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- mode

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### Today's Presentation

#### Purpose of webinar

Inventory" and inventory template as well as lead service line replacement (LSLR) eligibilities under the Drinking Water State Revolving Fund (DWSRF) and the Bipartisan Infrastructure Law (BIL) Provide an overview of USEPA's "Guidance for Developing and Maintaining a Service Line

#### Agenda

- Summarize contents of inventory guidance document
- Demonstrate EPA's inventory template
- Provide information on LSLR eligibilities under the DWSRF and BIL



# What's in the Inventory Guidance?

### Purpose and audience

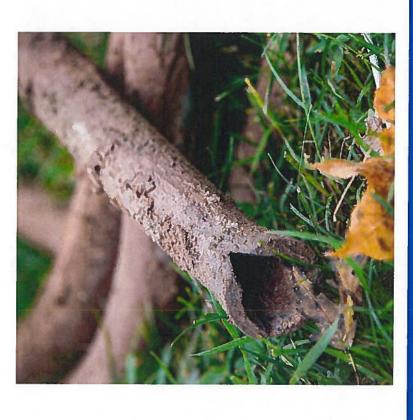
- Drinking water systems of all sizes
- States

#### **Guidance scope**

- LCRR inventory-related requirements
- Recommendations/best practices
- Case studies and example materials
- Inventory template

#### Disclaimer

substitute for those provisions and regulations nor impose legally binding requirements on EPA, states, or the regulated community This document is not a regulation itself, nor does it change or



### EPA United States Environmental Protection Agency

## **Guidance Document Topics**

- Benefits of a service line materials inventory
- Summary of LCRR inventory requirements
- Inventory elements
- Inventory planning
- Historical records review
- Service line investigation methods
- Developing and updating the inventory
- Public accessibility
- Appendix featuring case studies and more

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# The Benefits of a Comprehensive and Accurate Inventory

### **Facilitate LSLR programs**

- Can be used in applications for external LSLR funding
- Increase LSLR programs efficiency, stretching the value of internal or external funding
  - Enables prioritization of underserved communities for LSLR

#### Improve public health

- Allows for notification to customers about lead sources in drinking water infrastructure so they can take action to reduce their risk of exposure
- Allows for mitigation of exposure risk after disturbance of a known or potential lead service line (LSL) or galvanized requiring replacement (GRR) service line

### Engage the community

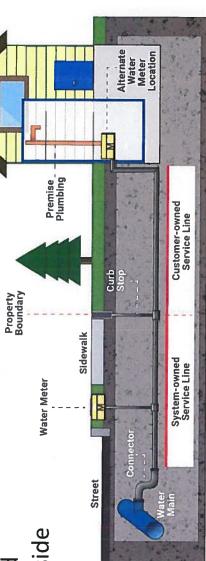
- Builds customer transparency
- Showcase progress of LSLR program
- Opportunity to educate and involve customers, which can create opportunities for LSLR

### Improved asset management

### Inventory Elements- Required

### Required service line material classifications

- Include all service lines, regardless of the actual or intended use
- Classify LSL, Galvanized Requiring Replacement (GRR), Unknown, Non-Lead
- Include both the system- and customer-side where ownership is split





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## Inventory Elements- Recommended

### Recommended subclassifications

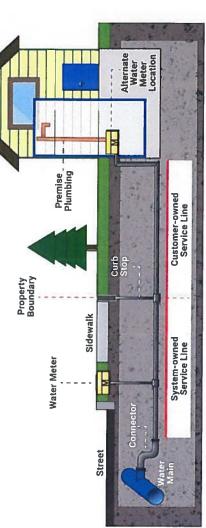
- Likelihood that an unknown is lead
- Actual material of non-lead lines

### Recommendation to include other drinking water infrastructure potentially containing lead

- Lead goosenecks, pigtails, connectors
- Lead solder
- Other leaded infrastructure

### Recommended service line characteristics to include

- Pipe diameter
- Installation date
- Source of material information





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#### \*Discrepancies may be occasionally encountered. If they are repeatedly reassess their confidence in their encountered, systems should identify all service line materials and COMPLETE INVENTORY UPDATE inventory's accuracy. reliability of records and field techniques EVALUATE **Inventory Planning** inventory and field investigation procedures CONTINUOUS IMPROVEMENT UPDATE proactively and during course of normal field operations INVESTIGATE Replace Lead Service Lines BUILD initial inventory records and compile data GATHER

Replacing lead service lines can occur anytime in the steps shown

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### **LCRR Initial Inventory Requirements**

Review and/or use the records specifically referenced in 40 CFR §141.42(d), 40 CFR §141.84(a)(3), including any required by the state

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#### Source: Hensley et al., 2021

Document the records source used to identify a service line's material

**Recommended Practices** 

- Continue to gather information on service line materials after they have been classified to assess the accuracy of historical records
- If a certain record source is found to be unreliable, consider reclassifying service lines based on that source as "unknown" until additional information can be gathered
- Records already reviewed for service line material information (i.e., for proactive inventory efforts done previously) do not need to be reviewed again



# Service Line Material Investigation Methods

#### **Investigation Methods**

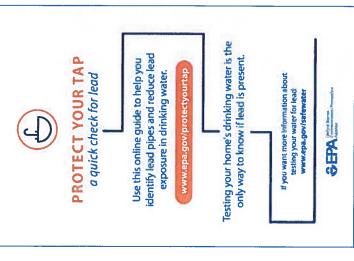
- used to identify the material of unknown service lines and to verify records Description of service line investigation methods that water systems have
  - Note the LCRR requires that states approve which investigation methods are acceptable

### **Pros and Cons of Each Method**

Including but not limited to cost/labor, disturbance, and accuracy

#### Real-World Examples

System level examples as well as their lessons learned



https://www.epa.gov/ground-water-and-drinking-water/protect-your-tap-quick-check-lead.

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## Developing and Updating the Inventory

### **Developing the Initial Inventory**

- LCRR initial inventory requirements
- Recommended initial records screening process
- Recommended weight-of-evidence approach when records are conflicting

### **Prioritizing Field Investigations**

- Vulnerable or environmental justice populations
- Areas with the most unknowns
- Service lines that are most likely lead, especially in tandem with LSLR
- Areas where LSLR is occurring
- To verify historical records

Starting Dataset

Local lead ban, building type, year premise built



Source: Liggett, 2021



# Developing and Updating the Inventory (continued)

# Requirement for customer notification of known or potential service line containing lead

Water systems with LSL, GRR, or lead status unknown services lines must provide notification to persons served by these lines within 30 days after completing the initial inventory.

## Requirements and recommendations for systems with only non-lead lines

- May publish a statement indicating they have only non-lead service lines in lieu of making their inventory publicly accessible
- Requirements and recommendations for non-lead systems that later discover an LSL in their system

### Submitting the initial inventory and inventory updates

Initial inventory must be submitted to the state by October 16th, 2024

### State review and reporting

EPA has developed a checklist for the initial inventory submittal with recommended considerations for states to use in their review



### **Public Accessibility**

### Elements of the Publicly Accessible Portion of the Inventory

- Must include each LSL and GRR with a location identifier, such as a street address, block, intersection, or landmark.
- Recommended to include (see document for full list)
- All service line materials (include unknowns and non-lead lines)
  - Consider using street addresses as your location identifier
- Information on steps that consumers served by LSLs can take to reduce exposure risk
- Instructions on how to use and interpret the inventory along with a disclaimer

Format Considerations (i.e., pros and cons of various formats)

Consumer Confidence Report Requirements



Source: Greater Cincinnati Water Works Service Line Information map. https://gcww.maps.arcgis.com/apps/webappviewer/index.html?id=0a\_70c268c694e46a8a4e394630df0bd. Accessed December 16, 2021.



#### Appendix

Appendix A: Selected Forms from Service Line Inventory Template

Appendix B: Case Studies

Appendix C: Instructions for Self-Identifying LSLs and Information When Water System Conducts Verification Appendix D: Summary of State Lead Ban Provisions

Appendix E: Michigan Field Investigation Protocol

Appendix F: Data Quality Disclaimer Language

### Inventory Summary (Continued)

Part 3. Inventory Summary Table

Service Line Material Classification	Definition	Total Number of Service Lines (REQUIRED to be reported under the LCRR)
Lead	Any portion of the service line is known to be made of lead. <sup>2</sup>	
Galvanized Requiring Replacement (GRR)	The service line is not made of lead, but a portion is galvanized and the system is unable to demonstrate that the galvanized line was never downstream of a lead service line.	
Non-tead	All portions of the service line are known NOT to be lead or GRR through an evidence-based record, method, or technique.	
Lead Status Unknown	The service line material is not known to be lead or GRR. For the entire service line or a portion of it (in cases of split ownership), there is not enough evidence to support material classification.	
	TOTAL	

This summary table is for reporting material for the entire service line connecting the water main to the customer's plumbing. See Section 2.1 for additional guidance on assigning a materials classification to the entire service line when ownership is split. Remember that systems must track the system-owned and customer-owned portions separately in their inventory.

<sup>2</sup>A fead-lined galvanized service line is consistent with the definition of an LSL under the LCRR ("a portion of pipe that is made of lead, which connects the water main to the building inlet") (40 CFR §141.2) and must therefore be classified in the inventiory as an LSL. Do NOT, however, count non-lead service lines with a lead gooseneck or pigtali as lead service lines unless required by your



