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REPORT NAME: 2022 Natural Gas Safety Project Plan - Oregon

COMPANY NAME: Avista Utilities

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 Order Order 17-084  
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If Yes, enter docket number: UM 1722

Key words: Natural Gas Safety Project Plan

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- **Accident reports required by ORS 654.715.**



**Avista Corp.**

1411 East Mission P.O. Box 3727  
Spokane, Washington 9220-0500  
Telephone 509-489-0500  
Toll Free 800-727-9170

September 26, 2022

Oregon Public Utility Commission  
Filing Center  
201 High St SE Suite 100  
PO Box 1088  
Salem, OR 97301

RE: Avista Utilities 2021 Natural Gas Safety Project Plan

Avista Corporation, dba Avista Utilities (“Avista” or “Company”), submits its 2022 Natural Gas Safety Project Plan in compliance with Commission Order 17 084. Among other matters the Order requires natural gas companies to submit an annual “Safety Project Plan” (Plan) report to the Commission by September 30<sup>th</sup> of each year. The Order lays out the requirements of the Plan, which is to be provided to the Commission as an informational report only. The Company’s attached report satisfies these requirements, demonstrates Avista’s priority commitment to natural gas safety, and meets the objective of being informational and easy to understand for the public, our customers, and other regulatory stakeholders. If you have any questions regarding this filing, please contact Amanda Ghering at (509) 495-7950 or [amanda.ghering@avistacorp.com](mailto:amanda.ghering@avistacorp.com).

Sincerely,

*/s/ Shawn Bonfield*

Senior Manager, Regulatory Policy & Strategy



## Avista Utilities

# Natural Gas Safety Project Plan - Oregon



September 2022

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## **I. INTRODUCTION**

On March 6, 2017, the Oregon Public Utilities Commission (Commission) issued Order 17-084, which in part required each of the natural gas distribution companies serving customers in Oregon to file with the Commission by September 30<sup>th</sup> each year an annual “Safety Project Plan” (Plan).<sup>1</sup> The purpose of the Plan is to increase transparency into the investments made by each utility, based predominantly on achieving important safety objectives. More specifically, the Plan intends to achieve the following objectives:

1. Explain capital and operating expenses needed to mitigate safety issues identified by risk analysis or to comply with federal and state rules.
2. Demonstrate the utility’s commitment to safety and priority to its customers.
3. Provide a non-technical explanation of primary safety reports each utility is required to file with the Commission’s pipeline safety staff.
4. Identify major state and federal regulatory changes that impact the utility’s safety programs and investments.

In meeting these objectives, the Plan provides an annual “snapshot” of the utility’s expected investments in its identified safety programs along with the activities planned for each program over a period of 12 months. The Plan also includes a brief description of each safety program or initiative, the risks being addressed, a description of any supporting analysis, the costs and benefits, and an explanation of any program changes from the prior reporting year.

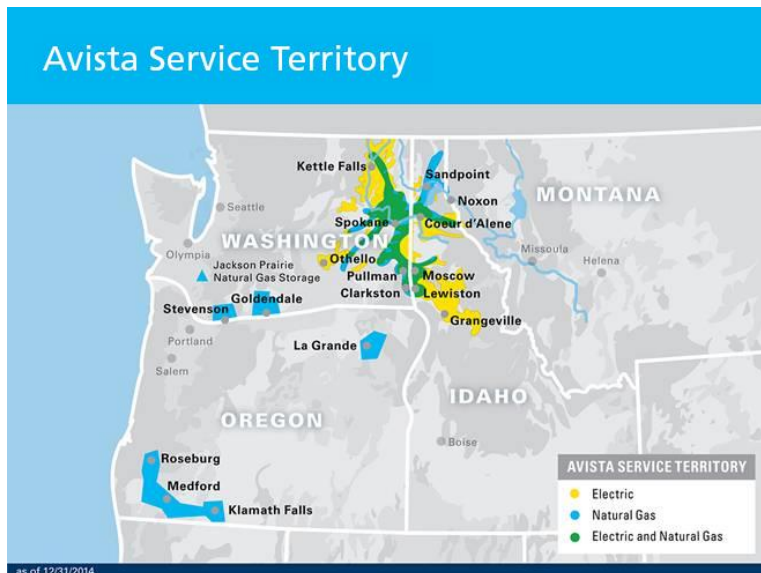
Importantly, the annual Plan is not intended to replicate the analysis performed to satisfy the utility’s Distribution and Transmission Integrity Management Plans (DIMP and TIMP). Neither will the Plan provide in-depth descriptions of the analytical methods used to evaluate safety risks or replicate filings each utility already makes with the Commission’s pipeline safety staff. In this respect, the annual Safety Project Plan has been deemed by the Commission to be an “informational report” to help the Commission better understand upcoming safety investments planned by each company, and as such, the Commission will not take any action on these informal plans. As detailed in Order No. 17-084, “the inclusion of a safety-related project in the Safety Project Plan (SPP) is not a prerequisite to recovery of the costs associated with that project in a

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<sup>1</sup> Order of the Public Utility Commission of Oregon in Docket UM 1722, Investigation into Recovery of Safety Costs by Natural Gas Utilities. March 6, 2017.

GRC. Further, the SPP process does not change the standard for a prudence review in a GRC, with respect to either the costs of the project or the determination to proceed with the project.”<sup>2</sup>

Avista serves approximately 365,000 natural gas customers in the states of Oregon, Washington and Idaho over an extensive service territory highlighted on the map to the right. The Company has served natural gas in Oregon since 1991 when it acquired the natural gas properties of Alltel/CP National in and around the communities of La Grande, Roseburg, Medford, and Klamath Falls.



## II. AVISTA’S PERSPECTIVE ON SAFETY INVESTMENTS

Providing service to its customers, Avista relies on complex infrastructure systems designed, built, operated, and maintained to achieve a range of important objectives. Nearly every infrastructure investment the Company makes has at least some relationship to providing “safe” and “reliable” service, though very few of them are made exclusively to achieve a safety or reliability objective.<sup>3</sup> For the purposes of this Plan the Company distinguishes between:

1. **Recognized Safety Programs** – Those investments made to comply with federal and state-mandated programs, and other programs that have a primary safety emphasis.
2. **Safety as a Key Factor** – Investments intended to achieve other objectives than safety but that have a strong emphasis on public, customer, and employee safety.
3. **Safety as a Minor Factor** – Programs with primary objectives other than safety.

<sup>2</sup> UM 1722, Order No. 17-084 at ¶24.

<sup>3</sup> For example, when Avista replaces worn equipment at the end of its useful life the new equipment is more safe and more reliable than the old, but the investments are made to meet the predominant objective of replacing plant based on asset condition. We say predominant because end of life asset replacements will generally be made as planned *regardless* of whether there is an attendant safety or reliability benefit. On the other hand, true safety and reliability investments are those that would likely *not be made* absent the safety or reliability objectives they are intended to achieve.

Consideration of safety is either not a factor or is only one of many considerations guiding the investment.

Avista has included Recognized Safety Programs and programs where Safety is a Key Factor in this Plan.

### **III. OVERARCHING FEDERAL SAFETY REGULATIONS**

Avista, like all other natural gas distribution utilities, is subject to a range of federal and state safety regulations, industry standards and practices, as well as its own operating requirements. While these regulations, rules, and standards are designed to achieve multiple objectives (e.g. environmental protection, security, and reliability), the safety of citizens, customers, and employees is a primary focus. The overarching rules governing pipeline safety are developed and implemented by the Pipeline and Hazardous Materials Safety Administration (PHMSA) of the U.S. Department of Transportation and are contained in the Code of Federal Regulations (CFR), Title 49, Parts 190-199. These federal regulations continuously evolve to address existing issues more effectively as well as new threats that continue to emerge over time. In addition to developing the rules, the agency also administers and enforces them. States such as Oregon are also engaged in the business of ensuring the safe operation of natural gas systems and play a companion role in the implementation and administration of these federal regulations.

**COVID-19 Impact Note:** Due to the unforeseen consequences of the COVID-19 pandemic, many of the safety programs and safety investments described in the following sections were negatively impacted by resource limitations, budget constraints, and safety restrictions in 2020 and 2021.

### **IV. RECOGNIZED SAFETY PROGRAMS**

#### ***Distribution and Transmission Integrity Management Plans***

In recent years, PHMSA has moved beyond the enforcement of individual rules to require natural gas utilities to conduct a standardized assessment of risks threatening the integrity of their pipeline systems. Known as the DIMP and TIMP, these requirements were enabled by amendments to the Federal Pipeline Safety Regulations on December 4, 2009, and December 15, 2003, respectively.



Distribution Integrity Management – The purpose of these plans is to enhance pipeline safety by identifying and reducing potential integrity risks on an operator’s natural gas distribution system. Operators must base their analysis on reasonably available information about their pipelines as the basis of informing their risk decisions. The rule, symbolized in the diagram at left, requires operators to prioritize the risks identified in their planning process and to focus remediation activities on those

that could result in an incident(s) that could cause serious consequences. Finally, the rule also requires that operators implement a program to provide greater assurance of the integrity of their pipeline systems. This requirement is designed to promote continuous improvement in pipeline safety by requiring operators to identify and invest in risk control measures that go beyond previously established regulatory requirements.

Avista’s DIMP - Managing the integrity, safety and reliability of gas distribution pipelines has always been a primary goal for Avista, ensuring design, construction, operations, and maintenance activities are compliant with state and federal requirements. Meeting these requirements is a key part of Avista’s goal to protect the health and safety of its customers, employees, and the communities we serve. Avista’s DIMP establishes the requirements for compliance with the regulations and addresses the following key elements:

- Knowledge
- Identify Threats
- Evaluate and Rank Risks
- Identify and Implement Measures to Address Risks
- Measure Performance, Monitor Results, and Evaluate Effectiveness
- Periodic Evaluation and Improvement
- Report Results



The results of Avista’s DIMP for its Oregon natural gas operations (including Transmission risks) have identified the following five priority risks (referred to as “sub-threats”) to Avista’s system.

Oregon Risk Ranking of Sub-Threats (Transmission & Distribution Combined)

1. Excavation Damage
2. Other Outside Force – Vehicle Damage to Aboveground Facilities
3. Natural Forces – Snow and Ice
4. Meter Set Assembly (MSA) Equipment
5. Incorrect Operations – Sewer Cross-bore

Transmission Integrity Management – As noted above, and as directed by the Pipeline Safety Act of 2002, PHMSA amended the Federal Pipeline Safety Regulations on December 15, 2003 by adding Subpart O – Gas Transmission Pipeline Integrity Management. The addition required operators of natural gas transmission pipelines to create a Transmission Integrity Management Program. The purpose of the program is to ensure the safe, reliable, and cost-effective transportation of natural gas for customers without adverse effects on the public, customers, employees, and the environment. This program provides for the comprehensive, integrated, and systematic management of pipeline integrity in high consequence areas (HCA) as a means to improve the safety of applicable pipeline systems.

As with Distribution Integrity Management, the Transmission Integrity Management Program provides the necessary framework for Avista to assess and mitigate risks in order to reduce both the likelihood and consequences of pipeline failures. This process enables the Company to effectively allocate resources to appropriate prevention, detection, and mitigation activities that will result in improved integrity and safety. The TIMP requires primary Company documents for the management of its natural gas system to be referenced and incorporated into the Plan, and as part of the Plan, procedures and standards are reviewed and modified as necessary. These primary documents include:

- Avista Utilities Gas Emergency and Service Handbook;
- Avista Utilities Gas Standards Manual;
- Avista Utilities Public Awareness Program; and

- Avista Utilities Operator Qualification Program.

