



Tillamook County LEPC Emergency Response Plan Tillamook County Emergency Management

August 26, 2025



Prepared by

Alliance Solutions Group, Inc.
11818 Rock Landing Drive, Suite 105
Newport News, VA 23606
757-223-7233

Joe Potaczek

Joe.potaczek@asg-inc.org

Robert Campbell

robert.campbell@asg-inc.org

Prepared for

Tillamook County Local Emergency Planning Committee



Table of Contents

1	EXECUTIVE SUMMARY	5
2	PURPOSE AND SCOPE OF THE PLAN	7
3	AUTHORITIES AND REFERENCES	8
4	ROLES AND RESPONSIBILITIES	9
4.1	Local Emergency Planning Committee	9
4.2	Regulated Facility Emergency Coordinator.....	9
4.3	Local Agencies	9
4.4	Regional HAZMAT Team Responses	13
4.5	Other State HAZMAT Resources	13
4.6	Federal Agencies	14
5	HAZARD IDENTIFICATION AND RISKASSESSMENT	15
5.1	Stationary Sources.....	15
5.2	Social Vulnerability Lens	15
5.3	Model Outputs	22
5.4	HAZMAT Transportation Model Outputs.....	25
5.5	Pipelines	29
5.6	Chemical Explosion and Detonations	29
5.7	Radioactive Materials.....	35
5.8	Public Protective Actions (PPAs).....	36
5.9	Drinking Water Vulnerability	38
5.10	Environmentally Sensitive Areas	42
5.11	Risk Assessment Results	45
6	ANALYZING RISK CONTROLS AND RECOMMENDATIONS BASED ON SCENARIOS	46
7	INCIDENT AND PUBLIC NOTIFICATION	49
7.1	Initial Emergency Notification Process	49
7.2	Community Water System Notification Procedures.....	49
7.3	Public Notification Procedures	50
7.4	Incident Termination	51
8	EXERCISE AND TRAINING	52
8.1	Training Analysis.....	52
8.2	Exercise and Evaluation Plan	52
9	SUPPORTING PLANS	55
	ATTACHMENT 1: RISK ASSESSMENT METHODOLOGY	56
A1.1.	Method and Process.....	56
A1.2.	Identify the Hazards	56
A1.3	Prioritizing Hazards.....	56
A1.4.	Assessing the Risk.....	59
A1.4.1.	Probability	59
A1.4.2.	Meteorological Data	60
A1.4.3.	Severity.....	60
A1.4.4.	Chemical Explosions and Detonations.....	60
A1.4.5.	Risk Estimate	61
A1.5.	Analyzing Risk Controls.....	61
	ATTACHMENT 2: FIRST RESPONDER INITIAL HAZMAT RESPONSE CHECKLIST	63
	ATTACHMENT 3: TECHNOLOGICAL HAZARD INVENTORY	65
	ATTACHMENT 4: RESPONSE CAPABILITIES AND EQUIPMENT	66
	ATTACHMENT 5: FACILITY PROFILE SHEETS FOR EHS FACILITIES	69



1 EXECUTIVE SUMMARY

The Tillamook County, Oregon Local Emergency Planning Committee (LEPC) contracted with Alliance Solutions Group, Inc. (ASG) to develop a hazardous materials (HAZMAT) Emergency Response Plan (ERP) that incorporates risk-based planning concepts to aid planners in the prioritization of resources for HAZMAT response within Tillamook County, Oregon. This plan serves as a reference to the County's Emergency Operations Plan (EOP).

ASG obtained Tier II Reports and radioactive material (RAM) storage information from the Oregon Community Right to Know (CR2K) Hazardous Substance Manager online database and formulated an inventory of chemical and radiological hazards. Analysts provided this information to the county separately in electronic format due to the sensitive nature of the material. This ERP addresses hazards such as industrial chemicals or materials that may be toxic, biohazardous, explosive, or radioactive. ASG also analyzed HAZMAT transported via tanker trucks, pipelines, and railcars.

To identify the top risks, ASG adopted chemical severity ratings from a 2011 report published by the Naval Research Laboratory titled, *Prioritization and Sensitivity Analysis of the Inhalation/Ocular Hazard of Industrial Chemicals*. This report provided a targeted list of 49 chemical hazards and assigned a Toxic Operational Hazard Score for each. Analyst plume modeled the top risks at county facilities and expressed the severity in terms of the estimated population impacted by each hazard release scenario as determined by a Geographic Information System (GIS). We multiplied the probability by the severity for each release scenario to obtain a risk rating. ASG used the risk rating to rank and identify the top three hazards based on risk in Tillamook County. The primary risks of concern within the county include anhydrous ammonia, nitrous oxide, and propane.