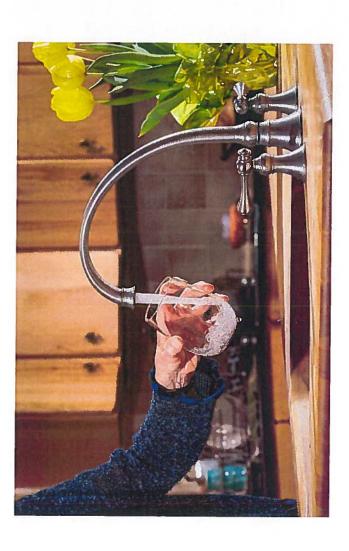
### **Template Demonstration**

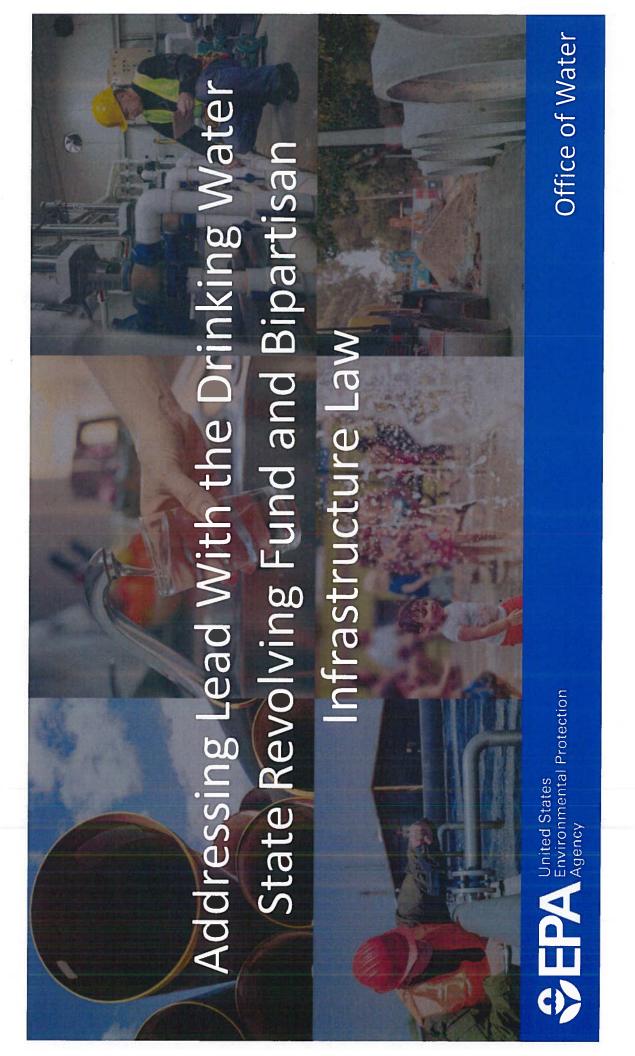
Please hold momentarily while we share our screen to walk you through EPA's inventory template

	10	Focation Information	ű.						System Owned Portion	ion				
Unique Service Line ID	Other Address 19	Other Location Literalifier	Sentitive Population? (Yes/No)	Disatvantaged Reighborhood? (Yes/Rio)	System-Owned Polition Service Line Material Classification	If Non Lead in Column G, Was Material Ever Previously Lead?	Service Line Installation Date	Service Line Size	Basis of Marerial Classification	Was the Service Line Material Field Venffied?	If Yes' Service Line Material Was Field Verified: Describe the Field Enter the Date of Field Verification	riisi Was Field Veriffed: Enter the Date of Field Veriffication	Hotes	Customer-Dwined M Service Line Man Cassification
A Unique ID is recommended for each service line.	which proposes most beat addresses of all availables to their devent from the interpret from the problem and t	ack addresses of all malitimentory. Exit he on bossion identifiers clark action of consistent sion identifier, other (GPS coordiness), in focation identifier	Select Yes if sensinve subpopulation, e.g., day care, school, multifamity home. if Yes-Other, describe in the Notes field.	Does location meet state afforability guidelines or other measures?	Drepdown list includes recommended subclassifications. If "Non-Lead Other", describe in Notes Tield	Select Yes, No, or Dan't lone. Innoctant for determining if adountstream, rustomer owned galvanized service line requires replacement	Date, year, or estimated date range when the service line was installed or replaced	Diameter in sinches	Select option from drop down list. If "Other," cestribe in the Nates field	Select Yes or No	Select agains from drap down list. If "Other," describe in the Nates field	Enter approximate date of field welfication or date that the record was updated	Can use this field for documenting additional relevant information, including when classification changes.	Bropdown list inclercommended subclassifications. If no other, describe in Nau.
Example 1	1234 Test St., Gty, State, Zip Code	Intersection of Test and Elm St.	No	No	Non-Lead - Plastic	Yes	1997	2	Installation date after lead bon	Yes	Visual Inspection of the meter plt	6102/1/5		Non-Lead - Plas
Example 2		Intersection of Test and Main St.	No	No	Non-Lead - Plastic	Na	Fall 1980	2	Installation record (e.g., tap	Yes	Mechanical excavation at	0/10/2020		Bolvanized
Example 3	16 Caprical St., City, State, Zip Code		No	Mo	Non-Lead - Capper	Don't know	1985	11/2	Service line repair or	No	The incomm			Colvenized
Example 4	I Water Avenue, City, State, Zia Code		No	No	Unknown - Ulkely Lead		1940's	2		No				Collectived
Example 5	Gity, State, Zip Code		Yes - Day Care	Mo	Unknown - Material Untnown		1950-1960	3/8		No				Underloant - Adramini (
Example 6	50 Price Street, City, State, Zip Code		Mo	No	Lead-lined golvanized		1955	2	Installation record (e.g., top	Yes	CCTV Investigation or curb	8/8/2020		Lead-lined golven
Example 7	129 System Ave., City, State, Zip Code	Building A	No	Ye	Non-Lend - Copper	Yes	2015	7	Service line repair or replacement record	No	data			Salvanited
Eusmple 8	123 System Ave., Clty, Store, Zlp Code	Building B	No	No	Non-Lead - Capper	Don't know	2015	2	Service line repair or	No				Unknown - Material L
								A CONTRACTOR						
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ă. :	PWS Information		Inventory Methods	Invento	Inventory Summary Detail	Detailed Inventory		Public Accessil	•					
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### **Next Steps**

- EPA is developing a small system compliance guide and fact sheets drawing from information in the guidance
- Propose LCRI in 2023 and finalize no later than October 16, 2024
- EPA does not expect to change the requirements for the initial inventory





# **Drinking Water State Revolving Fund: Overview**

### How does the DWSRF work?

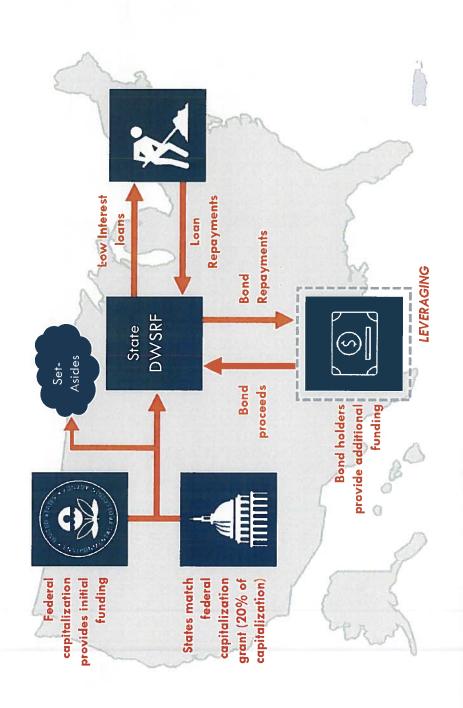
- Congress appropriates funding to EPA for the DWSRF program. EPA then awards capitalization grants (i.e., seed money) to each state.
- States may take part of their capitalization grant as set-aside funds, if desired.
- For most appropriations, each state provides a 20 percent match to those capitalization grants.
- Public water systems apply for project funding from their state's DWSRF.



### Drinking Water State Revolving Fund: Overview How does the DWSRF work?

- States then provide below-market rate loans and other authorized assistance to eligible public water systems for water infrastructure projects.
- States disburse DWSRF funds to those eligible assistance recipients on construction costs that are incurred.
- Assistance recipients repay their loans back into the state's DWSRF typically over 20-40 years.
- The state DWSRF programs use these "recycled" funds to make additional loans, and the "revolving" cycle continues.





# Who is Eligible to Use the DWSRF?

## Public or private\* community water systems

year-round residents, or regularly serves at least 25 year-round A water system serving at least 15 service connections used by residents

### Nonprofit non-community water systems

campgrounds, parks, and churches that are not part of a Some examples may include schools, publicly-owned community water system. \*Some states do not fund private systems.

# What Type of Projects Can Be Funded by the Loan Fund?

- Source: Rehabilitation of wells or development of eligible sources to replace contaminated sources
- **Treatment**: Projects to install or upgrade facilities to improve drinking water quality to comply with drinking water regulations
- **Transmission and distribution:** Rehabilitation, replacement, or installation of pipes to improve water pressure to safe levels or to prevent contamination caused by leaky or broken pipes, including lead service line replacement
- Storage: Installation or upgrade of finished water storage tanks to prevent microbiological contamination from entering the distribution system
- Consolidation: Interconnecting two or more water systems
- Creation of new systems: Construct a new system to serve homes with contaminated individual wells or consolidate existing systems into a new regional water system
- Planning and design: For all project types listed above.

https://www.epa.gov/sites/default/files/2019-10/decuments/dwsrf\_eliaibility\_handbook\_iune\_13\_2017\_uodraef\_508\_version\_artf



### **DWSRF Set-Asides**

- Set-asides provide additional tools for states to help achieve the public health protection objectives of SDWA.
- complement infrastructure financing
- strengthen Public Water System Supervision (PWSS) program
  - to implement "preventive" SDWA programs
- Capacity Development technical, managerial, and financial (TMF)
- Operator Certification
- Source Water Protection

## How Much Funding Can Be Set-Aside?

 States can take up to ~ 31% of their capitalization grant for set-aside activities

	Purpose	Set-Aside Amount (up to)
Admi	Administration of DWSRF and Technical Assistance to Water Systems	<i>Greatest of:</i> <b>4%,</b> \$400k, or 1/5 <sup>th</sup> of a Percent of Fund Valuation
Techn (<10,0	Technical Assistance to Small Water Systems (<10,000 population)	2%
State	<ul> <li>State Program Management</li> <li>Administer Public Water System Supervision and Source Water Protection         Programs         Implement Capacity Development Strategy and Operator Certification         Program     </li> </ul>	10%
Local	Local Assistance to Public Water Systems for Source Water Protection and Capacity Development	15%
	<ul> <li>Loan to acquire land/conservation easement for Source Water Protection</li> <li>Loan to implement voluntary Source Water Protection measures</li> </ul>	
	<ul> <li>Provide assistance to public water systems for Capacity Development Strategy</li> <li>Establish/Implement Wellhead Protection Program and Source Water</li> </ul>	
	Drotoction	



### **Set-Asides Eligibilities**

- Activities that facilitate compliance with National Primary Drinking Water Regulations.
- Activities that significantly further the public health protection objectives of the Safe Drinking Water Act (SDWA).
- KEY POINT: If an activity is eligible for funding under the loan program, it probably is not eligible for set-aside funding.
- Exceptions:
- Project planning and design costs.
- Costs for restructuring a system as part of a capacity development strategy.

#### Loan Fund

- Complete removal and replacement of lead service lines (public and privately owned portion) or service lines made of galvanized iron or galvanized steel (that are currently or have previously been downstream of lead components)
- Removal and replacement of lead or galvanized goosenecks, pigtails, and connectors
- LSL inventories\*
- Planning and design for LSLR construction projects\*
- Temporary pitcher filters or point-of-use (POU) devices certified by an American National Standards Institute accredited certifier to reduce lead during or for a short time period after LSLR projects
- Corrosion control studies\*/infrastructure

#### Set-asides

- Planning and design for LSLR construction projects\*
- LSL inventories\*
- LSL public outreach, education and training
- Non-routine lead sampling (if not for compliance purposes)
- Including in schools and child-care facilities
- Corrosion control studies\*

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\*Eligible under both the loan fund and set-asides.