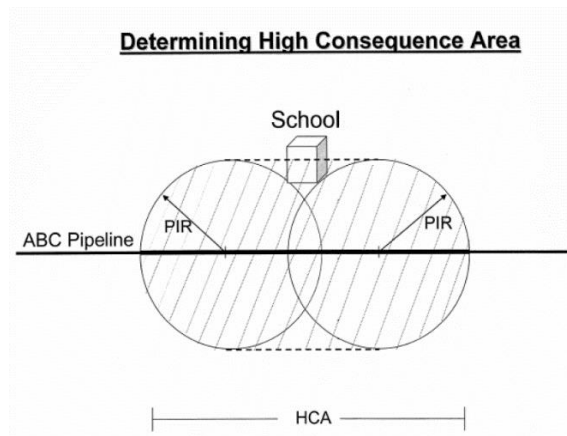
In the development and implementation of the TIMP, Avista has adopted a set of principles that guide the intent and specific details of the plan. These principles are summarized below:

- Functional requirements for integrity management shall be engineered into new pipeline systems from initial planning, design, material selection, installation and initial inspection and testing.
- System integrity requires commitment by all operating personnel using systematic, comprehensive, and integrated processes in order to safely operate and maintain the pipeline systems.
- The Integrity Management Program (IMP) will continuously evolve and improve, and is therefore, intended to be flexible. Periodic evaluations are conducted to ensure the program takes appropriate advantage of improvements in technologies, and that the program utilizes appropriate prevention, detection, and mitigation activities.
- The integration of information is recognized as a key component for managing system integrity. Avista is committed to analyzing all pertinent information in order to effectively manage pipeline integrity.
- Avista has developed a relative risk assessment methodology and uses that methodology to determine the types of adverse events or conditions that may impact pipeline integrity. The process is also used to rank the pipeline segments for further assessment by considering the likelihood and consequence of an adverse event.
- Avista is committed to staying abreast of new knowledge and technologies affecting pipeline integrity, evaluating those technologies, and implementing them where appropriate. Avista personnel attend meetings and conferences and perform literature searches in order to investigate and then evaluate the use of new technologies for specific application in the integrity management program.
- Avista has determined the set of performance measures that best serve the need for monitoring and evaluating the effectiveness of the integrity management program.
- Avista is committed to communicating the results of its integrity management activities to its stakeholders.

- Non-mandatory requirements from industry standards or other documents invoked by Subpart O (i.e., ASME B31.8S and NACE SP0502) are incorporated into the TIMP and implemented as recommended in the standard.

Avista’s DIMP and TIMP are submitted to the Oregon Commission’s pipeline safety staff each year.

Planned Activities for 2023 – Avista will continue its regular leak data gathering, review, and analyses for both distribution and transmission integrity management planning. For distribution, Avista is currently implementing a new probabilistic risk model provided by JANA, an integrity management consultant, which will be completed in 2023. Avista will complete its annual review and revisions to its accelerated actions in relation to the current leak data analysis and the new risk model and will publish these results in its annual distribution integrity management manual. For transmission, Avista will continue to work with Dynamic Risk as a consultant who performs the Company’s class location and high consequence area (HCA) analyses and its transmission risk analysis. An example of a high consequence area analysis is depicted in the following diagram.



Planned or Anticipated Changes to the Program for 2023 – Avista is currently implementing a new probabilistic risk model provided by JANA which will be completed in 2023. The new model will provide greater analysis into the risk associated with each gas asset and help in recommending future projects that will reduce the overall risk in Avista’s gas system and ideally prevent future leaks before they occur.

Expenses for preparing Avista’s DIMP and TIMP, as allocated to Oregon, are approximately \$300,000 for 2023. These expenditures fund the processing and preparation of the plans and producing the annual reports. Implementation of measures to address key threats are funded under the respective programs responsible for their implementation.

### ***Avista’s Excavation Damage Prevention Program***

As noted above, the number one safety and integrity threat to Avista’s natural gas system results from accidental damage to underground facilities, referred to as “dig-ins,” caused by third parties excavating in the vicinity of Avista’s underground pipelines. Avista and the natural gas industry are actively combatting this threat through a comprehensive public communication campaign known as the “811” or “Call Before You Dig” program. The purpose of Avista's Damage Prevention Program and customer awareness activities is to increase public and employee safety by reducing the number of hazardous excavation damages



to Avista's natural gas (and electric) facilities. Avista communicates, cooperates, and coordinates with government agencies, utilities, contractors, engineers, customers, and the general public through a membership in the “811 One-Call” centers and through other communication, education, and awareness initiatives. In addition to reducing the overall damage to Avista’s system, the Company also strives to meet the following objectives:

- Ensure adherence to federal and state regulations;
- Ensure adherence to Avista’s standards, policies, and procedures;
- Provide standby oversight during excavation near transmission, higher-pressure pipelines, and critical large diameter pipelines;
- Identify areas in Avista’s standards for damage prevention, such as locating, tracking of damages, and training that needs to be updated or clarified;
- Manage quality control of Avista’s contract locating services and monitor contract requirements for locators;

- Develop and provide training to increase awareness of the potential hazards to appropriate personnel and third-party contractors working near and around Avista facilities;
- Provide program data and updates to appropriate key stakeholders; and,
- Develop, analyze, and track performance metrics related to the program.

### Overview of Communications and Outreach

- Annual Excavator Letter and ‘Safe Excavation in Our Neighborhood’ Brochure – This informative letter and brochure are provided to commercial excavators and contractors within Avista’s service territory. Based on recommendations from the 2017 Public Awareness Program Effectiveness Survey, Avista increased its outreach to excavators from once a year to *twice* each year. These documents are physically mailed in the spring to avoid the busy construction season and gain more attention. A copy of this letter and Safe Excavation brochure are in Appendices A and B respectively.
- Annual letter and brochure; ‘Landscapers! Don’t dig into buried utilities’– Avista created a specific brochure for landscapers who often are the ones installing sprinkler lines and plants who may not consider themselves excavators. This brochure draws their attention to make sure they call 811. A copy of the letter and brochure are in Appendices C and D respectively.
- Digital Tips of the trade – This is a broadcast email sent quarterly to excavators in an attempt to reach the stakeholders who want easily accessible information on their phone. Avista contracts this service through a third-party vendor, Culver Company. The Company’s public safety specialist and Underground Facility Damage Prevention Administrator coordinate the content used in these emails. A copy of the email is in Appendix E.
- Safe Excavation Tips - When a dig-in occurs on our system, Avista personnel responding to the emergency call typically give the excavator on site a copy of the Safe Excavation Tips sheet, included as Appendix F.
- Fence builders! Watch out for buried utility lines - Additionally, in 2019 Avista created a brochure for fence builders so that they are not overlooking their importance of

utilizing 811 by not considering themselves excavators (dirt movers). A copy of the brochure is included in Appendix G.

- Avista Pipeline Damage Tips card - A credit card size business card was created covering 811 and steps to take in the event of a damaged gas pipeline. A copy of the card is included in Appendix H.
- Annual Excavator Safety Guide (Pipeline Association for Public Awareness – PAPA - publication) – This magazine is published by PAPA and is provided once each year to commercial excavators and contractors in the counties in which Avista operates. A copy of the front cover of the magazine is provided in Appendix I. This publication is mailed in the spring to avoid the busy construction season.

Avista Damage Prevention General Communications – The Company distributes a range of other education and outreach materials each year to the following groups:

- Avista Customers – Affected Public;
- Public in the Vicinity of Projects;
- Emergency Responders;
- Excavators/Contractors/Farmers/Fence Builders and Landscapers;
- Public Officials;
- Railroads, *and*
- Schools – targeting the third through sixth grades, providing instruction materials to teachers and students.



Avista offers a Natural Gas Safety brochure written in Spanish, which is included as Appendix J.

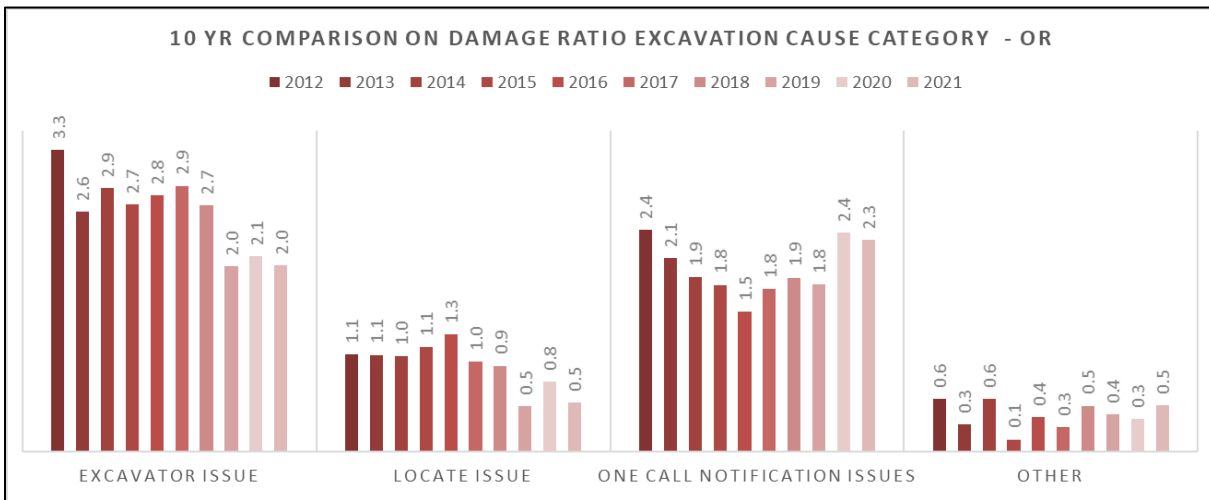
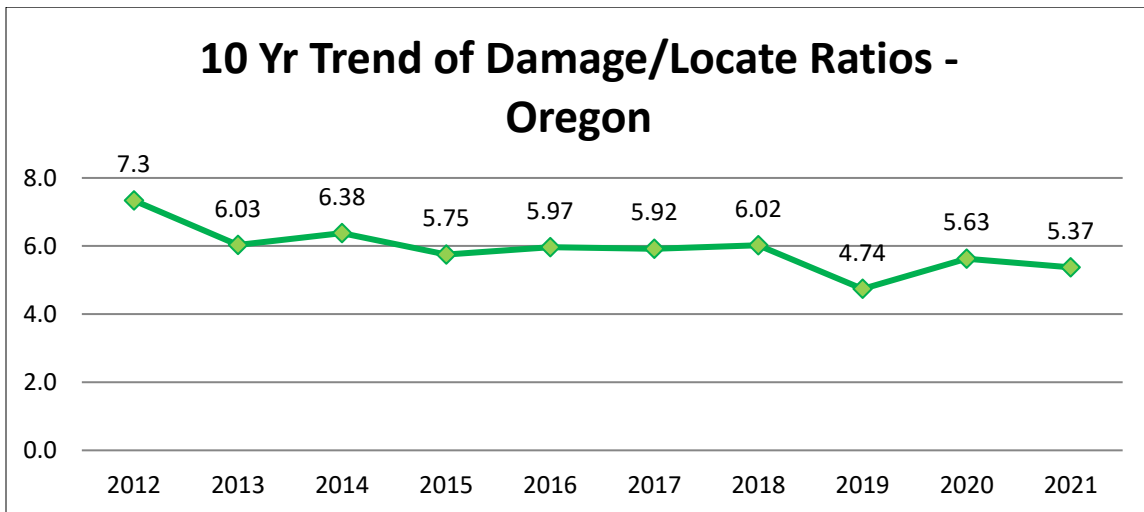
Digital Outreach - Starting in 2019, Avista contracted with a third-party to do digital outreach with 811 to provide public safety messaging every quarter (Safe Digging Tips Newsletter). This email targets key issues found based on excavation damage trending data. Avista also shares this digital outreach with its employees.

