates for both an RRA and ERP, and instructions for EPA's free online Vulnerability Self-Assessment Tool (VSAT) that can be used to generate an RRA. It was emphasized that water systems are not required to use any one method for complying with SDWA Section 1433(a) and (b) and that other resources through organizations, such as ARWA, may also be available for the system to utilize.

No additional information was received by EPA after exiting the System on August 10, 2023.

Section V – LIST OF APPENDICES

Appendix 1 – Photo Log – 5 photos taken 8/10/2023.

Appendix 1

Photograph Log



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 1

Location: West Helena Waterworks		
City: Helena-West Helena	County/Parish: Phillips	State: Arkansas



Photo File Name: DSCN0845

Date of Photo: 8/10/2023

Time of Photo: 9:10 AM

Photographer: Sami Doupnik

Description: Unlocked security fence surrounding a groundwater well visible and accessible from a main road in town.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 2

Location: West Helena Waterworks		
City: Helena-West Helena	County/Parish: Phillips	State: Arkansas



Photo File Name: DSCN0846

Date of Photo: 8/10/2023

Time of Photo: 9:12 AM

Photographer: Sami Doupnik

Description: Locked security fence surrounding a groundwater well visible and accessible from a main road in town.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 3

Location: West Helena Waterworks		
City: Helena-West Helena	County/Parish: Phillips	State: Arkansas