### What Lead-Related Activities Are Not Eligible **Under the DWSRF?**

- Installation or replacement of premise piping
- Premise piping = the pipes inside the house
- Routine, compliance-related sampling/testing of lead in drinking water
- Testing lead levels in blood
- Bottled water/trucked-in water
- Partial LSL replacement (unless other portion previously or concurrently replaced)

# Lead Service Line Replacement Eligibilities In Action

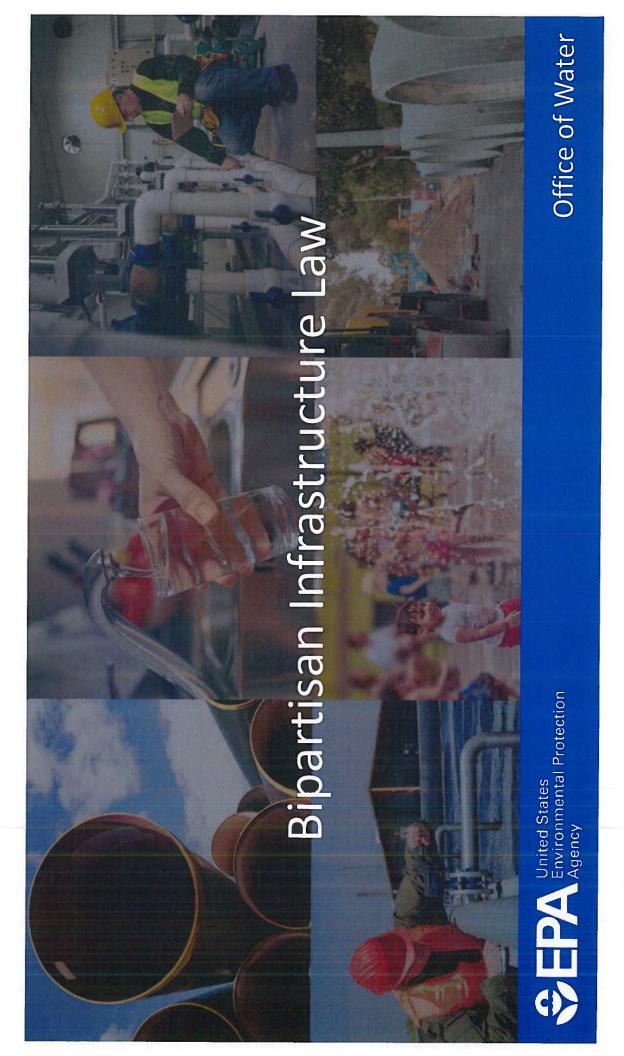
#### Virginia

- Lead Elimination Assistance Program (LEAP) promotes full replacement of lead service lines and educates public water systems and homeowners
- Reserves \$2 million in funding from each capitalization grant specifically for:
- LSL replacement
- LSL inventories
- Galvanized service lines requiring replacement
- Cast iron service lines and drinking water mains if they contain lead solder

### Set-Asides In Action

#### Vermont

- DWSRF Local Assistance Set-Aside dollars pay for the state's Lead Reduction Strategies Grant Program. Eligible activities include:
- LSL inventories
- Establishment of a full LSLR program
- Public education
- Strategic planning
- 2017: Bennington Water Department received a Lead Line Reduction Strategies Grant to develop a Lead Line Reduction Strategic Plan
- Lead Line Reduction Strategic Plan and eliminate all the lead service lines in In 2020, the state allocated \$11 Million for Bennington to implement their the water system



# Bipartisan Infrastructure Law (BIL)

- Also known as the Infrastructure Investments and Jobs Act (IIJA).
- Signed by President Biden on November 15, 2021.
- Environmental Protection Agency to build safer, healthier, cleaner communities. Historic investment in key programs and initiatives implemented by the U.S.
- wastewater systems the single largest investment in water that the federal Includes \$50 billion to EPA to strengthen the nation's drinking water and government has ever made.
- Approximately \$30 billion of this funding through the existing DWSRF programs.

### United States Environmental Protection Agency

# **BIL Implementation Key Priorities**

- Increase investment in disadvantaged communities
- Make rapid progress on lead service line replacement
- Address PFAS and emerging contaminants
- Resilience, climate, One Water innovation
- Support American workers and renew the water workforce
- Cultivate domestic manufacturing

# Available State Revolving Fund (SRF) Funding in the BIL

Appropriation	FY 2022 (\$)	FY 2023 (\$)	FY 2024 (\$)	FY 2025 (\$)	FY 2026 (\$)	Five Year Total (\$)
CWSRF General Supplemental	1,902,000,000	2,202,000,000	2,403,000,000	2,603,000,000	2,603,000,000	11,713,000,000
CWSRF Emerging Contaminants	100,000,000	225,000,000	225,000,000	225,000,000	225,000,000	1,000,000,000
DWSRF General Supplemental	1,902,000,000	2,202,000,000	2,403,000,000	2,603,000,000	2,603,000,000	11,713,000,000
DWSRF Emerging Contaminants	800,000,000	800,000,000	800,000,000	800,000,000	800,000,000	4,000,000,000
DWSRF Lead Service Line Replacement	3,000,000,000	3,000,000,000	3,000,000,000	3,000,000,000	3,000,000,000	15,000,000,000



### Office of Water

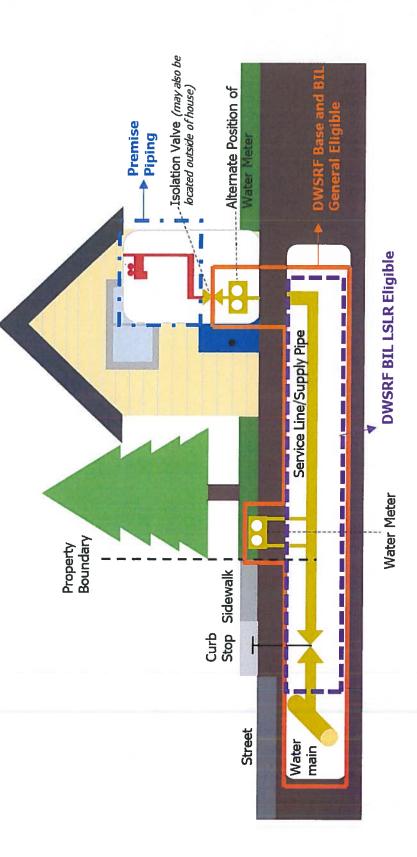
# **DWSRF Funding in the BIL: Overview**

- EPA is making \$30,713,000,000 in additional capitalization grants (i.e., seed funding) available to the state DWSRF programs over the next five years.
- Some of this money may fund any project eligible under the DWSRF; "emerging contaminants;" some funding is targeted towards the some funding is targeted towards projects focused on PFAS and identification and replacement of lead service lines.
- States have the authority to waive repayment on some of this new funding (e.g., forgive some or all of the loan's principal or provide as grants). This is called "additional subsidy."

## **DWSRF BIL Eligibilities**

### **Lead Service Line Replacement Funds**

- \$15 billion over 5 years. 49% of the funds that states receive from EPA must be provided as "additional subsidy."
- or unknown material), lead goosenecks, pigtails, and connectors; planning and design and galvanized service lines (currently or previously downstream of lead components Eligible: lead service line inventories; removal and replacement of lead service lines for those infrastructure projects.
- Any project involving the replacement of a lead service line must replace the entire lead service line, not just a portion, unless a portion has already been replaced or is concurrently being replaced with another funding source.
- Note: corrosion control studies, corrosion control infrastructure, water mains, backflow preventers, and water meters are <u>not</u> eligible under the BIL LSLR funding.





### Set-Asides Under the BIL

- States can take set-aside from BIL capitalization grants.
- BIL General: all set-aside eligibilities.
- in drinking water with a focus on perfluoroalkyl and polyfluoroalkyl substances." meet the statutory purpose of these funds: "to address emerging contaminants Emerging Contaminants: must be used to administer this capitalization grant or
- service line replacement projects and associated activities directly connected to capitalization grant or meet the statutory purpose of these funds: *"for lead* the identification, planning, design, and replacement of lead service lines." Lead Service Line Replacement: must be used to either administer this

## **LSLR Set-Asides Examples Under the BIL**

- Planning and design for LSLR infrastructure projects.
- Developing or updating lead service line inventories, including locating and mapping lead service lines.
- Providing technical assistance to water systems undertaking lead service line inventories or construction projects.
- Funding state staff and contractors to work on LSLR education, outreach, and planning.
- Non-routine lead sampling (not for compliance purposes).

Infrastructure Fund Assistance agreements (potentially including additional subsidization such as loan principal forgiveness or grants) with public water systems (PWSs) to conduct LSL inventories; states may optionally roll these loans into actual LSLR construction projects at a later date.  2% Small System (orgiveness or grants) with public water systems (PWSs) to conduct LSL inventories; states may optionally roll these loans into actual LSLR construction projects at a later date.  2% Small System (special Assistance Set-Aside (special Assistance) and project (special Assistance) and p
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## **SRF and BIL Information**

- DWSRF: https://www.epa.gov/dwsrf
- State DWSRF contacts
- EPA BIL general site: https://www.epa.gov/infrastructure
- DWSRF specific BIL site:

https://www.epa.gov/dwsrf/bipartisan-infrastructure-law-

srf-memorandum



**About BlueConduit** 

### million

Service lines analyzed

+%08

Hit rate



\$100<sup>+</sup> million in savings

2019 Company founded

**6** years

Water systems

Experience in ML prediction

## Simple, User-Friendly Process



Upload or Sync Data



Develop your
LSL Inventory,
Inspection, and
Replacement
Plan



Report Progress & Update with New Data



# Which Data Informs the Predictive Model?

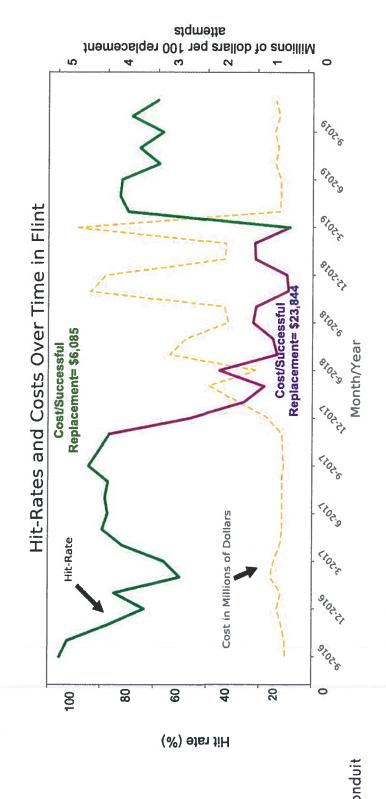
- Verified SL Material (Public/Private)
- SL Historical Record- Public / Private
- Parcel ID
- Address
- Year Built
- Longitude / Latitude
  - Home Value
- Acreage
- Water Test Results