Media Outreach – Advertising and outreach materials are distributed broadly through a range of



media outlets each year in Washington, Idaho, and Oregon, including online banners (also called online marketing), radio, YouTube and promotional projects such as the 811 partnership with Papa Murphy’s. Avista also partners with different organizations to advertise the 811 Call Before You Dig program, such as local and state Utility Coordinating Councils, the Pipeline Association for Public Awareness, Paradigm (except 2021), and special features like JJ the Rodeo Clown (pictured at left) who educates attendees at rodeos held across the state of Oregon.

The first chart below shows Avista’s trend with pipeline damages in Oregon for the last ten years of the Company’s Excavation and Damage Prevention Program. The second chart shows these annual damages by excavation cause category.



Planned Activities in 2023 – Avista continues to collaborate with other organizations to spread the public safety message through outreach mailings, media, in-person events and other activities. Avista continues its targeted focus on auditing the performance of contract locators through the Quality Assurance Department. These audits help identify program gaps, enhancements to locating processes, and aids in the accuracy of locates. Avista identified missed locates which did not result in any damages, as data not being captured. As a result, the Company created a process to document these incidents for review and trending analysis. Avista also focused on repeat offenders by utilizing the Oregon complaint process. Avista developed an 811 locate ticket risk ranking software in 2020 and piloted the software and new standby form in Medford to work through issues and then rolled the implementation of this software out to the other operating districts. This software identifies high risk locate tickets based on certain criteria such as location, population density and facility type. Once high-risk tickets are identified, field personnel contact the excavator to determine if the Company’s facilities will be affected and if so, Avista personnel will be onsite while excavating near its facilities. This also provides an opportunity for education of the Oregon dig laws. Lastly, the Company plans to incorporate an internal campaign for Avista employees to be more involved in 811 promotion, utility damage awareness, and damage prevention actions.

Planned or Anticipated Changes to the Program for 2023 – Beyond implementing any program changes based on the results of its effectiveness survey and focus group sessions, Avista does not anticipate any other material program changes. Avista will continue to collaborate with other organizations to spread the public safety message, and continue to do the outreach mailings, media, in-person events (depending on the situation with the COVID-19 pandemic), locating audits and filing complaints on repeat offenders and activities similar to 2022.

Avista’s expected 2023 expenses for its Damage Prevention Program and customer awareness communications in Oregon are approximately \$351,500 in capital and \$945,000 in O&M expenses.

The expected investments are proposed budgets for the time horizon presented; actual investments may change throughout each year and from year-to-year. The Company will seek recovery of the actual investments associated with this program through the General Rate Case process.



## ***Cathodic Protection Program***

Overview of Cathodic Protection Program - The purpose of the Cathodic Protection (CP) program is to provide additional protection to Avista's buried steel pipe from the effects of natural corrosion. Cathodic protection works by utilizing a low voltage DC current source, providing an excess number of electrons on the surface of the steel pipeline. By providing this excess amount of electrons on the surface of the pipeline, an electrical attraction is created with the chemicals in

the soil resulting in an electro-chemical reaction creating a neutral PH level (7) at the surface of the pipeline, which results in a corrosion free zone at the surface of the pipeline. This forced electrochemical process directs the corrosion process to a sacrificial metal, which protects the pipeline from corroding as long as the circuit and power source are properly



maintained. Even though steel pipelines coated with protective materials are effective in preventing corrosion, the cathodic protection system provides a safety net in the event this protective coating system is compromised. Cathodic protection systems are mandatory as required by the Code of Federal Regulations (CFR) 192.463, and this program is an important element of Avista's focus on reducing the second priority threat to the integrity of its system from external corrosion.

The Company's cathodic protection technicians are responsible for ensuring Avista's pipelines comply with these regulations, and that these systems are performing properly. Cathodic protection technicians take the lead in implementing corrective actions when problems arise. These technicians, shown in the photograph above, are continuously striving to upgrade and improve the efficiency of Avista's cathodic protection systems.

Zone Isolation Points and Zone Management - Avista manages multiple cathodic protection zones across its three-state service territory. “Isolation Fittings” are utilized to electrically isolate each zone (i.e., electric current is prevented from flowing between any adjacent zones). The size of these zones is monitored and managed each year, resulting in zone boundaries being maintained in their current state, or alternatively, divided or consolidated as appropriate.

Other Program Elements - In addition to zone management, the Company’s cathodic protection technicians are responsible for the following activities:

- Pipe Casings Monitoring;
- Bi-Monthly Rectifier Maintenance and Operation;
- Anode Bed Replacements;
- Annual Surveys; and
- Isolated Steel  $< / >$  100’ in Length Monitoring

Inspection and Other Requirements - Under federal and state regulatory rules, cathodic protection programs are subject to mandated inspection activities, initiation of inspection, and frequency of inspection requirements.

Planned Activities for 2023 – Avista will continue to monitor its cathodic protection systems and perform testing throughout the year. On average, one or two anode beds must be replaced each year due to anode consumption. These replacement projects are typically scheduled for construction during the summer.

Planned or Anticipated Changes to the Program for 2023 – There are no program changes anticipated for 2023.

Expected 2023 expenses for this program in Oregon are approximately \$105,000 in capital and \$275,000 in O&M expenses. The expected investments are proposed budgets for the time horizon presented; actual investments may change throughout each year and from year-to-year. The Company will seek recovery of the actual investments associated with this program through the General Rate Case process.

## ***Atmospheric Corrosion Program***

A companion part of the Company's response to the potential for external corrosion is the Atmospheric Corrosion Inspection Program (Atmospheric Corrosion). Similar to cathodic protection, this program is a requirement of federal regulation 49 CFR 192.481, which directs the pipeline operator to inspect its natural gas infrastructure exposed to the atmosphere for evidence of corrosion at least once every five years. The Company currently conducts the atmospheric corrosion program systematically, by state and by operations district, in a three-year cycle with the plan to eventually shift to a five-year cycle meeting minimum federal regulations. Avista's atmospheric corrosion program is managed by the natural gas programs manager and atmospheric corrosion program administrator. Field inspections are completed by contractors specializing in this activity.

At some service locations, the inspections identify "abnormal operating conditions," which are those that exceed standard requirements and require mitigation to correct. Avista field personnel remediate these abnormal conditions on a pre-determined compliance timeline. The local construction office schedules and manages these remediation efforts. Some examples of abnormal conditions include buried meters and service valves, corroded risers, and risers in need of protective wrap (protecting the riser from soil). In addition, Avista also monitors, identifies, and mitigates several "continuing surveillance" items under the Atmospheric Corrosion program. Examples of the continuing surveillance items include settled meter sets, overbuilt meters, and meters in need of barrier protection from vehicle damage.

Planned Activities for 2023 – Avista will continue its practice of inspecting facilities in at least one fifth of its Oregon service territory annually on a rotating schedule, which ensures we inspect each meter and riser at least once every five years. Remediation work is completed in accordance with the specified compliance timeline.

Planned or Anticipated Changes to the Program for 2023 – Avista will eventually move to a one fifth rotating inspection schedule, inspecting each meter and riser at least once every five years.

Avista's does not anticipate any capital expenses for 2023 and expects approximately \$240,000 in O&M expenses for this program in Oregon. The expected investments are proposed budgets for the time horizon presented; actual investments may change throughout each year and from year-to-year. The Company will seek recovery of the actual investments associated with this program through the General Rate Case process.

### ***Leak Survey Program***

The Company's leak survey program is mandated by federal regulation 49 CFR 192.723 and requires the utility to survey its system for potential leaks using specialized equipment that can detect trace amounts of natural gas. These surveys must be performed in business districts at least once each calendar year, but at intervals not exceeding 15 months. Surveys include tests of the atmosphere in natural gas, electric, telephone, sewer, and water system manholes, at cracks in pavement and sidewalks, and at other locations that provide an opportunity for finding gas leaks. Outside business districts, leak surveys must be conducted as frequently as necessary, but at least once every five calendar years, and at intervals not exceeding 63 months. The utility may also survey natural gas facilities on a more frequent basis, such as Avista's Priority Aldyl-A piping and high-pressure mains, where Avista leak surveys the facilities annually. Overall, Avista surveys its natural gas facilities in business districts, high occupancy structures and high occupancy areas, and 20 percent (one fifth) of its residential services each year. All of Avista's residential natural gas facilities are surveyed at least once every five calendar years.

Avista field personnel remediate the detected leaks based on the grade of the leak and its required compliance timeline. The local construction office schedules and manages the remediation efforts. In general, Grade 1 leaks are repaired immediately, Grade 2 leaks are repaired within six months of discovery, and Grade 3 leaks are repaired within one year of discovery.

Planned Activities for 2023 – Avista will continue the leak survey program in the state of Oregon at the above-listed intervals and will remediate all leaks within their respective compliance timeframes.

Planned or Anticipated Changes to the Program for 2023 – There are no program changes anticipated for 2023.

Avista does not anticipate any capital expenses in 2023 pertaining to this program and expects approximately \$600,000 in O&M expenses for this program in Oregon. The expected investments are proposed budgets for the time horizon presented; actual investments may change throughout each year and from year-to-year. The Company will seek recovery of the actual investments associated with this program through the General Rate Case process.

### ***Right of Way Clearing Program***

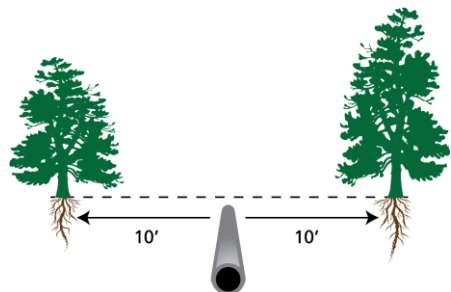
As part of its high-pressure pipeline maintenance program Avista must clear trees and other large woody materials from the rights of way of its buried lines. Tree roots can wrap around natural gas pipes as shown in the photo below, can damage protective coatings and interfere with

cathodic protection systems, increasing the risk of potential pipe failure and leaks. The clearance zone measures ten feet on either side of the pipeline for a total clear zone of 20 feet. The Company surveys rights of way for its high-pressure pipelines periodically and identifies the segments for



clearing vegetation, which is performed during follow-up work by Avista's vegetation management contractor. In addition to maintaining rights of way, Avista works with customers to make them aware of the required work in their neighborhood and to encourage them to avoid planting trees in the clearance zone, as shown in the illustration above. These contacts and communications with customers also provide the opportunity to reinforce their awareness of pipeline safety, particularly with the need to call for utility locates before doing any digging or excavation. Avista

performs right of way clearing on approximately 192 miles of natural gas pipeline in its Oregon service area.



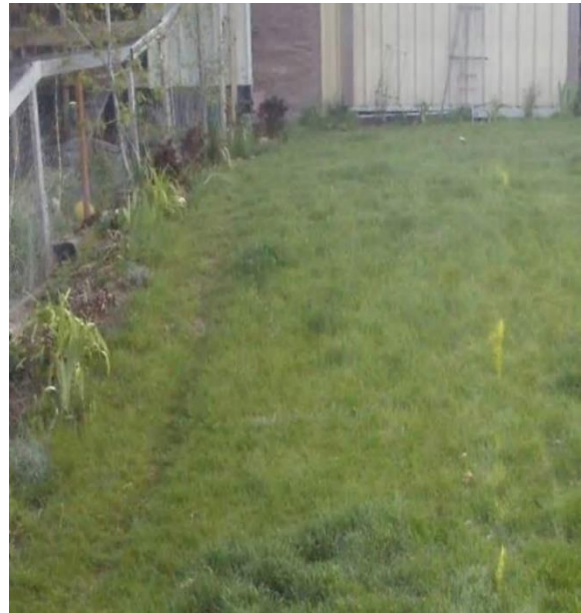
Planned Activities for 2023 – Avista will perform vegetation removal on high pressure pipelines in 2023 as requested by each Operating Area per issues discovered during annual pipeline patrols.