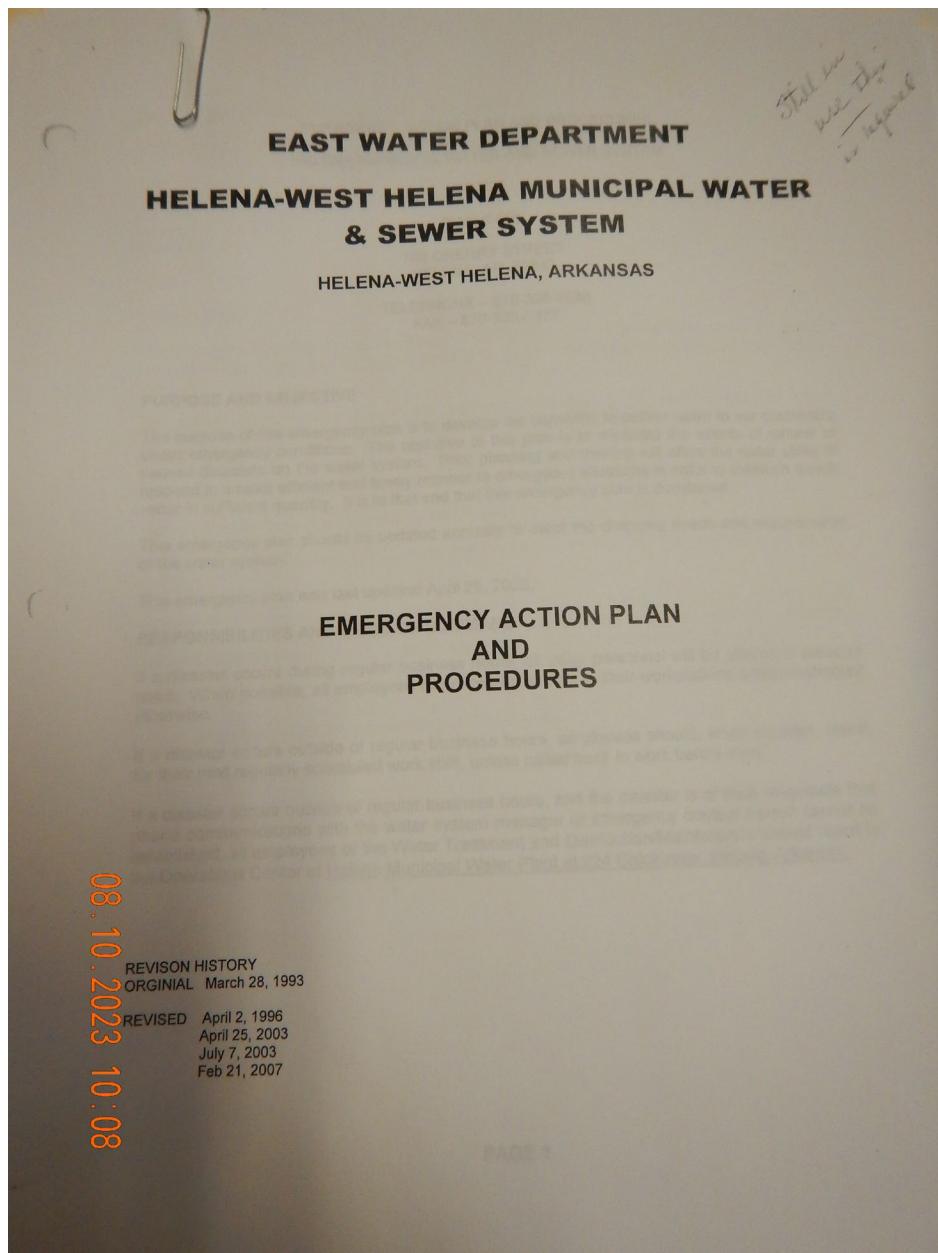


Photo File Name: DSCN0847

Date of Photo: 8/10/2023

Time of Photo: 10:08 AM

Photographer: Sami Doupnik

Description: Emergency Response Plan cover page.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 4

Location: West Helena Waterworks		
City: Helena-West Helena	County/Parish: Phillips	State: Arkansas

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United States Environmental Protection Agency

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America's Water Infrastructure Act (Sec. 2013(a)) / Risk and Resilience Assessment Certification Statement

I **TONY SCROGGINS** hereby certify that **WEST HELENA WATER WORKS**, serving a population of **7500**, Wholesaler **No**, has conducted, reviewed, or reviewed and revised an assessment of the risks to, and resilience of, its system. This assessment included an assessment of:

- The risk to the system from malevolent acts and natural hazards;
- The resilience of the pipes and constructed conveyances, physical barriers, source water, water collection and intake, pretreatment, treatment, storage and distribution facilities, electronic, computer, or other automated systems (including the security of such systems) which are utilized by the system;
- The monitoring practices of the system;
- The financial infrastructure of the system;
- The use, storage, or handling of various chemicals by the system;
- The operation and maintenance of the system; and
- May include an evaluation of capital and operational needs for risk and resilience management for the system.

Date of certification: **09/07/2022**

The U.S. EPA and the authorized official signing this document agree that this certification may be signed electronically. The parties agree that the typed electronic signature that appears on this certification is the same as a handwritten signature for the purposes of validity, enforceability, and admissibility.

Once you have submitted your risk and resilience assessment certification, EPA will send an email

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https://www.epa.gov/AWIA/Home/RRA?userId=TONY1954&email=tonyscroggins11954@yahoo.com&firstName=TONY&lastName=SCROGGINS&ad... 1/2

Photo File Name: DSCN0849

Date of Photo: 8/10/2023

Time of Photo: 10:10 AM

Photographer: Sami Doupnik

Description: Risk and Resiliency Assessment Certification of Completion.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 5

Location: West Helena Waterworks		
City: Helena-West Helena	County/Parish: Phillips	State: Arkansas

United States Environmental Protection Agency

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America's Water Infrastructure Act (Sec. 2013(b)) / Emergency Response Plan Certification Statement

I **TONY SCROGGINS** hereby certify that **WEST HELENA WATER WORKS**, serving a population of **7500**, Wholesaler **No**, has completed an emergency response plan that incorporates findings of the risk and resilience assessment conducted under Section 2013(a) of America's Water Infrastructure Act of 2018 for such system (and any revisions thereto). This emergency response plan includes:

- Strategies and resources to improve the resilience of the system, including the physical security and cyber security of the system;
- Plans and procedures that can be implemented, and identification of equipment that can be utilized, in the event of a malevolent act or natural hazard that threatens the ability of the community water system to deliver safe drinking water;
- Actions, procedures, and equipment which can obviate or significantly lessen the impact of a malevolent act or natural hazard on the public health and the safety and supply of drinking water provided to communities and individuals, including the development of alternative source water options, relocation of water intakes, and construction of flood protection barriers; and
- Strategies that can be used to aid in the detection of malevolent acts or natural hazards that threaten the security or resilience of the system.

Date of certification: **09/07/2022**

The U.S. EPA and the authorized official signing this document agree that this certification may be signed electronically. The parties agree that the typed electronic signature that appears on this certification is the same as a handwritten signature for the purposes of validity, enforceability, and admissibility.

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08.10.2023 10:13

Photo File Name: DSCN0850

Date of Photo: 8/10/2023

Time of Photo: 10:13 AM

Photographer: Sami Doupnik

Description: Emergency Response Plan Certification of Completion.