- Water Main Size
- Water Main Material
- Property Class / Zoning
  - Recent Surveys
- Water Bill Information
- Construction Records
  - Census Information
- Distance from Fire Hydrant
  - Fire Hydrant Company



## Accuracy in Predictions Matter

Flint, Michigan Example





# Use probabilities to dig where the lead is

Important to

note: the

model

iterating with

continues

information

new

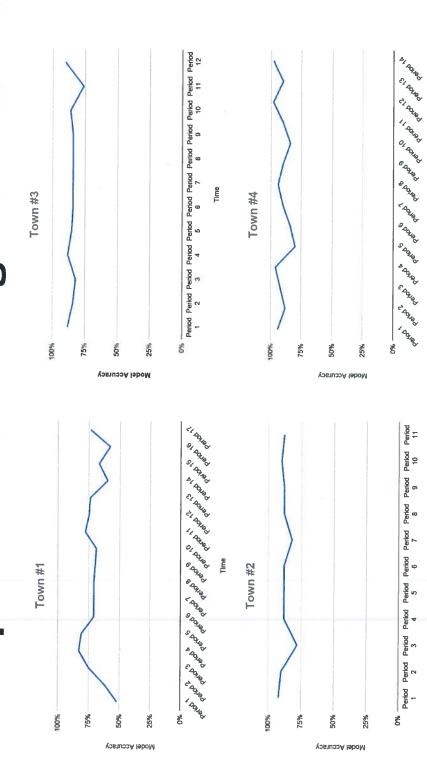
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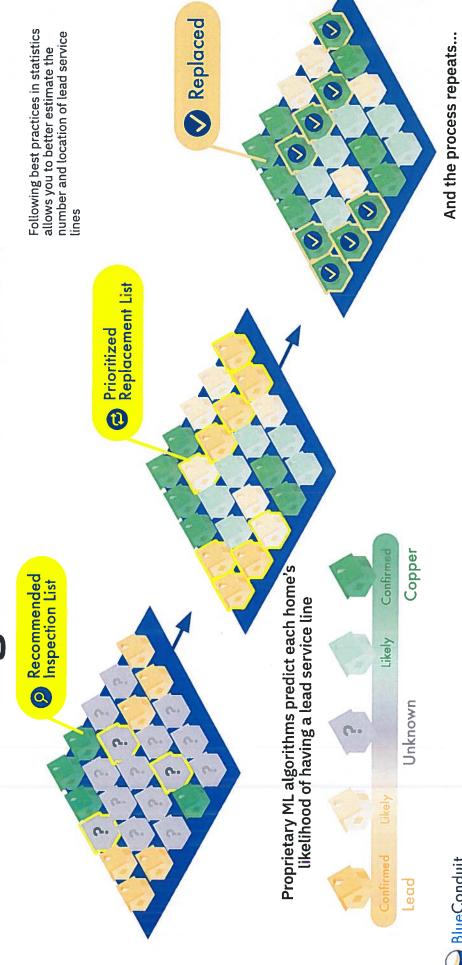
accuracy

over time,





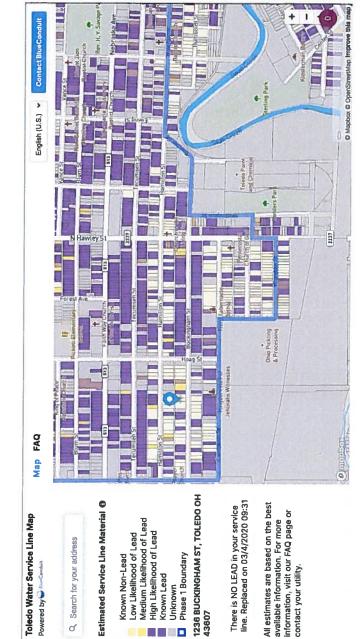
## Dig where the Lead is





# Publicly Accessible and Searchable Map

- Tool for transparency
- Based on city data and predictive algorithm
- Supports collaboration with public health experts
- FlintPipeMap.org
- Toledo Map

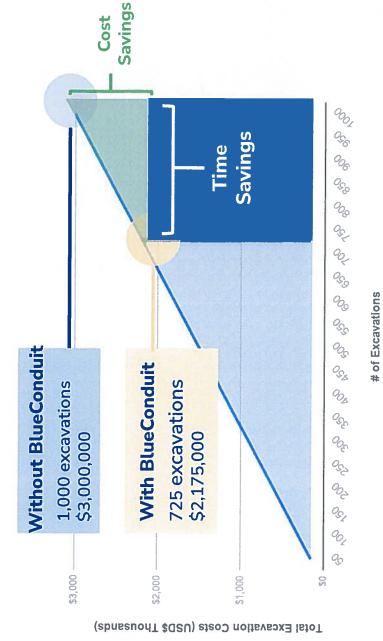




# **Our Accuracy Saves Time and Money**

"Working with
BlueConduit will save
us over \$10 million
in the first year alone
and will enable us to
maintain an accurate
LSL inventory going
forward."

- City of Detroit



Accurate predictions enable cities to focus replacement efforts on highest risk homes



Savings based upon 70% vs 50% accuracy rate and a target of 500 service line replacements and an average excavation cost of \$3,000

### 0

## BlueConduit Platform Benefits

Digital LSL Inventory System

Automated Compliance Reporting

Transparency and Access for Residents



### BlueConduit and our mission! hank you for your interest in

Please follow up with questions info@blueconduit.com

or sheela@blueconduit.com





Please find enclosed BlueConduit's proposal for Johnson City's service line inventory and replacement solution.

As the utility embarks on its program to identify and replace 100% of its lead service lines, this solution will allow Johnson City to track data across different stakeholders to support an efficient and equitable replacement project.

This solution will provide Johnson City with access to BlueConduit's software and expertise to assist in the following: estimating how many lead service lines are in the distribution system, identifying their likely locations, working towards EPA compliance, and helping prioritize where to begin inventory and replacement projects in support of Johnson City's initiative to address this public health risk.

BlueConduit's machine learning solution is supporting more than 50 communities in their lead service line inventory and replacement work, having already saved hundreds of millions of dollars for those utilities.

As part of the agreement, Johnson City will receive:

- Access to BlueConduit's dashboard with:
  - Recommended Inspection List -- a table and visual representation of recommendations of properties to inspect to reduce uncertainty and improve prediction accuracy
  - Service line inventory with predicted material probabilities for each service line segment
  - Updates to predicted material probabilities, populating maps, and recommended lists for inspections and replacement
  - Up-to-date map of the service line (SL) inventory and predicted SL materials at parcellevel for internal utility purposes
  - Up-to-date map of SL inventory and predicted SL materials at any level for public-facing purposes with ability links to local community and health resources
  - o Integration of service line inventory data between stakeholders' information systems

### **DESCRIPTION OF SOLUTION**

• Onboarding and Data Upload Process: BlueConduit's data upload process combines a streamlined tool and data science expertise that integrates different sources of information.



This creates a repository of service line information that will be accessible through the dashboard.

- Recommended Inspection List: BlueConduit will generate a random list of homes for the
  partner to conduct initial inspections to verify the public and private side service line materials.
  This inspection will provide a baseline for development of the statistical model. The number of
  homes included in the Recommended Inspection List will depend on factors determined by
  BlueConduit and jointly approved by the partner and BlueConduit. It is anticipated that this
  Recommended Inspection List may include up to one-percent of service area parcels.
  - The number of inspections may be reduced by recent verified site information that the partner may already have. This will be determined after the information is shared by the partner.
  - The cost of these inspections will be covered by Johnson City. BlueConduit anticipates
    these inspections would be a combination of verification at the water meter and at the
    curb stop.
- Service line inventory with predicted material probabilities for each service line segment:

  A home-by-home list (or GIS map overlay) that indicates the likelihood of a service line material at any point of service. This Replacement List will provide the partner with recommendations for targeted replacements.
- **Updates to predicted material probabilities:** Through the dashboard, BlueConduit will update the likelihood of a service line material at any point of service. as new data is recorded into the software.
- Interactive service line map: Public-facing engagement map showing the known service line
  materials data. Linked here is a <u>sample map</u> that was created for Toledo, OH. This map
  supports EPA compliance for a publicly accessible inventory. Built with best practices in risk
  communication and user experience in mind, Johnson City can effectively share information
  with the map.
- Inventory Compliance: A database that allows the partner to track service line materials for every point of service in the water system, that includes the ability to download reports and files that help satisfy regulatory requirements.



- **Data Collector app:** Integrated with the rest of the BlueConduit platform, the data collection app enables the utility and its contractors to seamlessly field-collected data into the database. This includes the following:
  - o Clear, easy-to-use, secure data input and data management software
  - Data validation and consistent formatting
  - Enable contractors to input data from fieldwork
- LSL Replacement Plan: A database that allows the partner to track service line materials for every point of service in the water system, that includes the ability to download reports and files that help satisfy regulatory requirements.

### **CUSTOMER EXPECTATIONS:**

- Provide source data and information as requested through BlueConduit's data upload tool. Data to include, but not limited to:
  - Recently verified service line records
  - Historical water service line records (ie, maps, work slips/cards)
  - Taxable parcel records (year built, land size, value, zoning, etc.)
  - Construction records (if available)
  - Water bills (if available)
- Commit to having staff available to attend meetings and provide feedback about data and findings as well as share general knowledge about the water system.
- Grant permission to BlueConduit to discuss the work done with the partner in future marketing materials (e.g., case studies).
- The partner is responsible for the validity of the raw data provided to BlueConduit.

### **Pricing**

	Pricing
Data Validation	\$7,500
Predictive Modeling and Continuous Validation (YR1 SaaS)	\$3,000
Predictive Modeling and Continuous Validation (YR2 SaaS)	\$2,400
Total for 2 year commitment	\$12,900



Payment terms	30 Days after invoice

We look forward to working with the team.

Regards,

Ian Robinson President/COO

(248) 761-2005 ian@blueconduit.com

### MASTER LICENSE AGREEMENT

This Master License Agreement ("Agreement") is made and effective as of **month/date/year** (the "Effective Date") by and between **Abernethy Schwartz Partners LLC** ("BlueConduit"), a Michigan limited liability corporation with its principal place of business at 2531 Jackson Ave #337, Ann Arbor, MI 48103, and **Johnson City, TX**, with an address at CUSTOMER ADDRESS ("Licensee").