Planned or Anticipated Changes to the Program for 2023 – There are no program changes anticipated for 2023.

Avista does not anticipate any 2023 capital expenditures for this program and expects approximately \$60,000 in O&M expenses for this program in 2023. The expected investments are proposed budgets for the time horizon presented; actual investments may change throughout each year and from year-to-year. The Company will seek recovery of the actual investments associated with this program through the General Rate Case process.

### ***Natural Gas Pipe Overbuild Program***

Among the safety standards contained in Title 49, Part 192 of the Federal Code of Regulations is the requirement to remove customer-installed encroachments or “overbuilds” that interfere with or prohibit the Company’s ability to safely operate the gas system. Typically, an overbuild situation occurs when a structure is erected over the top of Avista’s preexisting natural gas facilities. These structures or barriers prevent the Company from performing mandatory maintenance such as leak survey (as described above), which is typically performed by walking directly above the gas facilities while operating the leak detection equipment. Overbuild of piping not originally designed for that condition is also a violation of the federal code. This is because the construction does not meet the code requirement for installation of the pipeline within a sealed conduit that is vented outside the overlying structure.



Overbuilds present an increased risk to customers as well as operational risks to Avista employees because of the potential of leaking gas to migrate into or become entrapped within structures built over the line. Overbuilds also increase the Company’s operating costs due to the need to return to the overbuild location multiple times in an attempt to complete leak survey and other maintenance tasks.

Avista’s program is focused primarily on overbuilt pipe in mobile home parks. Due to the dynamic nature of this housing, it represents an area of great risk because the dwellings can be easily sited over buried facilities. Because of their incidence, they also represent the greatest opportunity to cost effectively resolve these problems. However, because overbuilds are not isolated to mobile home parks, the Company conducts the program over its entire natural gas service area.

Planned Activities for 2023 – Avista will continue to mitigate known overbuilt conditions in each district to address the high-risk projects first, as determined by the Company’s Distribution Integrity Management Plan.

Planned or Anticipated Changes to the Program for 2023 – No program changes are anticipated for 2023.

Avista’s expected 2023 expenses for this program in Oregon are approximately \$280,000 in capital and \$201,000 in O&M expenses. The expected investments are proposed budgets for the time horizon presented; actual investments may change throughout each year and from year-to-year. The Company will seek recovery of the actual investments associated with this program through the General Rate Case process.

### ***Gas Cross-bore Post-Construction Inspection Program***

In 2019, Avista began a Company-wide cross-bore inspection program targeted specifically at finding instances where a gas line has been installed through a sewer line. In rare cases, when natural gas lines are installed by boring horizontally, they can cross or penetrate an



undetected sewer line. This can happen if a sewer line wasn’t mapped and couldn’t be located on the property prior to the installation of the gas line. The safety risk created by a cross-bore comes when the gas line causes the sewer to back up and the homeowner or a plumber uses a roofer device to clean out the sewer line without checking for a

cross-bore first. The roter equipment is designed not only to cut roots that have encroached within the sewer line but also is capable of cutting plastic gas lines as well, causing blowing gas to enter into the sewer line and potentially into the home and neighboring homes.

The sewer inspections are completed using camera technology that travels through the inside of the sewer lines which minimizes the disruption to the customer. At times, the contractor will need access to a customer's home to access the sewer lateral with their camera equipment. Contractors will set up an appointment with the customer to complete their inspection. If a cross-bore is identified the contractor will notify Avista immediately and Avista personnel will be dispatched to the location to organize a reroute of the gas line and repairs to the sewer line.

Currently Avista's cross-bore inspection contractor is only inspecting sewer mains and laterals in proximity to new construction projects and Aldyl-A replacement projects where some form of trenchless technology was used to install the gas facilities. Avista's gas cross-bore inspection program is managed by the Pipeline Integrity Program Manager. Field inspections are completed by contractors specializing in this activity.

Planned Activities for 2023 – Avista will continue gas cross-bore inspections of new construction projects and Aldyl-A replacement projects when trenchless forms of technology are used during installation. Avista did perform a legacy cross-bore pilot project in 2020 to attempt to find and assess cross-bore risk from older gas line installations. Prioritization of the legacy projects was calculated internally, and no cross-bores were found during the pilot project. In 2023, Avista will continue with targeted, risk-based legacy inspections as part of the program.

Planned or Anticipated Changes to the Program for 2023 – There are no anticipated program changes for 2023.

Avista's expected 2023 expenses for this program in Oregon are approximately \$650,000 in capital and \$50,000 in O&M expenses. The expected investments are proposed budgets for the time horizon presented; actual investments may change throughout each year and from year-to-year. The Company will seek recovery of the actual investments associated with this program through the General Rate Case process.

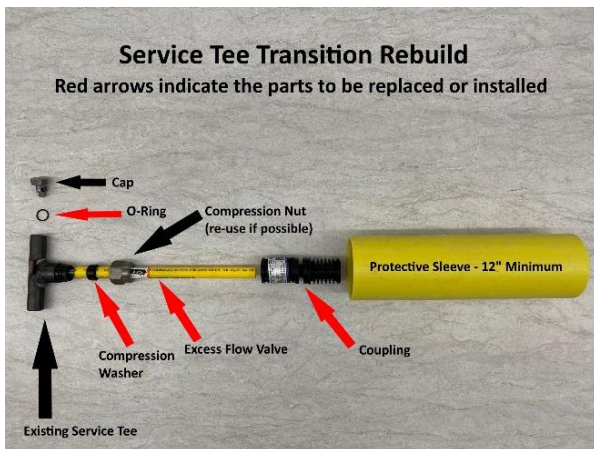


## **V. PROGRAMS WHERE SAFETY IS A KEY FACTOR**

As noted above, the Company makes a range of investments in its systems each year to replace assets that are at or are nearing the end of their useful life (i.e. based on asset condition). While there is some element of safety and reliability in nearly every investment of this type, the predominant reason for the investment is to replace worn out equipment that has provided a lifetime of useful service for our customers. While the next two programs represent the replacement of assets based on condition, the safety of customers and employees is a priority consideration in determining how the programs are implemented and over what period of time.

### ***Aldyl-A Pipe Replacement Program***

Avista is continuing its planned 20-year program to systematically replace select portions of the DuPont Aldyl-A medium density polyethylene pipe in its natural gas distribution system.



This work is accomplished by the Gas Facilities Replacement Program (GFRP), which is responsible for developing and managing the projects in Idaho, Oregon, and Washington. Avista’s Master Plan for this program, titled “Protocol for Managing Select Aldyl-A Pipe in Avista’s Natural Gas System”, provides the background on this pipe, the vintages and types of pipe slated for replacement, as well as the rationale

for the proposed 20-year replacement program. None of the subject pipe is “high pressure main pipe”, but rather, consists of distribution mains at maximum operating pressures of 60 psi and pipe diameters ranging from 1¼ to 4 inches. As part of this program, Avista has rebuilt or eliminated thousands of transition fittings used to connect Aldyl-A service piping (1/2 and 3/4-inch diameter) to steel tees that are welded to steel main pipe (service tee transitions). The illustration above shows the replacement components of a new service tee transition.

Nature of the Safety Risk – Early vintages of Aldyl-A pipe produced for natural gas service from the 1960s through the early 1980s are subject to “premature brittle-like cracking”. This failure process results from a loss of ‘ductility’ or flexibility in the pipe material. Ductility is a

fundamentally important property of polyethylene piping. Its loss allows small cracks to form on the inner wall of the pipe, which eventually propagate through the pipe wall, resulting in failure. This tendency for brittle-like cracking renders the pipe more susceptible to failure over time than newer-generation polyethylene pipe, and this tendency to fail increases as the piping continues to age.

Completed Replacement Activities – Under guidance of the Master Plan, Avista began replacing 253 miles of select Aldyl-A piping in its Oregon service territory in 2012. The group responsible for managing Aldyl-A Pipe Replacement projects at Avista is known as the Gas Facilities Replacement Program (GFRP). While the GFRP’s plan was to replace 93.9 miles (37%) of pipe via construction projects from 2012 through 2021, the actual amount of pipe replaced during this 10-year timeframe totaled 64.0 miles (25%), a shortfall variance of 29.9 miles. Despite the shortfall via construction activities, Avista’s system of record indicates that 108.3 miles (43%) has been replaced or otherwise removed during the same timeframe by way of local district road projects, system repairs, and mapping corrections. From 2012 through 2017, approximately 6,650 service tee transitions were rebuilt in Oregon. Total capital investment for this work from 2012 through year-end 2021 was \$53,115,165.

Construction Approach – Avista continues to complete the majority of its Aldyl-A replacement using contract crews and equipment. This approach is more cost efficient since this effort is focused, intensive, specialized, subject to seasonal constraints, and is adaptive to Avista’s normal workload and staffing levels required for ongoing natural gas operations. As of January 2021, Michels Utility Services<sup>4</sup> became Avista’s primary contractor for performing its Aldyl-A main pipe replacement and rebuilding service tee transitions. Michels’ proven expertise and mastery of specialized natural gas construction techniques will be a valuable asset in Avista’s efforts to complete work on time and cost effectively. Avista partners with Michels to refine their

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<sup>4</sup> Michels operates in 40+ locations across the US and in Canada. Michels has a reputation for safe, high quality, and cost-effective construction services, including the installation or replacement of over 200 miles of natural gas main and roughly 10,000 services each year. Website: <https://www.michels.us/market/gas-pipelines/>



construction technologies allowing the Company to improve efficiency and cost effectiveness over time. The photograph above shows the use of vacuum excavation which can be used in conjunction with “keyhole” technology to minimize the asphalt restoration associated with rebuilding service tee transitions. Avista continues to employ keyhole technology in support of main pipe replacement work when installing new main pipe by the use of directional drilling. More specifically, in effort to avoid cross-

boring or otherwise damaging adjacent utilities along the bore path, each utility is exposed, or windowed to visually ensure that the drill head clears each respective utility without conflict. From 2012 to the time of this report, this surgical and environmentally friendly approach has yielded approximately \$8.1 million of road restoration cost avoidances as compared to the cost of conventional construction and road restoration.

Managing the Unit Costs of Replacement – Prior to initiating Avista’s Aldyl-A pipe replacement program, Avista’s experience with pipe installation and the associated cost was almost exclusively with new construction. Since new construction most often involves installation of main pipe and service lines in new residential or commercial developments, the activities are generally limited to trenching in open soil, installing piping and padding, and filling and compacting the open ditch. The 2011-2012 construction costs for new construction averaged about \$45 per linear foot.

Replacing natural gas facilities decades after the initial installation, and after the subsequent development of these areas, turns out to be another matter entirely. Replacement pipe



must now be installed in fully developed and occupied areas that consist of numerous below ground facilities, paved streets, sidewalks and arterials, landscaped residential neighborhoods, and hard-surfaced commercial developments teeming with daily traffic and other activity. New main pipe is most often

installed by either “horizontal drilling” or open trenching. While horizontal drilling is far less invasive, both methods require cutting into existing pavement or other hard surfaces. Care must be taken to plan and locate the existing underground facilities to avoid damaging them, new service lines must be ditched into landscaped yards, etc., and all of these features must be restored to unblemished service once the installation is complete.