After assessing each facility storing Extremely Hazardous Substances (EHS) within the county (Emergency Planning and Community Right-to-Know Act, or EPCRA Section 302 facilities), ASG expanded its analysis by assessing additional chemical and explosive overpressure hazards stored in above ground storage tanks (EPCRA Section 312 facilities) since many designated EPCRA Section 302 facilities reported EHS that present a minimal risk to the community (e.g. sulfuric acid contained in lead/acid batteries, etc.). Analysts conducted plume modeling and explosive overpressure distance calculations based upon the quantity listed on the Tier II report and used a GIS to determine the estimated population impacted (severity) for each release scenario. ASG multiplied the probability by the severity for each scenario to obtain a risk rating.

Analysts validated and updated a list of emergency response equipment, responder training, and estimated response times for primary response agencies and follow-on Regional Hazardous Materials Response Teams (RHMRT). Tillamook County first responders have limited defensive response capabilities during the initial phases of a hazard release other than implementing public protective actions. Local responders will attempt to stabilize the scene and request the assigned RHMRT through Tillamook 9-1-1. Prompt access to RHMRTs, which provide advanced offensive response capabilities, is available upon request following the initial response. RHMRT 9, located in Tualatin and RHMRT 13 located in Salem, serve Tillamook County and have a two-hour response requirement upon notification of a HAZMAT incident. Furthermore, the state's 102nd Civil Support Team (CST) based in Salem can be rapidly mobilized and provides advanced detection and analysis capabilities during a HAZMAT incident.

Based on the top risks, ASG identified potential response gaps and provided recommendations for each potential issue identified (see Table 6-1: *Gap Analysis Results and Recommendations*). The greatest challenges included the lack of: emergency response planning for chemical and explosion hazards, a lack of shelter-in-place and evacuation plans for vulnerable facilities, and a need for HAZMAT training and exercises that reflect high risk release incident



scenarios.

ASG is recommending the following to improve preparedness for a hazardous material release incident:

- Share hazard and impact information with affected vulnerable facilities and assist them with the development and exercising of Shelter-in-Place or evacuation plans.
- Ensure that pre-incident plans are developed for EHS facilities and address the name and storage locations of HAZMAT present at each site.
- Obtain HAZMAT response capability information from first responders to identify potential HAZMAT response gaps that may exist.
- Conduct training and exercises related to high-risk HAZMAT incidents.



2 PURPOSE AND SCOPE OF THE PLAN

The purpose and scope of the plan is to address the following elements:

- Hazard Identification through analysis of Tier II reports, to include Radioactive Material, and railroad commodity density flow reports;
- Identification of routes likely to be used for the transportation of HAZMAT;
- Risk assessment to prioritize and align plans, training and resources with risks;
- Identification of at-risk facilities such as nursing homes, schools, hospitals, etc.;
- Identify HAZMAT response methods and procedures to be followed by private sector facilities, local emergency and medical personnel;
- Designation of responsibilities associated with planning and response;
- Outline of emergency notification and public information procedures from the initial phase of the incident to incident termination;
- Methods for determining the occurrence of a hazard release and the area or population likely to be affected by the release;
- Description of local emergency response equipment in the community and at facilities;
- Outline of evacuation plans, route identification, and plume modeling for critical areas;
- Training programs and resources for first responders;
- Methods and potential scheduled timeframes for exercising the plan; and
- Identification of existing emergency response plans and mutual aid agreements within the specific response area and implementation of those plans.



3 AUTHORITIES AND REFERENCES

The following authorities and references are applicable to this plan:

- National Incident Management System (NIMS)
- Emergency Planning Community Right to Know Act (EPCRA), SARA Title III, Section 303, Emergency Planning
- ORS 453.307-414, Oregon Community Right to Know and Protection Act
- 2019 Emergency Management Standard
- Oregon State Fire Marshal Standards of Coverage for Regional Hazardous Material Emergency Response Teams, December 2023
- State of Oregon Emergency Operations Plan, June 2024
- Northwest Area Contingency Interim Plan, April 2024
- Tillamook County Emergency Operations Plan, March 2017
- Oregon Drinking Water Protection Program Interactive Mapping Tool: <https://www.oregon.gov/deq/wq/dwp/pages/dwp-maps.aspx>
- Oregon Department of Transportation TransGIS Site: <http://gis.odot.state.or.us/transgis/>
- Oregon GEOHub GIS repository: <https://geohub.oregon.gov/>
- Community Right-to-Know (CR2K) Information Access and Downloads Site: http://www.oregon.gov/osp/SFM/Pages/CR2K_InformationAvailable.aspx
- National pipeline Mapping System (NPSM) Public Viewer interactive mapping tool: <https://www.npms.phmsa.dot.gov/>
- Prioritization and Sensitivity Analysis of the Inhalation/Ocular Hazard of Industrial Chemicals, Naval Research Lab 2011.
- Fast Local Emergency Evacuation Times (FLEET) Evacuation Model Tool: <https://fleet.vmasc.odu.edu/>
- FEMA's Resilience Analysis and Planning Tool (RAPT): <https://www.fema.gov/about/reports-and-data/resilience-analysis-planning-tool>