### **BACKGROUND**

BlueConduit has developed certain software programs and related documentation pertaining to their use ("Documentation") that is made available to Licensee, as it may be updated from time to time by BlueConduit more particularly described in Order Schedule A attached hereto (the "Software"), and offers related training and implementation services (the "Consulting Services") in support of its customers' use of the Software.

The parties agree as follows:

### 1. SOFTWARE LICENSE AND OWNERSHIP

<u>License</u>. Subject to the terms of this Agreement, BlueConduit hereby grants to Licensee a non-exclusive and non-transferable (except as provided in Section 11 (Assignment)) right to use the type and number of licenses and users of Software specified in an order schedule (the "Order Schedule") attached hereto, solely for Licensee's own, internal business operations and consistent with the limitations and conditions set forth in this Agreement. Additional Order Schedules, designated as Schedules A-2, A-3, and so forth, may be executed by the parties and attached to this Agreement.

Licensee may not:

- (i) Remove any copyright notices or other legends of ownership;
- (ii) Modify or adapt the Software or merge it into another program;
- (iii) Reverse engineer, disassemble, decompile, or make any attempt to discover the source code of the Software;
- (iv) Place the Software onto a server so that it is accessible via a public network such as the internet:
- (v) Distribute, sublicense, rent, lease, or lend any portion of the Software; or
- (vi) Authorize, permit, or suffer any person who is not an Authorized End User to use the Software;
- (vii) Disclose the License Key to any person who is not an Authorized End User;
- (viii) Use the Software or any BlueConduit Confidential Information to plan, develop, encourage, direct, or operate any business activity or venture that competes with BlueConduit's exploitation of the Software.

<u>Ownership</u>. BlueConduit retains all right, title and ownership interest in the products provided under this Agreement including the Software and all enhancements, modifications and updates to the Software. No interest in the Software other than this license is granted to Licensee. Licensee retains all right, title and ownership interest in its preexisting intellectual property and data. For the avoidance of doubt, the output of Licensee's operation of Software generated by the Software's analysis of Licensee data shall be owned by Licensee.

<u>Use by Licensee Affiliates.</u> A Licensee Affiliate may use the Software, if specifically authorized by, and subject to, the terms of this Agreement. Any use by a Licensee Affiliate will be subject to the following: (a) Licensee is responsible for the acts or omissions of the Licensee Affiliate as if they were Licensee's acts or omissions; and (b) the Licensee Affiliate's use must not constitute a violation under any applicable export law or regulation.

For purposes of this Agreement, the term "Licensee Affiliate" means any individual or business entity that, either directly or indirectly, is controlled by Licensee or is under common control with Licensee. "Control" shall mean possession of the power to direct or cause the direction of the management and policies of an organization or other entity whether through the ownership of voting securities, by contract, or otherwise.

<u>Unlicensed Software</u>. Licensee has a license to use only the Software specifically identified on the applicable Order Schedule. Licensee may have access to unlicensed BlueConduit software products, capabilities or modules, but this access does not imply a license to these products, capabilities or modules and Licensee shall not use them in any manner.

<u>Licensee Responsibilities</u>. Licensee is responsible for all activity occurring under Licensee's user accounts and shall abide by all applicable local, state, national and foreign laws, treaties and regulations in connection with Licensee's use of the Software, including those related to data privacy, international communications, and the transmission of technical or personal data.

### 2. LICENSE FEE AND TAXES

Licensee shall pay the license fee for the number of licenses as specified in the applicable Order Schedule, including the renewal terms ("License Fee") and other charges, within thirty (30) days of the date of the invoice. These fees and charges will be documented on an invoice sent to Licensee by BlueConduit or one of its affiliates. If the parties have agreed to Consulting Services under a Statement of Work (as defined below) or Order Schedule, BlueConduit will invoice for fees and expenses on a monthly basis, in accordance with the Statement of Work/Order Schedule.

In the event that Licensee fails to pay BlueConduit fees due within sixty (60) days of its receipt of a properly issued invoice therefor, then such fees due shall be increased by one percent (1%) and by an additional one percent (1%) for each additional thirty (30) day period thereafter in which Licensee fails to pay such properly invoiced fees.

Licensee shall be solely responsible for any sales, use, privilege, value added, excise or other transaction taxes, however designated, that may be levied based on this Agreement. Each party will be liable for its own income taxes.

### 3. TERM AND TERMINATION

This Agreement takes effect upon the Effective Date and remains effective for so long as Licensee has an active license to the Software, the parties are engaged in an ongoing Statement of Work, or unless extended or terminated as provided herein. Each party may terminate this Agreement in the event of a material breach by the other party that is not cured within thirty (30) days after the non-breaching party gives written notice, provided, however, that with respect to non-payment or breach of Article 1, the cure period shall be ten (10) days.

Upon termination, Licensee shall immediately cease use of BlueConduit Software. Termination of this Agreement by either party will not limit a party from pursuing any other remedies available to it, including injunctive relief, nor will termination release Licensee from its obligation to pay all fees that Licensee has agreed to pay under this Agreement, except as follows:

If Licensee terminates this Agreement for BlueConduit's uncured material breach of a provision of this Agreement other than Section 7 (which contains a separate provision providing a refund): (i) BlueConduit shall reimburse Licensee on a pro rata basis for any remaining prepaid License Fees for the remaining License Period after the date of Licensee's written notification of BlueConduit's breach ("BlueConduit Breach Date"), (ii) fees paid up to the BlueConduit Breach Date shall not be refunded, and (iii) Licensee shall have no further obligation to pay the remaining unpaid License Fees after the BlueConduit Breach Date.

### 4. SOFTWARE MAINTENANCE AND SUPPORT SERVICES

BlueConduit's standard maintenance and associated support services for the Software ("Maintenance and Support") are described in Schedule B attached hereto. Any software, bug fixes, documentation, or other items provided as part of Maintenance and Support will automatically be licensed to Licensee under this Agreement. Maintenance and Support is included in the License Fees.

### 5. CONSULTING, IMPLEMENTATION, AND TRAINING SERVICES

If the parties execute a Statement of Work or Order Schedule for Consulting Services under this Agreement, then Schedule D will apply and BlueConduit shall provide the Consulting Services described in that Statement of Work or Order Schedule under the terms and conditions of Schedule F and this Agreement. "Statement of Work" means a mutually executed statement of work defining the Consulting Services that BlueConduit shall provide to Licensee. Consulting Services will be performed on a time and materials basis, plus reasonable out-of-pocket travel expenses and any other project expenses. The fees for Consulting Services will be as listed in the Statement of Work/Order Schedule.

### 6. CONFIDENTIALITY

In the course of performing under this Agreement, either party (the "Disclosing Party") may provide Confidential Information to the other party (the "Recipient"). For the purposes of this Agreement, "Confidential Information" means all (i) technical and non-technical information including patent, trade secret and proprietary information, techniques, sketches, drawings, models, inventions, know-how, processes, apparatus, equipment and algorithms, and (ii) information relating to costs, prices, names, finances, marketing plans, business opportunities, personnel, research, development or know-how; provided that information is designated by the Disclosing Party as confidential in writing or, if disclosed orally, is identified as confidential at the time of disclosure. All technical and non-technical information related to the Software shall be deemed to be the Confidential Information of BlueConduit. All of Licensee's non-public business information shall be deemed to be Confidential Information of Licensee.

The Recipient, during and after the term of this Agreement: (a) shall use the same level of care to protect the confidentiality of the Disclosing Party's Confidential Information as it does to protect its own Confidential Information, but not less than a reasonable degree of care; (b) shall not use any of the Disclosing Party's Confidential Information except for the purpose of fulfilling its obligations or exercising its rights under this Agreement; (c) shall not, or permit others to, disclose, duplicate, transfer, sell, lease, or otherwise make any Disclosing Party Confidential Information available to others without the prior written consent of the Disclosing Party; and (d) shall not remove, or permit to be removed, any notice indicating the confidential nature of the Disclosing Party's Confidential Information.

The Recipient shall return the Disclosing Party's Confidential Information at the earlier of the termination of this Agreement or upon the request of the Disclosing Party, except that the Recipient may retain a limited number of electronic backup copies of the Confidential Information as are automatically created and retained by its standard backup processes and systems. The Recipient shall comply with its nondisclosure obligations under this Section with regard to these copies and shall destroy them in accordance with its normal destruction processes.

The Recipient will not be obligated under this Section for information that: (A) is or becomes generally known or available through no act, or failure to act, of the Recipient; (B) is independently developed by the Recipient without use or reference to the Disclosing Party's Confidential Information; (C) is lawfully obtained by the Recipient from a third party who has the right to make such disclosure; or (D) is approved in writing by the Disclosing Party for disclosure.

If the Recipient receives a request to disclose all or any part of the Disclosing Party's Confidential Information by a subpoena or order issued by a court or other governmental agency, to the extent permitted by applicable law, the Recipient shall: (a) immediately notify the Disclosing Party of the existence, terms and circumstances surrounding the request; (b) consult with the Disclosing Party on the advisability of taking legally available steps to resist or narrow the request; and (c) if disclosure is required, cooperate as requested by the Disclosing Party, at the Disclosing Party's expense, to obtain an order or other reliable assurance that confidential treatment will be accorded to the portion of Confidential Information as the Disclosing Party may designate.

After the Effective Date, the parties shall treat any information that was previously disclosed under any standalone non-disclosure or confidentiality agreement between them (the "Existing NDA") in accordance with this Section; the Existing NDA is hereby terminated and of no further force or effect.

### 7. LIMITED WARRANTY, REMEDY, AND DISCLAIMER

BLUECONDUIT WARRANTS THAT FOR A PERIOD OF NINETY (90) DAYS AFTER THE EFFECTIVE DATE THE SOFTWARE WILL PERFORM SUBSTANTIALLY IN ACCORDANCE WITH ITS

DOCUMENTATION. (THE PARTIES ACKNOWLEDGE THAT THEIR RIGHTS AND OBLIGATIONS REGARDING SOFTWARE PERFORMANCE AFTER THIS PERIOD ARE GOVERNED BY SECTION 4 (SOFTWARE MAINTENANCE AND SUPPORT SERVICES).) BLUECONDUIT DOES NOT WARRANT THAT THE OPERATION OF THE SOFTWARE WILL BE COMPLETELY UNINTERRUPTED OR ERRORFREE. LICENSEE MUST PROVIDE A DETAILED WRITTEN NOTICE OF ANY ALLEGED WARRANTY FAILURE PROMPTLY WITHIN THE WARRANTY PERIOD. LICENSEE MUST PROVIDE A DETAILED WRITTEN NOTICE OF ANY ALLEGED WARRANTY FAILURE PROMPTLY UPON ITS OCCURRENCE AND, IN ANY EVENT, WITHIN THE WARRANTY PERIOD.