During the first two years of the program Avista reported<sup>5</sup> average per foot replacement costs ranging from \$69 to \$83 per foot. These costs included pipe replacement in hard-surfaced areas as well as areas of exposed soil, such as the shoulder of semi-rural roadways with limited adjacent facilities and road restoration. More recently, Aldyl-A pipe replacement project locations have been primarily located in suburban developments in which the right-of-way is fully built-out with paved roads and sidewalks and has required increased permitting stipulations. As a result of these conditions, pipe replacement costs have increased significantly. In 2021, the average cost of main pipe replacement was \$122 /LF (per linear foot), with a low of \$90/LF in Klamath Falls and a high of \$155/LF in the City of Medford.

Avista continued to report its experience with replacement construction costs, in particular, as the Company experienced a trend on the part of municipalities toward more restrictive and expensive roadway restoration and traffic control requirements. Over the past several years these traffic control, pavement cutting, and remediation policies of local jurisdictions have had a significant impact on the scheduling, logistics, operational methods, extent of the area to be repaved, and the ultimate cost of pipe replacement. In Avista’s experience, this continuing trend to enforce more restrictive moratoria on cutting in newer arterials and streets, to



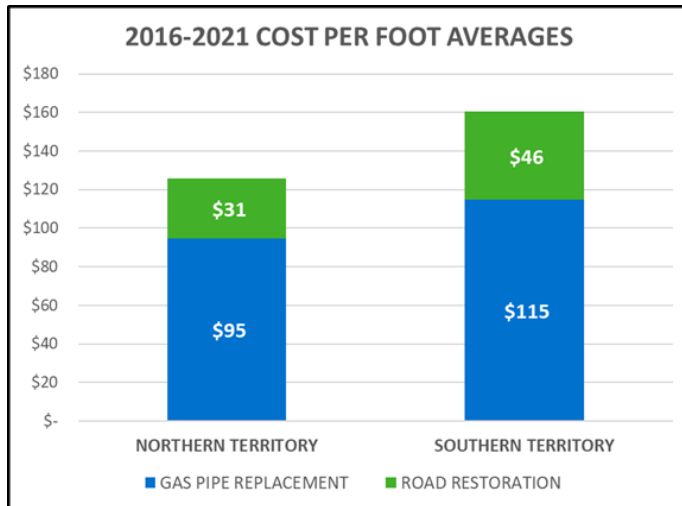
support more stringent requirements for backfill and compaction, for patching or repaving of streets cut for pipe replacement, and traffic control requirements have had a substantial impact on installation costs. These requirements include rules on the export and import of trench backfill

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<sup>5</sup> In direct testimony provided by Avista in rates proceedings in multiple jurisdictions, including Oregon.

materials (e.g. slurry backfill), significant soil compaction, and the width of pavement restoration, which averages four feet and can range from two feet up to eight feet for segments of a project.

In an effort to understand, control, and document project costs, the program has been tracking system-wide cost data including cost per foot averages since its inception in 2012. The



cost of completing this work in Oregon is significantly higher than other state jurisdictions. As an example, the chart below shows the average cost per foot from 2016-2021 for the Company’s northern territory, which includes Idaho, Washington and the southern Oregon service area. Though actual pipe replacement costs are higher in Oregon,<sup>6</sup>

the major element of the total cost disparity between the two territories is related to road restoration requirements in Oregon jurisdictions. These costs are largely a direct result of municipally-driven traffic control, road restoration, and permit requirements, which are beyond Avista’s direct control.

Optimizing Trenchless Technology – Given the high unit costs associated with open trenching and roadway restoration and as previously stated, Avista partners with Michels to optimize the use of trenchless technologies, including horizontal drilling and “split and pull”. The adjacent photograph shows a horizontal drilling machine being used to replace main pipe. Not all projects, however, are suitable for using these technologies due to safety issues associated with the presence of multiple underground utilities, or when the affected area has only one source of supply. The latter case requires the coordination and logistics of an all-day customer outage and the ability to perform the procedure to allow for restoration of customers’ service the same day. Other prohibitive conditions include the presence of subsurface

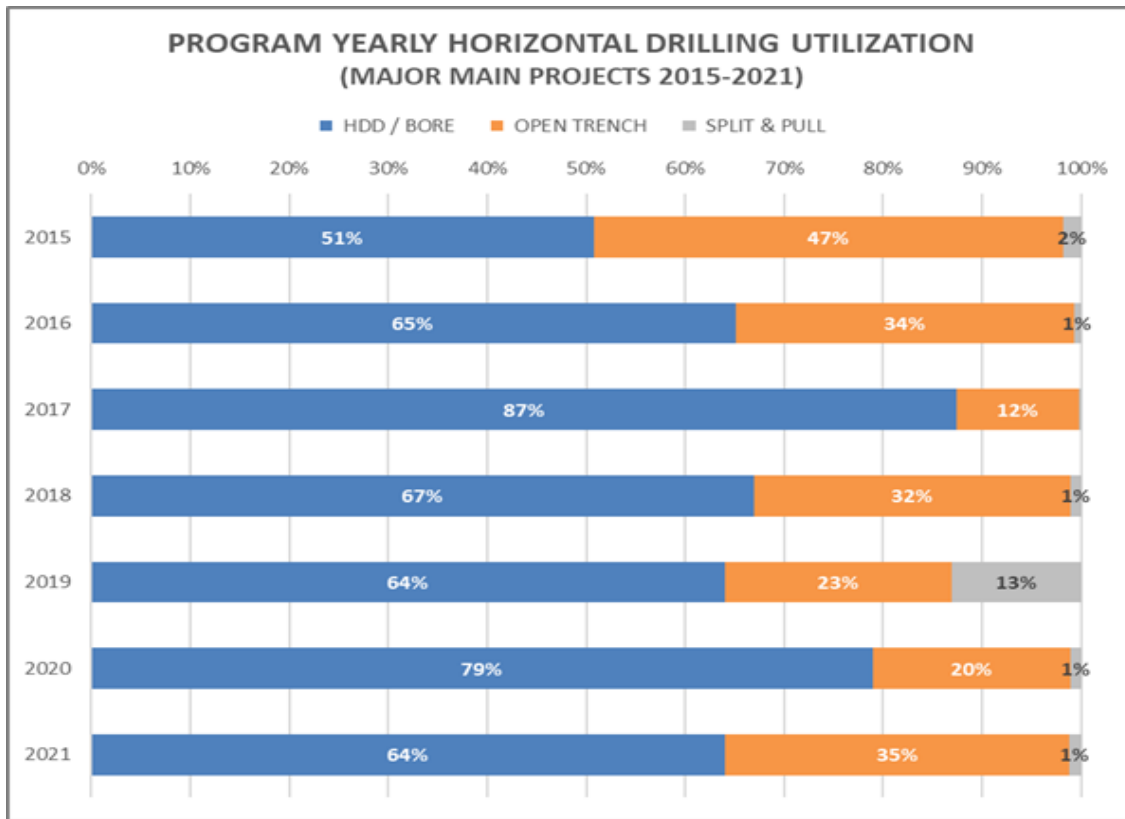


<sup>6</sup> Some of the reasons for the higher construction costs include 100% import/export of trench materials, slurry backfill, material handling requirements, native soil conditions, traffic control requirements such as traffic plate locks, and installation methods used.

rock (solid rock or heavy cobble) and the lack of sufficient clearance along the pipe path to provide for adequate separation of utilities. However, where conditions are favorable, horizontal drilling can provide a cost-effective alternative to open trench construction because the restoration footprint is significantly reduced.

As shown in the table and graph below, the utilization of horizontal drilling as a percent of main pipe installed each year shows an increasing trend since 2015.

<b>Program Utilization of Horizontal Drilling Installation for Main Pipe</b>	
<b>Year</b>	<b>Percent Utilized</b>
2015	51%
2016	65%
2017	87%
2018	67%
2019	64%
2020	79%
2021	64%



Continuing Annual Leak Survey – Avista has continued to conduct annual leak surveys on Priority Aldyl-A main pipe since 2011, even though it is more costly than the conventional frequency of surveying every five years. This frequency, however, provides our customers and others a prudent margin of added safety while these facilities are being replaced and rebuilt.

Heightened Risk Prioritization within High-Consequence Areas (HCA) – A key tool developed by Avista for better managing the risks associated with its priority Aldyl-A piping, is its risk consequence model. The model predicts areas in the system where leaks are most likely to occur and then incorporates information on the density of development (high-consequence areas) to assess relative priorities for pipe replacement. In 2014, Avista updated its model to distinguish schools and daycare facilities from other types of developments. These were identified as sites that would be difficult to evacuate in the event of a natural gas emergency. Though these sites were already included in designated high-consequence areas, this designation provides an additional layer of priority. The model highlights those instances where Aldyl-A facilities are within close proximity to facilities that can sometimes encompass outdoor play areas or other areas of congregation. Avista continues to list and map potential sites to determine whether they might warrant this higher-level prioritization.

Activity Summary for 2021 – The COVID-19 pandemic struck the nation in early 2020 and only essential work was able to continue which extended into 2021. The NPL Utility Workers Union of America (UWUA) employees went on strike starting on July 6, 2020 and ended on August 26, 2020. Avista contacted several companies with a Request for Proposal (RFP) to replace UWUA in an attempt to complete this vital work. As of January 2021, Michels Utility Service had a 4-month transition as Avista’s primary contractor in Oregon. There were several wildfires and the smoke created poor air quality conditions. The impact of these events in Oregon was the completion of 6.39 miles of the planned 8.98 miles by Michels. A total of 9.21 miles was completed with the addition of 2.82 miles through pipe verification.

Current Activities for 2022 – As shown in the table below, Avista and Michels are working to complete over 10 miles of Aldyl-A main pipe replacement in the city of Medford and surrounding Roseburg areas in Oregon. While the Service Tee Transition Rebuild (STTR) Program was ramped

down in December of 2017, Avista rebuilds or eliminates the remaining tee transitions in Oregon by utilizing local office resources. Priority Services are also addressed by the local offices.

<b>Current 2022 Oregon Major Main Projects</b>			
<b>Location</b>	<b>Miles</b>	<b>Start</b>	<b>End</b>
Eagle Point Carryover 2021	0.24	January	July
Medford S I-5 Carryover 2019	0.91	January	May
Medford E I-5 Carryover 2020	0.97	January	June
Klamath Falls Carryover 2021	0.30	June	July
Medford E I-5 2022	1.29	April	December
Dillard/Winston 2022	3.69	April	October
Talent 2022	0.27	July	September
Phoenix 2022	1.84	July	October
Canyonville/Riddle/Glendale 2022	1.07	September	December
<b>Total Miles</b>	<b>10.58</b>		

Planned Activities for 2023 – As shown in the table below, Avista and Michels are scheduled to address approximately 8.50 miles of main pipe replacement in the city of Medford and throughout Oregon.

<b>Planned 2023 Oregon Major Main Projects</b>			
<b>Location</b>	<b>Miles</b>	<b>Start</b>	<b>End</b>
Medford South Partial E of I-5 Carryover 2022	2.00	January	April
Dillard/Winston Carryover 2022	2.48	April	July
Roseburg 2023	3.82	July	November
Medford 1	0.20	October	December
<b>Total Miles</b>	<b>8.50</b>		

Avista’s expected 2023 expenses for this program in Oregon are approximately \$9,229,270 in capital and \$115,550 O&M expenses. The expected investments are proposed budgets for the time horizon presented; actual investments may change throughout each year and from year-to-year. Avista will seek recovery of the actual investments associated with this program through the General Rate Case process.