4 ROLES AND RESPONSIBILITIES

4.1 Local Emergency Planning Committee

Under the EPCRA, the Tillamook County LEPC is responsible for developing a HAZMAT ERP, reviewing this plan at least annually, and providing information about chemicals in the community to citizens. While EPCRA 302 designated facilities are required to participate in the LEPC, there is no requirement for EPCRA 312 facilities to participate. Analysts performed an assessment of the county's EPCRA 312 facilities and included several of these facilities within this plan based on the risk rating.

4.2 Regulated Facility Emergency Coordinator

Each facility regulated by the EPCRA that uses or stores extremely hazardous substances (EHS) will designate an Emergency Coordinator. The emergency coordinator provides requested information to the LEPC and/or emergency response agencies as requested to support the emergency planning process. Attachment 5 lists the Facility Emergency Coordinator for each facility when provided. The emergency coordinator or facility designee performs the following tasks:

- Submits Tier II and Toxic Release Inventory Form R Reports annually through Oregon's CR2K online database
- Provides current emergency contact numbers to local response agencies
- Ensures that timely notification of an emergency is made to local response agencies
- Carries out emergency response as outlined in the Emergency Action Plan or other facility emergency plan(s)
- Provides accident assessment information to responders following an incident
- Makes recommendations to local responders for containing a HAZMAT release and protecting the public
- Supports the establishment of a Unified Command as requested

4.3 Local Agencies

The Tillamook County LEPC has designated the Tillamook County Office of Emergency Management Director as the Community Emergency Coordinator. This person is responsible for the organization, operation, and administration of the Emergency Management Structure within the County. Section three and corresponding Emergency Support Function Annexes in the Tillamook County Emergency Operations Plan (EOP) describe the roles and responsibilities of the following response and volunteer organizations at the local, state and federal levels. Analysts included these by cross-reference to ensure consistency and interoperability among plans. During a HAZMAT incident, these responsibilities will not change; however, unique responsibilities may arise and are described below the following list of key local, state and tribal agencies. Figure 4-1 displays the Tillamook County fire districts and associated areas of responsibility for each.

City/County/Special Districts

- Board of Commissioners
- County Department Heads
- County Assessor
- County Clerk
- County Treasurer



- Emergency Management Director
- District Attorney
- Finance
- Fire Departments/Districts
- Justice of the Peace
- Emergency Medical Service (EMS) providers
- Community Emergency Response Team (CERT)
- Environmental Health
- Private Sector Organizations
- Community Partners - Local Volunteer and Faith-Based Organizations
- KTEL Radio Station
- Law enforcement
- Liaison Officer
- Manzanita Department of Public Safety
- Public Health Departments
- Public Information Officer
- Rockaway Beach Police Department
- Tillamook County Ambulatory Services
- Tillamook County Communications District
- Tillamook County Emergency Communications 9-1-1 District
- Tillamook County Fire Defense Board
- Tillamook County Health Department
- Tillamook County Information Services
- Tillamook County Office of Emergency Management
- Tillamook County Public Works Department
- Tillamook County Radio Amateur Civil Emergency Services (RACES)/Amateur Radio Emergency Services (ARES)
- Tillamook County Regional Medical Center
- Tillamook County Sheriff's Office
- Tillamook County Oregon Voluntary Organizations Active in Disaster (VOAD)
- Tillamook County Transportation District
- Tillamook People's Utility District
- Tillamook Police Department