BLUECONDUIT'S SOLE OBLIGATION AND LICENSEE'S EXCLUSIVE REMEDY FOR ANY FAILURE OF THIS WARRANTY IS THE CORRECTION OR REPLACEMENT, AT BLUECONDUIT'S OPTION, OF THE NONCONFORMING SOFTWARE.

TO THE MAXIMUM EXTENT PERMITTED BY LAW, THE SOFTWARE IS "AS IS" AND THE FOREGOING LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS, IMPLIED OR STATUTORY, AND BLUECONDUIT DISCLAIMS ANY AND ALL IMPLIED WARRANTIES OR ANY INCLUDING WITHOUT LIMITATION IMPLIED WARRANTY CONDITIONS, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, NONINFRINGEMENT, OR ARISING FROM A COURSE OF DEALING, USAGE OR TRADE PRACTICE, REGARDLESS OF WHETHER BLUECONDUIT KNOWS OR HAD REASON TO KNOW OF LICENSEE'S PARTICULAR NEEDS. LICENSEE AGREES AND ACKNOWLEDGES THAT EXCEPT AS EXPRESSLY PROVIDED IN THIS AGREEMENT, LICENSEE HAS NOT RELIED ON ANY EXPRESS OR IMPLIED, WRITTEN OR ORAL REPRESENTATION OR WARRANTY AS AN INDUCEMENT TO ENTER INTO THIS AGREEMENT.

### 8. INFRINGEMENT INDEMNITY

BlueConduit will defend and indemnify Licensee, and its directors, officers, employees and agents, at BlueConduit's expense, against any third-party claim or suit against Licensee based on an alleged violation of a trade secret, patent or copyright that arises out of Licensee's use of the Software in accordance with this Agreement, and BlueConduit will pay all costs, settlements, or judgments finally awarded, provided (i) Licensee gives BlueConduit prompt written notice of any claim; (ii) BlueConduit has the right to control the defense of the litigation; and (iii) Licensee takes all such actions in connection with such claim as BlueConduit may reasonably request, at BlueConduit's expense. If a judgment is obtained against Licensee's use of any part of the Software, or if BlueConduit believes that there is a likelihood of a claim of infringement, BlueConduit may, at BlueConduit's option and expense: (x) modify or substitute the affected Software (but provide Licensee with substantially the same functionality); (y) obtain the right to Licensee's continued use; or (z) terminate the license and take back the affected Software. In the event of such termination, BlueConduit will refund the License Fees paid for the affected Software for the balance of the applicable License Term.

THE RIGHTS GRANTED TO LICENSEE UNDER THE PARAGRAPH ABOVE WILL BE LICENSEE'S EXCLUSIVE REMEDY AND BLUECONDUIT'S SOLE OBLIGATION AND LIABILITY FOR ANY ALLEGED INFRINGEMENT OF A TRADE SECRET, PATENT, COPYRIGHT, OR OTHER PROPRIETARY RIGHT. BLUECONDUIT HAS NO LIABILITY TO LICENSEE, INCLUDING UNDER THE PARAGRAPH ABOVE, FOR ANY CLAIM OF INFRINGEMENT CAUSED BY: (A) MODIFICATION OF THE SOFTWARE WITHOUT THE APPROVAL OF BLUECONDUIT; (B) ANY LICENSEE OR THIRD-PARTY APPLICATION OR OTHER TECHNOLOGY; (C) COMPLIANCE WITH LICENSEE'S DESIGN REQUIREMENTS OR SPECIFICATIONS; (E) USE OF SOFTWARE OTHER THAN AS PERMITTED UNDER THIS AGREEMENT, OR IN A MANNER FOR WHICH IT WAS NOT INTENDED

### 9. LIMITATION OF LIABILITY

IN NO EVENT SHALL BLUECONDUIT BE LIABLE FOR ANY INDIRECT, INCIDENTAL, CONSEQUENTIAL, SPECIAL, RELIANCE, OR PUNITIVE DAMAGES, OR LOST OR IMPUTED PROFITS OR LOST DATA ARISING FROM OR RELATING TO THIS AGREEMENT. BLUECONDUIT'S AGGREGATE, CUMULATIVE LIABILITY, REGARDLESS OF THE FORM OF ANY CLAIM OR ACTION OR THEORY OF LIABILITY (INCLUDING, WITHOUT LIMITATION, CONTRACT, TORT, OR WARRANTY) ARISING FROM OR RELATING TO THIS AGREEMENT, THE SOFTWARE, OR ANY RELATED SERVICE, SHALL NOT EXCEED AND BE LIMITED TO DIRECT DAMAGES IN THE AMOUNT EQUIVALENT TO THE LICENSE FEES ACTUALLY RECEIVED BY BLUECONDUIT FROM LICENSEE DURING THE ONE-YEAR PERIOD PRECEDING THE FIRST ACT GIVING RISE TO LIABILITY. THE

LIMITATIONS AND EXCLUSIONS SET FORTH IN THIS SECTION APPLY TO ALL CLAIMS OR CAUSES OF ACTION ON WHATEVER BASIS AND UNDER WHATEVER THEORY BROUGHT AND IRRESPECTIVE OF WHETHER BLUECONDUIT HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH CLAIM. THESE LIMITATIONS OF LIABILITY ARE INDEPENDENT OF ANY EXCLUSIVE REMEDIES FOR BREACH OF WARRANTY IN THIS AGREEMENT, AND WILL SURVIVE AND APPLY NOTWITHSTANDING THE FAILURE OF ESSENTIAL PURPOSE OF ANY SPECIFIED REMEDIES.

Nothing in this Section is intended to exclude or limit any liability that cannot be excluded or limited under the governing law.

### 10. FORCE MAJEURE

BlueConduit will not be responsible for any delay or failure in performance caused by acts of God or any government or any other cause beyond BlueConduit's reasonable control.

### 11. ASSIGNMENT

This Agreement shall be binding upon and inure to the benefit of each of the parties hereto and each of their authorized and respective successors and assigns. Either party may assign this Agreement as part of the sale of that part of its business which includes the Software, or pursuant to any merger, consolidation or other reorganization, upon notice to the other party. Any other assignment of this Agreement requires the agreement of the other party, which shall not unreasonably be withheld. An assignee of either party, if authorized hereunder, shall have all of the rights and obligations of the assigning party set forth in this Agreement. Any purported assignment in violation of this Section is null, void, and without effect.

### 12. NOTICES

All notices required or permitted to be given by one party to the other under this Agreement shall be sufficient if sent by personal delivery, overnight delivery service, or certified mail, return receipt requested, to the parties at the respective addresses set forth above or to such other address as the party to receive the notice has designated by notice to the other party.

### 13. GOVERNING LAW

This Agreement shall be governed by and construed in accordance with the laws of the State of Michigan without regard to principles of conflict of laws. The parties irrevocably submit to the exclusive jurisdiction of any state or federal court located in the Eastern District of Michigan over any suit, case, or controversy related to or arising from this Agreement. With respect to any action arising under or related to this Agreement, the parties hereto each hereby: (i) agrees that it has sufficient contacts with Michigan to subject it to the personal jurisdiction of the state and federal courts in the Eastern District of Michigan; (ii) agrees that venue properly lies in Michigan; (iii) waives and agrees not to assert any claim that it is not subject personally to the jurisdiction of the above-named courts; such action should be dismissed on grounds of lack of venue or forum non conveniens; should be transferred to any court other than the above-named courts; should be stayed by reason of the pendency of some other proceeding in any court other than the above-named courts; (iv) consents and agrees that service of process may be made in any manner permitted by law or by registered or certified mail, return receipt requested, at its principal place of business; and that service made in accordance with the foregoing is reasonably calculated to give actual notice of any such action; and (v) waives and agrees not to assert any claim that service of process made in accordance with the foregoing does not constitute good and sufficient service of process.

### 14. SEVERABILITY

In case any one or more of the provisions contained in this Agreement shall, for any reason, be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect the other provisions of this Agreement, and the provision so held shall be modified automatically so to be valid or enforceable and to as nearly as possible reflect the intent of the parties. If moreover, any one or more of the provisions contained in this Agreement shall for any reason be held to be excessively broad as to duration, geographical scope, activity or subject, it shall be construed by limiting and reducing it, so as to be enforceable to the extent compatible with the applicable law as it shall then appear.

### 15. NO WAIVER

No waiver by any party of any breach of this Agreement shall be a waiver of any preceding or succeeding breach. No waiver by any party of any right under this Agreement shall be construed as a waiver of any other right.

### **16. AUDIT**

Upon thirty (30) days' notice to Licensee and no more than once per year, BlueConduit will have the right to conduct an on-site audit during Licensee's normal business hours to verify compliance with the terms and conditions of the Agreement. Licensee shall cooperate with BlueConduit by: (a) making applicable records available; (b) providing copies of the records requested; and (c) directing all agents to cooperate.

### 17. PUBLICITY

- (i) Licensee authorizes BlueConduit to use Licensee's name and logo in BlueConduit's customer list.
- (ii) Licensee shall, within thirty (30) days after execution of this Agreement, cooperate with BlueConduit to issue a joint press release announcing the contract award and intended use and value to be derived from Licensee's use of the Software.

### 18. SAAS LICENSE

if the Type of License selected in the Order Schedule includes a SaaS Subscription, then the terms of Schedule C shall be incorporated and included in this Agreement.

### 19. NO THIRD-PARTY BENEFICIARIES

This Agreement is an agreement between BlueConduit and Licensee, and confers no rights upon any of the parties' employees, agents, contractors or customers, or upon any other person or entity.

### 20. COMPLETE AGREEMENT

This Agreement, including all Schedules and Statements of Work hereto, is the final, complete and exclusive agreement of the parties with respect to the subject matter hereof and supersedes and merges all prior and contemporaneous discussions or agreements (whether written or oral) between the parties regarding such subject matter. No modification of or amendment to this Agreement, nor any waiver of any rights under this Agreement, will be effective unless in writing and signed by both parties. In the event Licensee issues a purchase order or other document covering the subject matter of this Agreement, it is agreed that such purchase order or document is for Licensee's internal purposes only, any terms or conditions on a purchase order in any way different from or in addition to the terms and conditions of this Agreement will have no effect, and BlueConduit hereby rejects these terms and conditions.

### 21. SURVIVAL

Sections 3 (Term and Termination), 6 (Confidentiality), 8 (Infringement Indemnity), 9 (Limitation of Liability), 12 (Notices), 13 (Governing Law), and 21 (Survival), will survive any termination or expiration of this Agreement.

### 22. COUNTERPARTS; ELECTRONIC COPIES

This Agreement may be signed in one or more counterparts, each of which is an original, and all of which together constitute only one agreement between the parties. Delivery of an executed counterpart by facsimile, electronic mail in portable document format (.pdf), or by any other electronic means intended to preserve the original graphic and pictorial appearance of a document, has the same effect as delivery of an executed original of this Agreement.