### ***Isolated Steel Pipe Replacement Program***

Steel pipe that is not cathodically protected is subject to varying degrees of corrosion depending on pipe coating, the type and condition of the pipe, soil type and acidity, ground moisture, the presence of foreign utilities, and other factors. Corrosion causes the loss of metal



from the pipe wall, which over time can result in a failure of the pipe and a gas leak. A safety issue can arise because in many cases these pipes are installed next to the businesses and homes of our customers.

As mandated by Federal and State regulation, Avista monitors isolated steel sections of pipeline main less than 100 feet in length, and isolated services and risers at a frequency of 10 percent per year. This preemptive effort helps reduce the potential for corrosion and a subsequent leak, thereby increasing the safety and reliability of Avista's natural gas system.

Current Activities for 2022 – During 2022, the Company is planning to continue proactively replacing isolated steel pipeline and services/risers at the rate of approximately 10 percent per year.

Planned or Anticipated Changes to the Program for 2023 – There are no anticipated changes to the overall program for 2023.

Avista's expected 2023 expenses for this program in Oregon are approximately \$850,000 in capital and \$180,000 O&M expenses. The expected investments are proposed budgets for the time horizon presented; actual investments may change throughout each year and from year-to-year. The Company will seek recovery of the actual investments associated with this program through the General Rate Case process.

## VI. APPENDICES

### Appendix A: Gas Excavator Letter



#### May 2022

Right now, safety is top-of-mind for all of us as our communities take precautionary steps to help contain the spread of coronavirus. And we want you to continue to be safe in your daily work round natural gas equipment as well.

#### Quick Reminders:

- **PLEASE CALL 811 at least TWO Full Business Days BEFORE YOU DIG**
- Go to [www.myavista.com/safetyvideos](http://www.myavista.com/safetyvideos) to see helpful Safety Videos that can keep you and your family safe.

Enclosed is the Avista **Safe Excavation in Our Neighborhoods** brochure.

Before beginning any excavation project, be sure to have all utilities located first. To locate what's below the ground, just call 811 – the call is **FREE** and the service is **FREE**. The National 811 Call Before You Dig number is available to everyone specifically contractors, excavators, and homeowners. You may also use the website: <https://digsafelyoregon.com>. Locating underground lines is just a phone call or a click away and it may save a life. You can now use internet ticket processing in Oregon from a smart phone at: <http://or.itic.occinc.com> – click the button labeled ITIC Mobile (located near or at the bottom of the list of buttons)

Remember to call at least two **full business days (excludes holidays and weekends)** before excavating or digging more than 12 inches. Your proposed excavation area must be painted in white. This allows the utility locator sufficient time to mark the location of any buried wire, cables or natural gas pipe. Once the utilities have been located remember buried utilities could be up to 24" away from the locate mark. One scoop with a shovel or backhoe could strike a natural gas or electric line that may be buried close to the surface. For this reason it is required to hand dig or use non-invasive methods, i.e. shovel, when digging within 24" of a marked utility. Privately owned utilities are generally downstream of the meter and must be located by the homeowner. These may include water/sprinklers, sewer laterals, utilities to a detached garage, outbuilding, etc.

You shall hand dig to expose each underground utility prior to excavation or you may be in violation of OSHA and/or State Regulations.

Remember – Avista's pipeline markers are yellow and list our name and telephone number on the marker.

#### Immediately Report Scrapes, Dents or Pipeline Damage

If you do expose underground utilities while working on your project and notice or cause a dent, scrape, or damage to a gas pipeline, please contact Avista customer service at 800-227-9187 immediately so Avista may inspect the lines for safety before you backfill. **Watch, Listen & Smell for Signs of a Leak.**

Know the signs of a leak and what to do. If you see, hear or smell signs of a pipeline leak immediately leave the area in an **upwind** direction. Warn others to stay away and contact 911 from a safe distance. Also, it is critical you do not enter an area where the gas is blowing, and do not try to stop the gas flow which includes bending the pipe over. In addition, do not operate machinery or electrical equipment, including cell phones, near a potential pipeline leak.

Avista is happy to provide safety information to your business. Contact us to order additional **Safe Excavation in Our Neighborhoods (Natural Gas)** brochures or we would gladly attend your company safety meeting to discuss the 811 program.

We have also developed a brochure for builders, contractors and homeowners to assist in understanding the importance of where to place the gas meter when building a structure. This brochure is the **Natural Gas Meter Location Guidelines** brochure and this can be found at our website under [myavista.com/safety](http://myavista.com/safety).



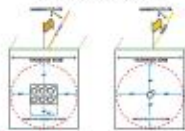
We just want you to be safe.  
Customer Service 800-227-9187



### AVISTA Safe Excavation Tips

What is excavation definition?  
Means any operation, including the installation of signs, in which earth, rock, or other material is removed from the ground, is moved or displaced.

#### TOLERANCE ZONE



RED	Electric Power lines, cables, Cables & Lightning Cables
YELLOW	GAS, OIL, STEAM, Petroleum or Gasoline Materials
ORANGE	Communication, Alarm or Signal Lines, Cables or COBOL
BLUE	Potable Water
GREEN	Sewers and Drain Lines
PURPLE	Non-Potable Water, Recycled Water, Irrigation and Slurry Lines
PINK	Temporary Survey Markings
WHITE	Proposed Excavation

### Safe Excavation

We want everyone to be safe



1. Pre mark your dig area in white.
2. Call 811 for a locate ticket. Make sure the company who is doing the digging is on the locate.
3. Have you waited two business days for the locate?
4. Verify the locate description matches the excavation project. Keep locate ticket on hand as verification all utilities have responded.
5. Reasonable Accuracy means location within 24 inches of the outside dimensions of both sides of an underground facility.
6. Use of hand tools or other non-invasive methods in the accuracy zone.
7. Are you maintaining the locate marks?
8. Call 811 and the utility owner if a gas line is damaged and gas is escaping. If needed call the utility owner.

"Safe Excavation in Our Neighborhoods"

"Natural Gas Meter Location Guidelines"

The above brochure is the "Safe Excavation Tips" offered by Avista as an additional resource

**AVISTA** 800-227-9187  
www.avista.com/safety

**In the event of gas pipeline damage:**

- Turn off and abandon your vehicle
- Leave the area immediately
- Call from a safe distance, 911 and Avista
- Evacuate people to an upwind location
- DO NOT bend the pipe over
- DO NOT turn valves
- DO NOT drive over manholes
- DO NOT attempt to extinguish flames of burning gas

**811** Know what's below. Call 811 before you dig. Digging can be dangerous. Call 811 before you dig.

RED Electric Power Lines, Cables, Cables & Lightning Cables  
YELLOW Gas, Oil, Steam, Petroleum or Gasoline Materials  
ORANGE Communication, Alarm or Signal Lines, Cables or COBOL  
BLUE Potable Water  
GREEN Sewers and Drain Lines  
PURPLE Non-Potable Water, Recycled Water, Irrigation and Slurry Lines  
PINK Temporary Survey Markings  
WHITE Proposed Excavation

GAS LEAK CARD (credit card size)

If you would like to request for future copies, please send to 509-777-5901 or email [publicsafety@avistacorp.com](mailto:publicsafety@avistacorp.com), please provide name of brochure and number of copies. Also please give us your feedback on our safety videos!

Company Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Name of brochures requested \_\_\_\_\_

Number of brochures requested \_\_\_\_\_

We just want you to be safe,

Salina Simpson  
Public Safety Specialist  
509-495-7851



# Appendix B: Safe Excavation in Our Neighborhoods

Add this number to your phone contacts: 800-227-9187 (Avista Customer Service)

### Signs of a natural gas leak



We add a sulfur-like rotten egg stench so you'll know right away if there is a problem.



Gas can hiss or even roar as it escapes pipes.



Gas may make bubbles, blow dirt and kill plants when leaking from underground pipes.

### General Pipeline Markers are no substitute for calling 811

Avista's transmission and major distribution pipelines for natural gas have aboveground yellow markers along their routes, each displaying a 24-hour emergency response phone number. Please be aware that THESE YELLOW MARKERS ONLY INDICATE THE GENERAL LOCATION OF BURIED NATURAL GAS LINES and may not be located above the actual pipelines. You are still required to have pipelines located by calling 811 at least two business days before you dig.

Transmission pipeline maps by county and zip code, including the names of pipeline operators, are available by registering with the National Pipeline Mapping System at [www.npms-phmsa.dot.gov](http://www.npms-phmsa.dot.gov).



Other materials available to order at [publicsafety@avistacorp.com](mailto:publicsafety@avistacorp.com)

- Pipeline marker wallet card
  - What to do in the event of a gas leak wallet card
  - Safe excavation tips checklist
- Please review state dig law and OSHA requirements at [myavista.com/safety](http://myavista.com/safety)
- Please see our safety videos at [myavista.com/safetyvideos](http://myavista.com/safetyvideos)

For additional information  
800-227-9187  
[myavista.com/safety](http://myavista.com/safety)  
[publicsafety@avistacorp.com](mailto:publicsafety@avistacorp.com)

Если Вы хотели бы получить информацию о правилах безопасности на русском языке, пожалуйста звоните по телефону 800-227-9187.

Si desea recibir información en Español acerca de la seguridad, por favor llamar a: 800-227-9187

For assistance with alternative languages please call customer service at 800-227-9187.

Avista Utilities  
1411 East Mission MSC 20  
Spokane, WA 99220-3727



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Natural Gas



### Safe Excavation in Our Neighborhoods



We just want you to be safe.  
Customer Service 800-227-9187

## Know what's below to be safe

It takes a system of underground pipelines to bring natural gas service to our community. Federal and state codes extensively regulate natural gas pipelines for public safety. Avista regularly maintains our natural gas facilities to ensure safety for all.



Know what's below.  
Call before you dig.

### You are required to:

- Call 811 (or visit [call811.com](http://call811.com)) at least two full business days before you dig to have underground utilities marked.
- Mark the perimeter of where you intend to dig with white paint.

### Then:

- Wait for all utility lines to be marked before proceeding.
- There is a 2-foot tolerance zone on either side of markings. Hand dig in this zone to expose and determine the exact location before you proceed with mechanical equipment.
- Don't move or alter the marks until the underground facilities are exposed.
- Exposed gas pipelines need to be properly supported and protected from damage so they don't break or rupture.
- Use acceptable backfill (such as sand or rock free dirt) and proper compaction to avoid damage to pipes.
- Stop excavating immediately if you find unmarked gas or electric lines and call 811 (or visit [call811.com](http://call811.com)) to have them marked.
- Never try to fix a damaged natural gas line or restrict the gas flow in any way, including bending the pipe over.

### Ground marking identification

Ground markings are in different colors to indicate the locations and types of utility facilities buried below.

Locates are good for the following time:  
WA - 45 days  
ID - 21 days  
OR - 45 days

If anyone digs after the listed times, they are digging with an invalid ticket.

### Do not build over gas lines

Never build any type of structure overtop buried utility lines or where it will block access to meters. Doing so runs a serious safety risk and prevents Avista from maintaining the infrastructure that serves customers.

ELECTRIC: RED
GAS/OIL: YELLOW
COMMUNICATION: ORANGE
WATER: BLUE
SEWER: GREEN
TEMPORARY SURVEY: PINK
IRRIGATION: PURPLE
PROPOSED EXCAVATION: WHITE



### Hazards when natural gas is released

- Natural gas mixed with air can be highly flammable and easily ignited by heat or sparks.
- Natural gas in the air can be ignited 4 to 15-percent gas-to-air mixture.
- Gas fires may produce irritating and/or toxic fumes.
- Natural gas is lighter than air and can migrate into enclosed spaces.
- Released gas may displace oxygen without warning and can cause dizziness or even asphyxiation.

### Responding to a gas leak emergency

The following recommendations apply to all natural gas lines:

- Avoid any action that may create a spark.
- Do NOT start vehicles, switch lights or use phones.
- Evacuate the area on foot in an upwind and uphill direction.
- Alert others to evacuate the area and keep people away.
- Call 911 from a safe distance to report the emergency.
- Call and report to Avista who will inspect and repair the line.
- Wait for emergency responders and Avista to arrive.
- Do NOT attempt to close any pipeline valves.

# Appendix C: Landscaper Safety Letter



May 2022

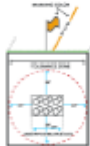
Right now, safety is top-of-mind for all of us as our communities take precautionary steps to help contain the spread of coronavirus. And we want you to continue to be safe in your daily work round natural gas equipment as well.

### Quick Reminders:

- **PLEASE CALL 811 at least TWO Full Business Days BEFORE YOU DIG**
- Go to [www.myavista.com/safetyvideos](http://www.myavista.com/safetyvideos) to see helpful Safety Videos that can keep you and your family safe.

Before beginning any landscaping project be sure to have all natural gas services located first. To locate what's below the ground, just call 811. The National 811 Call Before You Dig number is available to everyone specifically contractors, excavators, and homeowners. You may also use the website [www.call811.com](http://www.call811.com) or [www.callbeforeyoudig.org](http://www.callbeforeyoudig.org). Locating underground lines is just a phone call or a click away and it may save a life. You can now use internet ticket processing in WA, OR, MT & HI from a smart phone at [www.callbeforeyoudig.org](http://www.callbeforeyoudig.org).

Remember to call at least two business days (excludes holidays and weekends) before digging. Your proposed excavation area must be painted in white. This allows the utility sufficient time to mark the location of any buried wire, cables or natural gas pipe. One scoop with a shovel or backhoe could strike a natural gas line that may be buried close to the surface. Once the utilities have been located the buried utility could be up to 24" away from the locate mark. It is recommended to hand dig within this 24" zone. Privately owned utilities generally located after the meter can be located for a fee. These may include water/sprinklers, sewer laterals, utilities to a detached garage, outbuilding, etc.



### Immediately Report Scrapes, Dents or Pipeline Damage

If you do expose natural gas lines while working on your project and notice you have caused a dent, scrap, or damage to a gas utility, please contact Avista at 800-227-9187 so we may inspect those lines for safety before you backfill. It is critical that your crews work safely when near buried natural gas pipelines.

### Watch, Listen & Smell for Signs of a Leak

Know the signs of a leak and what to do. If you see, hear or smell signs of a pipeline leak immediately leave the area in an upwind direction. Warn others to stay away and contact 911 from a safe distance and then Avista. Do not operate machinery or electrical equipment, including cell phones, near a potential pipeline leak.

Avista is happy to provide safety information to your business. Please find the enclosed our brochure.

Please contact us to order additional Landscape brochures.

Fax requests for more copies to 509-777-5901 or email [publicsafety@avistacorp.com](mailto:publicsafety@avistacorp.com).

Company Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Number of brochures requested \_\_\_\_\_

We just want you to be safe,

Salina Simpson  
Public Safety Specialist  
[509-495-7851](tel:509-495-7851)



## Appendix D: Landscaper Brochure

**Signs of a natural gas leak**

- Smell** We add a sulfur-like, rotten-egg stench so you'll know right away if there is a problem.
- Hear** Gas can hiss or even roar as it escapes pipes.
- See** Gas may make bubbles, blow dirt and kill plants when leaking from underground pipes.

**Hazards when natural gas is released**

- Natural gas mixed with air can be highly flammable and is easily ignited by heat or sparks.
- Natural gas can be ignited when there is a 4% to 15% gas-to-air mixture.
- Gas fires may produce irritating and/or toxic fumes.
- Natural gas is lighter than air and can migrate into enclosed spaces.
- Released gas will displace oxygen and can cause dizziness or even asphyxiation.

**Responding to a gas leak emergency**

The following recommendations apply to all natural gas lines:

- Avoid actions that may create a spark.
- Do NOT start vehicles, switch lights or use phones.
- Evacuate the area on foot going upwind and uphill.
- Alert others to evacuate the area and keep people away.
- Get a safe distance away and call 911 and Avista to report gas emergencies.
- Call Avista so we know to inspect and repair the line.
- Wait for emergency responders and Avista to arrive.
- Do NOT attempt to close any pipeline valve.

It takes a system of underground utilities to bring natural gas service to your community. Avista regularly maintains our natural gas facilities to ensure safety. Natural gas pipelines are also extensively regulated by federal and state codes for public safety.

General pipeline markers are no substitute for calling 811

Avista's transmission and major distribution pipelines for natural gas have above ground yellow markers along their routes, each displaying a 24-hour emergency response phone number.

Please be aware that **THESE YELLOW MARKERS ONLY INDICATE THE GENERAL LOCATION OF BURIED NATURAL GAS LINES** and may not be located above the actual pipelines. You are still required to have pipelines located by calling 811 at least two business days before you dig.

Transmission pipeline maps by county and zip code, including the names of pipeline operators, are available by registering with the National Pipeline Mapping System at [www.npms.phmsa.dot.gov](http://www.npms.phmsa.dot.gov).



### For additional information

800-227-9187

[myavista.com/safety](http://myavista.com/safety)

[publicsafety@avistacorp.com](mailto:publicsafety@avistacorp.com)

Если Вы хотели бы получить информацию о правилах безопасности на русском языке, пожалуйста звоните по телефону 800-227-9187.

Si desea recibir información en Español acerca de la seguridad, por favor llamar a: 800-227-9187

For assistance in alternative languages please call 800-227-9187.

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Natural Gas

**Landscapers!  
Don't dig into  
buried utilities.**

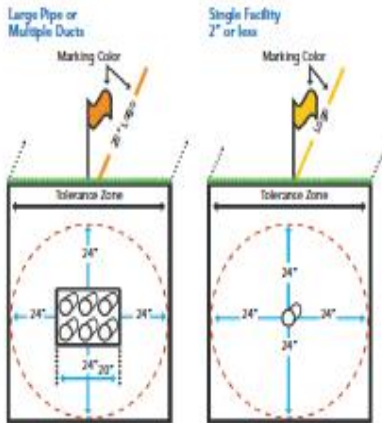
We just want  
you to be safe.

Customer Service 800-227-9187

Landscapers should be aware that buried utilities could be any place, some just below the surface. Before you break ground with a shovel, auger or other equipment, call 811 at least two business days before you dig—it's the law. A utility representative will locate the proximate area and mark buried utility lines in your dig zone. Never disturb the ground until completing these steps:

1. Use white paint to mark where you plan to dig.
2. Call 811 and wait for a utility representative to mark facilities owned by utilities. (NOTE: You must hire a private contractor to locate non-utility-owned lines.)
3. Maintain and respect these location marks.
4. Hand dig to expose and determine the exact line-location before you proceed with excavation.
5. Do not install landscaping (fence posts, sprinkler pipes, etc.) within 24 inches of a natural gas line. See tolerance zone below.

#### Tolerance Zone



#### Ground marking identification

Ground markings are in different colors to indicate the locations and types of utility facilities buried below. Locates are good for the following times:

WA - 45 days  
ID - 21 days  
OR - 45 days

Any digging after listed times is digging with an invalid ticket.

ELECTRIC
GAS-OIL
COMMUNICATION
WATER
SEWER
TEMPORARY SURVEY
IRRIGATION
PROPOSED EXCAVATION

#### What to do if you damage a natural gas line

- If you hit or nick a natural gas line, stop excavating and immediately notify Avista at 800-227-9187.
- If you damage a pipeline and gas is escaping, **DO NOT FOLD OVER THE PIPE** to seal the leak. Static charge can ignite the gas. Get a safe distance away then call 911 and Avista.
- If you find unmarked gas lines, call 811 (or visit [cal811.com](http://cal811.com)) to have them marked.

#### Do not build over natural gas lines

Never build any type of structure overtop buried utility lines or where it will block access to meters. Doing so runs a serious safety risk and prevents Avista from maintaining the infrastructure that serves customers.



## Appendix E: Digital Tips of the trade



*Who's going to know? Scraping or nicking a buried electric conduit or natural gas pipeline might seem like a little thing. It may be tempting to look for damage, and if you don't see a crack or hear or smell escaping gas, to bless your luck and keep on digging. DON'T DO IT! If you do, you may be taking the first step down the road to your worst nightmare.*



For more electric and natural gas safety information, visit [myavista.com/safety](http://myavista.com/safety).

[VISIT SITE >](#)

Instead, stop your excavation and report any electric or natural gas line contact to Avista at (800) 227-9187 immediately, even if damage is not readily apparent. If natural gas is leaking, federal law requires you to call 911 immediately.

### Why Is Reporting Every Incident So Important?

Nicking a buried electric conduit can cause the cable insulation inside to degrade and eventually fail, resulting in power outages and electric shock injuries or deaths.

Even a minor scrape to the coating of a natural gas pipeline can cause it to deteriorate. The compromised pipe may leak, resulting in a natural gas fire or explosion and possibly loss of life and property. In addition, a pipeline that is pulled or bumped may break underground, some distance away from the initial contact point, where a gas leak may go undetected until it ignites or explodes.

It is equally important to report damaged tracer wire. If the tracer wire installed with plastic underground natural gas lines is broken or compromised during your excavation and not repaired, future excavators and the public are endangered because the line can no longer be located.

### If You Suspect a Natural Gas Leak

Remember the three Rs of natural gas safety: **Recognize, React and Report.** If you **RECOGNIZE** any signs of a gas leak, **REACT** immediately by warning others and leaving the area. When you are in a safe place, **REPORT** the leak by calling 911 and Avista at (800) 227-9187 immediately.

### Do You Like This Email Series?

Do you find the information helpful? We would like to know. [Sign up](#) to tell us what you think, or let us know what topics you'd like to see in future emails. Please visit our website for other [Tips of the Trade](#).

**Smell or hear a gas leak or need to report a downed power line? Damage a gas pipeline or underground power line? Call (800) 227-9187.**



For more safety information, visit:

Avista Natural Gas Safety  
Avista Electrical Safety

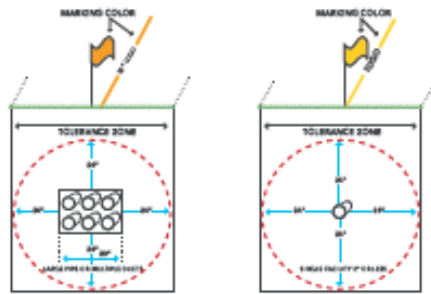
## Appendix F: Safe Excavation Tips Card

### AVISTA<sup>®</sup> Safe Excavation Tips

#### What is excavation definition?

... Means any operation, including the installation of signs, in which earth, rock, or other materials on or below the ground is moved or displaced.

#### TOLERANCE ZONE



<b>RED</b>	Electric Power Lines, Cables, Conduit & Lightning Cables
<b>YELLOW</b>	Gas, Oil, Steam, Petroleum or Gaseous Materials
<b>ORANGE</b>	Communication, Alarm or Signal Lines, Cables or Conduit
<b>BLUE</b>	Potable Water
<b>GREEN</b>	Sewers and Drain Lines
<b>PURPLE</b>	Non-Potable Water: Reclaimed Water, Irrigation and Slurry Lines
<b>PINK</b>	Temporary Survey Markings
<b>WHITE</b>	Proposed Excavation

## Safe Excavation

*We want everyone to be safe*



- 1  Pre mark your dig area in white.
- 2  Call 811 for a locate ticket. Make sure the company who is doing the digging is on the locate.
- 3  Have you waited two full business days for the locates?
- 4  Verify the locate description matches the excavation project. Keep locate ticket on hand as verification all utilities have responded.
- 5  Reasonable Accuracy means location, within 24 inches, of the outside lateral dimensions.
- 6  Use of hand tools or other non-invasive methods in the accuracy zone.
- 7  Are you maintaining the locate marks? Means 45 calendar day period after notice.
- 8  Call 911 and the utility owner if a gas line is damaged and gas is escaping. If nicked call the utility owner.