### 23. AUTHORIZED SIGNATORIES

Each individual below represents and warrants that he or she has the authority to execute this Agreement and bind its employer to the provisions of this Agreement.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the Effective Date, with full knowledge of its content and significance and intending to be legally bound by the terms hereof.

BLUECONDUIT	LICENSEE	
Authorized Signature	Authorized Signature	
Print Name and Title	Print Name and Title	

### ORDER SCHEDULE A-1 (All amounts are in USD)

This Order Schedule A-1 ("Schedule A-1"), effective as of [\_\_\_\_\_] ("Effective Date"), is being submitted under the terms and conditions of the [\_\_DATE OF MLA\_\_] Master License Agreement ("Agreement") between Abernethy Schwartz Partners LLC ("BlueConduit") and [\_\_\_\_\_\_], ("Licensee"). Unless specifically defined in this Order Schedule or unless the context indicates otherwise, all terms shall have the same meaning as defined in the Agreement.

The Software purchased under this Order Schedule is as follows, and as specified in the product Documentation:

- 1. BlueConduit LCR and LSLR Platform
- 2. Documentation: Online in-app documentation provided
- 3. License Key: Electronic license key provided annually

### Definitions:

<u>"Authorized End User"</u> means a single, named Licensee employee, under Licensee's control, that is authorized to use BlueConduit's Software and agrees to abide by the terms of this Agreement.

The Software license purchased under this Order Schedule (the "Schedule A-1 License") is as follows:

- 1. BlueConduit LCR and LSLR Platform Licensed Components
  - Customer Onboarding and Initial Data Upload: BlueConduit will onboard licensee and provide guidance on the data upload process, which will create a repository of service line information that will be accessible through the Platform.
  - Recommended Inspection List: BlueConduit will generate a list of homes for licensee to conduct initial inspections to verify the public and private side service line materials. This list will be accessible through the Platform.
    - The cost of the property inspections will be assumed by licensee.
  - Inventory Compliance: The Platform will allow licensee to view, edit, and update service line materials for every service line in the distribution system. The Platform will allow users to create reports and files that help satisfy regulatory requirements.
  - Prioritized Replacement List: Home-level service line material predictions will be available in the Platform. These predictions may be viewed in list form or via a GIS overlay.

- **Updated Prioritized Lists:** Through the platform, BlueConduit will update material predictions as parcel-level inspections/replacements data is recorded into the Data Collection System.
- Interactive service line map: BlueConduit will create a public-facing map showing the service line materials data. This map will support EPA compliance for a publicly accessible inventory.
- **Data Collection:** Data collection capabilities enable the utility and its contractors to seamlessly field-collect data into the database. This includes the following:
  - o Clear, easy-to-use, secure data input and data management
  - o Data validation and consistent formatting
  - o Enable contractors and utility employees to input data from fieldwork
  - Type of License: SaaS Annual Subscription
  - · Number of Licenses: One (1)

The term license period is 24 months, beginning on the Effective Date, and ending 24 months later, ("License Period"), and the license fee is \$5400 ("License Fee") for the Schedule A-1 Licenses.\*\*

### Payment Terms:

BlueConduit or its affiliate shall invoice Licensee as follows:

- 1. \$10,500 upon execution of this Schedule net 30 days, with payment due within 30 days of Effective Date. This includes:
  - \$7,500 for Onboarding/Data Validation
  - \$3,000 for YR1 SaaS
- 2. \$2,400 for YR2 SaaS on one-year anniversary, with payment due (Effective Date + 1 Year)

### Optional:

3. \$2,400 for YR3 SaaS on the two-year anniversary, with payment due (Effective Date + 2 Years)

### Invoicing details:

Bill to Address:	2531 Jackson Ave #337, Ann Arbor, MI 48103
Ship to Address:	

Accounts Payable Contact		Purchasing/Renewal Contact	
Name	Ashley Lewis	Name	Nya Dreyfuss
Email	ashley@blueconduit.com	Email	nya@blueconduit.com
Phone	301-257-8961	Phone	216-206-7829

s a	Purchase	Order	Required:	Yes*	No E
3 a	Lululase	Oluci	r veuun eu.	163	INO

Is a Sales Tax Exemption or Direct Pay Certificate Required: Yes\* ☐ No ☒

<sup>\*</sup>Unlicensed Software. Licensee has a license to use only the Capabilities specifically identified herein. Licensee may have access to unlicensed Capabilities, but this access does not imply a license to these unlicensed Capabilities and Licensee shall not use them in any manner.

\*If yes, please send the Purchase Order and/or Certificate to Accounts.Receivable@BlueConduit.com

	Invoice Submission Method (complete as appropriate)	
Email		
Portal		
Mailing Address		 

### Renewal Terms:

- At least 90 days prior to the end of the then-current License Period, BlueConduit may provide
  written notice of the renewal terms for the Schedule A-1 Licenses (including the price increase,
  payment terms, and the extended License Period).
- Licensee has 30 days from the notice date to provide a written objection, and if it does not do so
  the renewal terms will be effective and the License Period will be extended as specified in
  BlueConduit's notice.

Authorized Signatories: Each individual below represents that he or she has the authority to execute this Order Schedule and bind its employer to the provisions of this Schedule A-1.

IN WITNESS WHEREOF, the parties have executed this Schedule A-1 as of the Effective Date above.

BLUECONDUIT	LICENSEE	
Authorized Signature	Authorized Signature	
Print Name and Title	Print Name and Title	
Date	Date	

### SCHEDULE B MAINTENANCE AND SUPPORT SERVICES

### 1. DESCRIPTION OF SUPPORT

### A. Remedial Support

Licensee may contact BlueConduit's Support Center HOTLINE for Remedial Support (as defined herein), via telephone at (734) 519-0675 and/or via email at <a href="Support@BlueConduit.com">Support@BlueConduit.com</a> (collectively the "Support Center HOTLINE") to request Remedial Support of the Software. This request shall include an estimate of the severity level. The Support Center HOTLINE operates during business hours, 8 AM – 5 PM Eastern Time (US), Monday through Friday, excluding legal holidays. Extended coverage is available for an additional fee. The Support Center HOTLINE may also be used to notify BlueConduit of problems associated with the Software.

Upon receipt by BlueConduit of notice from Licensee through the Support Center HOTLINE that the Software has failed to perform substantially in accordance with the Documentation (an "Error"), BlueConduit will provide remedial support to address such Errors in accordance with the severity levels defined in this section ("Remedial Support"). BlueConduit will determine the actual severity level and respond, with appropriately qualified personnel, and rectify such Error in accordance with the severity of the problem, as defined below:

Severity 1: Produces an emergency situation in which the Software is inoperable or fails catastrophically.

RESPONSE: BlueConduit will provide a response by a qualified member of its staff to begin to diagnose and to correct a Severity 1 problem as soon as reasonably possible, but in any event a response via telephone or email will be provided within two (2) business hours.

SOLUTION: BlueConduit will continue to provide commercially reasonable efforts to resolve Severity 1 problems in less than two (2) business days provided that Licensee responds promptly to BlueConduit's Support Center HOTLINE questions related to the problem. The resolution will be delivered to Licensee as a workaround or as an emergency Software fix ("Workaround"). If BlueConduit delivers an acceptable Workaround, the severity classification will drop to Severity 2 or 3.

**Severity 2:** Produces a detrimental situation in which performance (throughput or response) of the Software degrades substantially under reasonable loads, such that there is a severe impact on use; the Software is usable, but materially incomplete; one or more mainline functions or commands is inoperable; or the use is otherwise significantly impacted.

RESPONSE: BlueConduit will provide a response by a qualified member of its staff to begin to diagnose and to correct a Severity 2 problem as soon as reasonably possible, but in any event a response via telephone or email will be provided within four (4) business hours.

SOLUTION: BlueConduit will exercise commercially reasonable efforts to resolve Severity 2 problems within five (5) business days provided that Licensee responds promptly to BlueConduit's Support Center HOTLINE questions related to the problem. The resolution will be delivered to Licensee in the same format as Severity 1 problems. If BlueConduit delivers an acceptable Workaround for a Severity 2 problem, the severity classification will drop to Severity 3.

**Severity 3:** Produces an inconvenient situation in which the Software is usable, but does not provide a function in the most convenient or expeditious manner, and the Authorized End User suffers little or no significant impact.

RESPONSE: BlueConduit will provide a response by a qualified member of its staff to begin to diagnose and to correct a Severity 3 problem as soon as reasonably possible, but in any event a response via telephone or email will be provided within four (4) business hours.

SOLUTION: BlueConduit will exercise commercially reasonable efforts to resolve Severity 3 problems within five (5) business days provided that Licensee responds promptly to BlueConduit's Support Center HOTLINE questions related to the problem. BlueConduit will exercise commercially reasonable efforts to resolve Severity 3 problems in future maintenance releases.

In the event BlueConduit fails to meet the resolution times established above for Severity levels 1, 2 and 3 for Remedial Support, Licensee shall have the right to escalate the unresolved Error in the Software and/or Services to BlueConduit's VP of Global Support. Such escalation request will be submitted by Licensee to BlueConduit's Support Center HOTLINE.

### B. Maintenance

- 1. At no additional costs for Licensee and Licensee's Affiliates, BlueConduit will provide Software updates and enhancements to Licensee as the same are offered by BlueConduit to its licensees of the Software under maintenance generally ("Updates").
- 2. Updates will be provided on an as-available and business-ready basis, unless explicitly requested by Licensee, and may include the items listed below:
  - Bug fixes;
  - Performance enhancements to Software.

### C. Hotline Support

Licensee may contact BlueConduit's Support Center HOTLINE for Hotline Support (as defined below) in the event their Authorized End User(s) are having problems or difficulties with the Software, such as creating or solving models. Licensee and Licensee's Affiliates shall appoint no more than eight (8) contact persons total (not exceeding the number of Licenses) being employees of Licensee or Licensee's Affiliates, who are Authorized End User(s) with Desktop or SaaS Designer (Modelers, App Builders, and Visualizers) licenses ("Product Administrators") to request support of the Software.

Excluding Remedial Support (as defined above), general questions associated with the use of the Software and Consulting Services, shall be defined as "Hotline Support" and shall be deemed as Severity 3 or lower, as per the Severity levels outlined in Section B above. BlueConduit shall only accept and respond to Hotline Support requests coming from Product Administrators. Licensee acknowledges and accepts that any problems or requests from the SaaS User or Viewer Authorized End User(s) shall be handled by Licensee internally and addressed to the Licensee's SaaS Authorized End User(s). BlueConduit shall respond to a reasonable number of Hotline Support requests from Licensee's Product Administrators, at BlueConduit's discretion. BlueConduit reserves the right to limit the number of or decline any requests and charge Licensee for such support. Licensee acknowledges that this Hotline Support is meant to be occasional, short-term help with problems or difficulties related to use of the Software and that it is not designed to replace any Consulting Services or to act as comprehensive or unlimited support.