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# Appendix G: Fence builders! Watch out for buried utility lines

**Signs of a natural gas leak**

**Smell**  
We add the scent of a burnt match or rotten eggs to our natural gas, so you'll know right away if there's a problem.

**Hear**  
Gas can hiss, whistle or even roar as it escapes from pipelines.

**See**  
Dirt blowing from a hole in the ground, an area of dead vegetation or bubbling in pooled water may indicate an underground gas leak. You may also see fire come up from or burn atop the ground.

**Hazards when natural gas is released**

- Natural gas mixed with air can be highly flammable and is easily ignited by heat or sparks.
- Natural gas can be ignited when there is a 4% to 15% gas-to-air mixture.
- Natural gas is lighter than air and can migrate into enclosed spaces.
- Released gas will displace oxygen and can cause dizziness or even asphyxiation.

**For additional information**  
800-227-9187  
myavista.com/safety  
publicsafety@avistacorp.com

Avista is committed to safety. For additional information, call or visit us online.

Если Вы хотели бы получить информацию о правилах безопасности на русском языке, пожалуйста звоните по телефону 800-227-9187.  
Si desea recibir información en Español acerca de la seguridad, por favor llamar a: 800-227-9187

For assistance in alternative languages please call 800-227-9187.

Avista  
1411 East Mission MSC 20  
P.O. Box 3777  
Spokane, WA 99220-3777

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**AVISTA**

**Fence builders!  
Watch out for  
buried utility lines.**



**We just want  
you to be safe.**

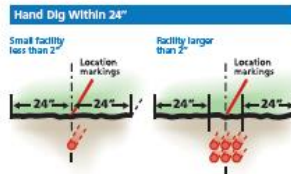
800-227-9187

Before you break ground with a shovel, auger or other equipment, call 811 at least two business days before you dig—it's the law. A utility representative will come locate and mark buried utility lines in your dig zone. (The service is free for Avista residential customers.) Never disturb the ground until you complete these steps:

- Use white paint to mark where you plan to dig.
- Call 811 and wait for a utility representative to mark facilities owned by utilities. (NOTE: You must hire a private contractor to locate non-utility-owned lines.)
- Maintain and respect these location marks.
- Hand dig to expose and determine the exact location before you proceed with excavation (see below).

**Reasonable Accuracy Zone**

The utility should be found within two feet of either side of the mark, or inside a 4-foot corridor. However, if the line marks indicate the size of the buried utility and is greater than 2" in width, you will need to increase the accuracy zone by that amount.



**Ground Marking Identification**

Ground markings are in different colors to indicate the locations and types of utility facilities buried below.

<b>ELECTRIC: RED</b>
<b>GAS-OIL: YELLOW</b>
<b>COMMUNICATION: ORANGE</b>
<b>WATER: BLUE</b>
<b>SEWER: GREEN</b>
<b>TEMPORARY SURVEY: PINK</b>
<b>IRRIGATION: PURPLE</b>
<b>PROPOSED EXCAVATION: WHITE</b>



**General Pipeline Markers are no substitute for 811**

Avista's major distribution pipelines for natural gas have aboveground yellow markers along their routes, each displaying a 24-hour emergency response phone number. Please be aware that **THESE YELLOW MARKERS ONLY INDICATE THE GENERAL LOCATION OF BURIED NATURAL GAS LINES** and may not be located above the actual pipelines. You are still required to have pipelines located by calling 811 two business days before you dig.

**What to do if you damage a line**

- If you hit or nick an electric or natural gas line, immediately notify Avista at 800-227-9187.
- If you damage a pipeline and gas is escaping, **DO NOT HOLD OVER THE PIPE** to seal the leak. Static charge can ignite the gas. Get a safe distance away, then call 911 and Avista.

**How to respond to a natural gas emergency**

- Avoid any action that may create a spark.
- Do NOT start vehicles, switch on/off lights, make calls or hang up phones.
- Evacuate the area on foot in an upwind and uphill direction.
- Alert others to evacuate the area and keep people away.
- Call 911 from a safe distance to report the emergency.
- Call and report the event to Avista.

## Appendix H: Pipeline Damage Tips



### **In the event of gas pipeline damage:**

- Turn off and abandon your vehicle
- Leave the area immediately
- Call from a safe distance, 911 and Avista
- Evacuate people to an upwind location
- DO NOT bend the pipe over
- DO NOT turn valves
- DO NOT drive over manholes
- DO NOT attempt to extinguish flames of burning gas

Appendix I: Front Cover of the Excavation Magazine by PAPA



# Appendix J: Spanish Language Natural Gas Safety Brochure

## Nuestro sistema de gas natural

Se necesita un sistema de tuberías subterráneas para llevar gas natural hasta su hogar o negocio. Hay códigos federales y estatales que regulan exhaustivamente las tuberías de gas natural para la seguridad pública. En Avista, hacemos nuestra parte al vigilar y dar mantenimiento rutinariamente a nuestras instalaciones de gas para garantizar la seguridad. Para ayudarlo a aprovechar el gas natural al máximo, consulte nuestro sitio web en [avistautilities.com](http://avistautilities.com) bajo la pestaña de Su seguridad (Your Safety).

## Inspecciones de tuberías y medidores

Para mantener seguro nuestro sistema de gas natural, Avista debe realizar mantenimiento periódico anual. Realizamos varios procedimientos, entre ellos, investigaciones de fugas, vigilancia de tuberías, inspección de medidores y cambios de medidores de gas. Por lo tanto, queremos que esté enterado de que, de vez en cuando, puede ver a alguno de nuestros inspectores en su patio.

## Su medidor de gas

Es importante que los clientes mantengan un buen acceso a su(s) medidor(es) de gas para las lecturas mensuales, el mantenimiento periódico y las emergencias. Lo siguiente es de ayuda para nosotros:

- Puede arbustos y plantas para dejar espacio alrededor del medidor, de modo que puedan verse los indicadores.
- Preste atención a que no se acumule tierra ni desechos debajo y alrededor del medidor para prevenir corrosión y fugas.
- Asegúrese de que siempre pueda accederse a la válvula de cierre del medidor en caso de emergencias.
- No ponga objetos encima del medidor ni los apoye sobre ésta, tampoco se ponga de pie sobre el medidor ni lo utilice para atar animales.
- Proteja el medidor contra los vehículos.

## Llame al 811 antes de excavar

Si entra en contacto con una tubería de gas natural al excavar con una pala, motocultor o retroexcavadora, esto podría causar una lesión o la muerte. Así que, manténgase a salvo. Llame al 811 por lo menos dos días antes de excavar para que se localicen y marquen sus líneas y tuberías con anticipación, ¡así lo dicta la ley! El servicio es gratuito para los clientes residenciales. Si corta (mella) o daña una línea o tubería, llame a Avista al 800-227-9187. Las tuberías dañadas que se dejan sin reparar pueden convertirse en un peligro.



Entérese de lo que hay enterrado.  
Llame antes de excavar.

## Asuntos de seguridad

Avista quiere que todos permanezcan seguros. Si su vivienda tiene inquilinos o arrendatarios, manténgalos informados al pedimos más folletos. Para obtener más información, consulte la página [avistautilities.com](http://avistautilities.com) o llame al 800-227-9187.

Si desea recibir información en Español acerca de la seguridad, por favor llamar a: 800-227-9187.  
Para obtener ayuda con otros idiomas, llame al 800-227-9187.

Avista  
Public Safety Dept.  
P.O. Box 3727  
Spokane, WA 99220-3727  
[publicsafety@avistacorp.com](mailto:publicsafety@avistacorp.com)



AVA147i



## Seguridad sobre el gas natural



Sólo queremos que se mantenga a salvo..

800-227-9187

## Seguridad sobre el gas natural

### Consejos de seguridad sobre el gas natural

Para ayudar a prevenir accidentes en su hogar y mantener segura a su familia, siga estos consejos generales:

- Mantenga el área alrededor del hornillo de calefacción y del calentador del agua, limpia y sin basura.
- Nunca guarde materiales y líquidos combustibles cerca de los aparatos de gas.
- Enséñeles a los niños a mantenerse alejados de la estufa de gas y de todos los otros aparatos que fundonen con gas.
- Mantenga limpios los hornos y las estufas para prevenir los incendios producidos por grasas.
- Nunca use el horno o la estufa para calentar una habitación.
- Nunca deje que los niños se columpien o se cuelguen de las tuberías de gas.

### Emergencias y desastres naturales

Debe saber cómo cortar el servicio de gas natural de su casa en caso de una emergencia o desastre natural, como un terremoto o una inundación.

Primero, localice la válvula de cierre en la tubería cerca del medidor de gas. Use una llave inglesa grande para dar un cuarto de giro a la válvula en cualquier dirección. Cuando la válvula esté en una posición transversal (perpendicular) respecto de la tubería, el paso del gas estará cerrado.



Corte el servicio de gas solamente si huele o escucha una fuga de gas natural, o si su vivienda sufre daños mayores. En las grandes emergencias, Avista implementará nuestro plan de emergencia para garantizar la seguridad de la zona afectada

### Reconocimiento de una fuga de gas

Las fugas de gas natural no suceden a menudo pero pueden ser peligrosas. Manténgase a salvo, sin embargo, es tan fácil como usar su nariz, oídos y ojos.

### Si huele o escucha gas

Incoloro, inodoro y más ligero que el aire, el gas natural se vuelve inflamable cuando se mezcla con aire y se expone a una fuente de ignición.



Le agregamos un mal olor parecido al azufre y un huevo podrido, para que sepa de inmediato si hay algún problema.



El gas puede sisear o incluso rugir a medida que escapa de las tuberías.



El gas puede producir burbujas, hacer volar tierra y matar plantas cuando escapa de tuberías subterráneas.

Conozca el olor del gas natural.

Rasque y huela aquí.

Si se da cuenta de que hay una fuga de gas natural, váyase de la zona. Si se encuentra en el interior, dirjase al exterior rápidamente. No use ningún teléfono, accione un interruptor ni haga nada que pueda causar una chispa. Desde la casa de un vecino o a una distancia segura, llame al 911 y a Avista al 800-227-9187.

### Monóxido de carbono

El monóxido de carbono (CO) es un gas incoloro, inodoro y mortal que se produce cuando la combustión de cualquier combustible, tal como el gas natural, ocurre sin suficiente oxígeno. El envenenamiento por CO provoca dolor de cabeza, cansancio, dificultad para respirar, náuseas, mareo y la muerte. Para alertar a su familia sobre la presencia de CO, compre un detector de monóxido de carbono aprobado por UL e instálelo según las instrucciones del fabricante.



MANTÉNGASE A SALVO AL INSTALAR UN DETECTOR DE MONÓXIDO DE CARBONO.

### Desbloqueo del alcantarillado

En muy escasas ocasiones, las tuberías de gas natural subterráneas se instalaron sin querer a través de tuberías del alcantarillado que no se detectaron. Estas tuberías son seguras a menos que sean cortadas por una herramienta de desobstrucción de alcantarillado, que pudiera causar una fuga de gas y producir un incendio o explosión. Antes de desobstruir una tubería de alcantarillado bloqueada, llame a Avista. Enviaremos a un técnico sin costo alguno para asegurarnos de que no represente ningún peligro.