Hotline Support excludes Consulting Services, as defined in the Agreement, and BlueConduit reserves the right to charge Licensee for any such number of hours of Consulting Services that Licensee incurs through the Hotline Support. Any additional support time that is required will be charged at an hourly rate, subject to Licensee's written approval being received before it is incurred.

### 2. LIMITATIONS ON MAINTENANCE AND SUPPORT

- A. BlueConduit will provide support services for the current release of Software
- **B**. Support services do not include resolution of issues if and to the extent caused by or resulting from Licensee's other software, network connectivity, infrastructure, or similar issues. Without limiting the foregoing, BlueConduit shall have no obligation to provide support, if and to the extent (i) the use of the Software is not in accordance with the Agreement, the system requirements, or the operation instructions, or (ii) problems result from the improper use by Licensee unless Licensee agrees in

advance in writing to bear the extra costs for such support, or (iii) system failures or interruptions result from services or conduct of a third-party.

- D. Support services do not include any of the following: (1) custom programming services; (2) on-site support, (3) training; (4) out-of-pocket and reasonable expenses if and to the extent these expenses relate to on-site support.
- E. BlueConduit will make recommendations to Licensee on possible methods to improve Licensee knowledge such as training, tutorials, etc., that may or may not require additional cost for Licensee.

### SUBSCRIPTION TERMS for SaaS Products

- Standard Support Services. Direct support for the SaaS Products is limited to the list of named SaaS
  Product Administrators, as defined in Schedule B, who will collect and facilitate support requests from
  Licensee's SaaS Products users, and interface directly with BlueConduit's SaaS Products support
  contact.
- 2. Updates and Maintenance for SaaS Products. BlueConduit may perform scheduled maintenance for SaaS Products that will be announced at least one (1) day in advance; and during such time SaaS Products will be unavailable to Licensee. BlueConduit may perform additional unscheduled updates, repairs or maintenance, which may temporarily degrade the quality of the SaaS Products or result in a partial or complete outage of the SaaS Products. BlueConduit shall endeavor to provide notice of such activities, however, BlueConduit provides no assurance that Licensee will receive advance notification.
- 3. **Disclaimers.** LICENSEE AGREES THAT THE OPERATION AND AVAILABILITY OF THE SYSTEMS USED TO ACCESS AND INTERACT WITH THE SAAS PRODUCTS, INCLUDING TELEPHONE, COMPUTER NETWORKS, AND THE INTERNET, OR TO TRANSMIT INFORMATION, CAN BE UNPREDICTABLE AND MAY, FROM TIME TO TIME, INTERFERE WITH OR PREVENT ACCESS TO OR USE OR OPERATION OF THE SAAS PRODUCTS. BLUECONDUIT SHALL NOT BE LIABLE FOR ANY SUCH INTERFERENCE WITH OR PREVENTION OF LICENSEE'S ACCESS TO OR USE OF THE SAAS PRODUCTS OR THE IMPACT SUCH INTERFERENCE OR PREVENTION MAY HAVE ON LICENSEE'S ABILITY TO USE THE SAAS PRODUCTS. BLUECONDUIT SHALL NOT BE RESPONSIBLE FOR THE DELETION, CORRUPTION, DESTRUCTION, DAMAGE, LOSS OR FAILURE TO STORE ANY LICENSEE DATA.
- 4. Licensee's Responsibilities. Licensee shall: (a) notify BlueConduit immediately of any unauthorized use of any password or account or any other known or suspected breach of security; and (b) report to BlueConduit immediately, and use reasonable efforts to stop immediately, any copying or distribution of the SaaS Products that is known or suspected by Licensee. Licensee shall designate and keep in place a qualified individual to create user accounts and otherwise administer Licensee's use of the SaaS Products (an "Authorized Administrator").
- 5. Audit. Upon request by Licensee, BlueConduit agrees to complete, within forty-five (45) days of receipt, an audit questionnaire provided by Licensee or Licensee's designee regarding BlueConduit's information security program. BlueConduit will maintain annual SSAE-16 Type II audit reports with SOC2 Type II audit reports on availability, security, confidentiality, privacy and processing integrity (the "Audit Reports") for datacenters that provide the Services (including storage of any Licensee data) to Licensee. Upon Licensee's request, BlueConduit shall provide Licensee with the Audit Reports for its review.

### SCHEDULE D Terms for Consulting Services

These terms apply to all Consulting Services and Sections 1 through 4 below supersede the corresponding terms in the main body of this Agreement.

### 1. TERMINATION OF CONSULTING RELATIONSHIP

- a. **By the Licensee or BlueConduit.** At any time, either the Licensee or BlueConduit may terminate, without liability, the Consulting Services for any reason, with or without cause, by giving (thirty) 30 days advance written notice to the other party.
- b. **Termination obligations.** In the event of termination, Licensee shall pay BlueConduit for all performed Consulting Services and approved travel expenses up to the date of termination.

### 2. LIMITED WARRANTY, REMEDY, AND DISCLAIMER

BLUECONDUIT WARRANTS THAT CONSULTING SERVICES WILL BE PERFORMED BY REASONABLY SKILLED PERSONNEL IN A PROFESSIONAL AND WORKMANLIKE MANNER. LICENSEE MUST PROVIDE A DETAILED WRITTEN NOTICE OF ANY ALLEGED WARRANTY FAILURE WITHIN THIRTY (30) DAYS AFTER THE NONCONFORMING SERVICE IS PERFORMED, AND LICENSEE'S RIGHT TO MAKE SUCH CLAIM WILL TERMINATE AFTER THAT PERIOD. BLUECONDUIT'S SOLE OBLIGATION AND LICENSEE'S EXCLUSIVE REMEDY FOR ANY FAILURE OF THIS WARRANTY IS THE REPERFORMANCE OF THE NONCONFORMING SERVICES. IF BLUECONDUIT IS UNABLE TO REPERFORM SERVICES IN A CONFORMING MANNER THEN BLUECONDUIT WILL REFUND THE FEES PAID FOR THE NONCONFORMING SERVICES.

TO THE MAXIMUM EXTENT PERMITTED BY LAW, THE FOREGOING LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, AND THE PARTIES DISCLAIM ANY IMPLIED WARRANTIES OR CONDITIONS, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, OR NONINFRINGEMENT.

### 3. LIMIT OF LIABILITY

IN NO EVENT SHALL BLUECONDUIT BE LIABLE FOR ANY INDIRECT, INCIDENTAL, CONSEQUENTIAL, SPECIAL, RELIANCE, OR PUNITIVE DAMAGES, OR LOST OR IMPUTED PROFITS OR LOST DATA ARISING FROM OR RELATING TO THIS AGREEMENT. BLUECONDUIT'S AGGREGATE, CUMULATIVE LIABILITY REGARDLESS OF THE FORM OF ANY CLAIM OR ACTION OR THEORY OF LIABILITY (INCLUDING, WITHOUT LIMITATION, CONTRACT, TORT, OR WARRANTY) ARISING FROM OR RELATING TO CONSULTING SERVICES UNDER A STATEMENT OF WORK SHALL BE LIMITED TO DIRECT DAMAGES IN THE AMOUNT EQUIVALENT TO THE CONSULTING SERVICES FEES ACTUALLY RECEIVED BY BLUECONDUIT FROM LICENSEE UNDER THAT STATEMENT OF WORK. THE LIMITATIONS AND EXCLUSIONS SET FORTH IN THIS SECTION APPLY TO ALL CLAIMS OR CAUSES OF ACTION ON WHATEVER BASIS AND UNDER WHATEVER THEORY BROUGHT AND IRRESPECTIVE OF WHETHER BLUECONDUIT HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH CLAIM. THESE LIMITATIONS OF LIABILITY ARE INDEPENDENT OF ANY EXCLUSIVE REMEDIES FOR BREACH OF WARRANTY IN THIS AGREEMENT, AND WILL SURVIVE AND APPLY NOTWITHSTANDING THE FAILURE OF ESSENTIAL PURPOSE OF ANY SPECIFIED REMEDIES.

Nothing in this Section is intended to exclude or limit any liability that cannot be excluded or limited under the governing law.

### 4. INTELLECTUAL PROPERTY

a. Licensee Intellectual Property. Licensee shall maintain all ownership, rights, and title to its preexisting intellectual property and data, including without limitation, all works, inventions, methods, improvements, or derivatives ("Licensee Data").

b. BlueConduit Intellectual Property. The Parties acknowledge that BlueConduit may use preexisting proprietary computer software, methodology, techniques, software libraries, tools, algorithms, materials, products, services, training, ideas, skills, designs, know-how or other intellectual property owned by BlueConduit or its licensors, and BlueConduit may also create, author, or invent additional intellectual property based thereon, in the performance of the Consulting Services (all of the foregoing, the "BlueConduit Intellectual Property"). BlueConduit shall maintain all ownership, rights, and title to its BlueConduit Intellectual Property. Licensee agrees that all proprietary rights to the BlueConduit Intellectual Property, as it existed as of the date hereof and as it may be modified or created in the course of providing the Consulting Services, including patent, copyright, trademark, and trade secret rights, to the extent they are available, are the sole and exclusive property of BlueConduit, free from any claim or retention of rights thereto on the part of Licensee, and Licensee hereby assigns to BlueConduit any rights it may have or obtain in any of the foregoing.

### 5. INSURANCE

- a. BlueConduit shall maintain sufficient insurance coverage to enable it to meet its obligations created by this Agreement and by law. Without limiting the foregoing, to the extent this Agreement creates exposure generally covered by the following insurance policies, BlueConduit shall maintain, at its expense, at least the following insurance: (a) Commercial General Liability including (i) bodily injury, (ii) property damage, (iii) contractual liability coverage, and (iv) personal injury, in an amount not less than one million dollars (\$1,000,000) per occurrence; (b) Business Automobile Liability for hired and non-owned vehicles in an amount not less than one million dollars (\$1,000,000) for each accident; (c) Workers' Compensation at statutory limits; (d) Professional Liability covering errors and omissions and wrongful acts in the performance of the Consulting Services, in an amount not less than two million dollars (\$2,000,000) per occurrence; and (e) Cyber Liability in the amount of five million dollars (\$2,000,000).
- b. Specific Requirements. Upon Licensee's request, BlueConduit shall (a) cause each of these policies to name Licensee and its Affiliates and assignees as additional insureds, and (b) furnish to Licensee certificates of insurance and other documentation relating to the policies as Licensee may reasonably request.