State

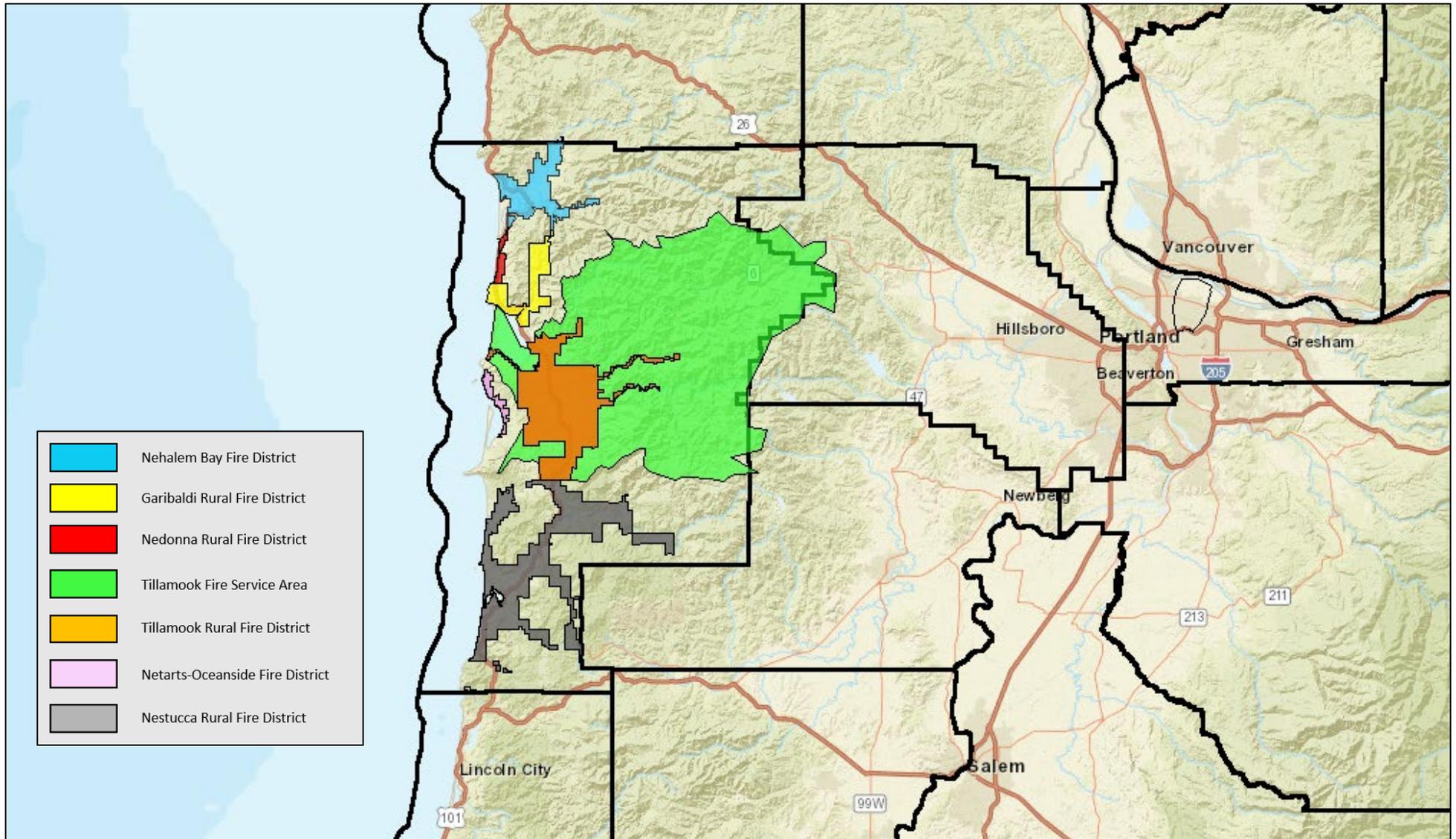
- Business Oregon
- Office of the State Fire Marshal
- Oregon Health Authority
- Oregon Department of Administrative Services
- Oregon Department of Transportation
- Oregon Food Bank
- Oregon State Police
- Oregon Public Utility Commission
- Oregon Office of Emergency Management
- Oregon Department of Agriculture
- Oregon Department of Energy
- Oregon Radiation Protection Services
- Oregon Military Department
- RHMRT No 9
- Department of Environmental Quality
- Department of Forestry
- Department of Health, Housing, and Human Services
- Department of Justice

Tribes

- Confederated Tribes of Siletz Indians Government Offices
- Confederated Tribes of Grand Ronde Government Offices



Figure 4-1: Tillamook County Fire District Areas of Responsibility





4.4 Regional HAZMAT Team Responses

When a HAZMAT incident occurs, additional resources may be required once first responder capabilities are exhausted. For public safety response agencies, this determination is often made with the information provided by the reporting party or responders on scene. Considerations on whether to activate a HAZMAT team include factors such as: life safety hazard, whether the substance is unknown or known to be a significant threat, the type of release, and weather conditions.

The state operates and funds twelve RHMRTs; two of which serve Tillamook County. RHMRT 9 is staffed by Tualatin Valley Fire and Rescue and is the designated state responder for most areas of the county. Salem Fire Department personnel support RHMRT 13, this team serves a small area in the southern portion of the county. In addition to their responsibilities within Tillamook County, each regional team serves a large geographic area including multiple counties (see Figure 4-2). RHMRTs are requested through the local 9-1-1 dispatch, responsible party of the incident, or IC notifying the Oregon Emergency Response System (OERS).

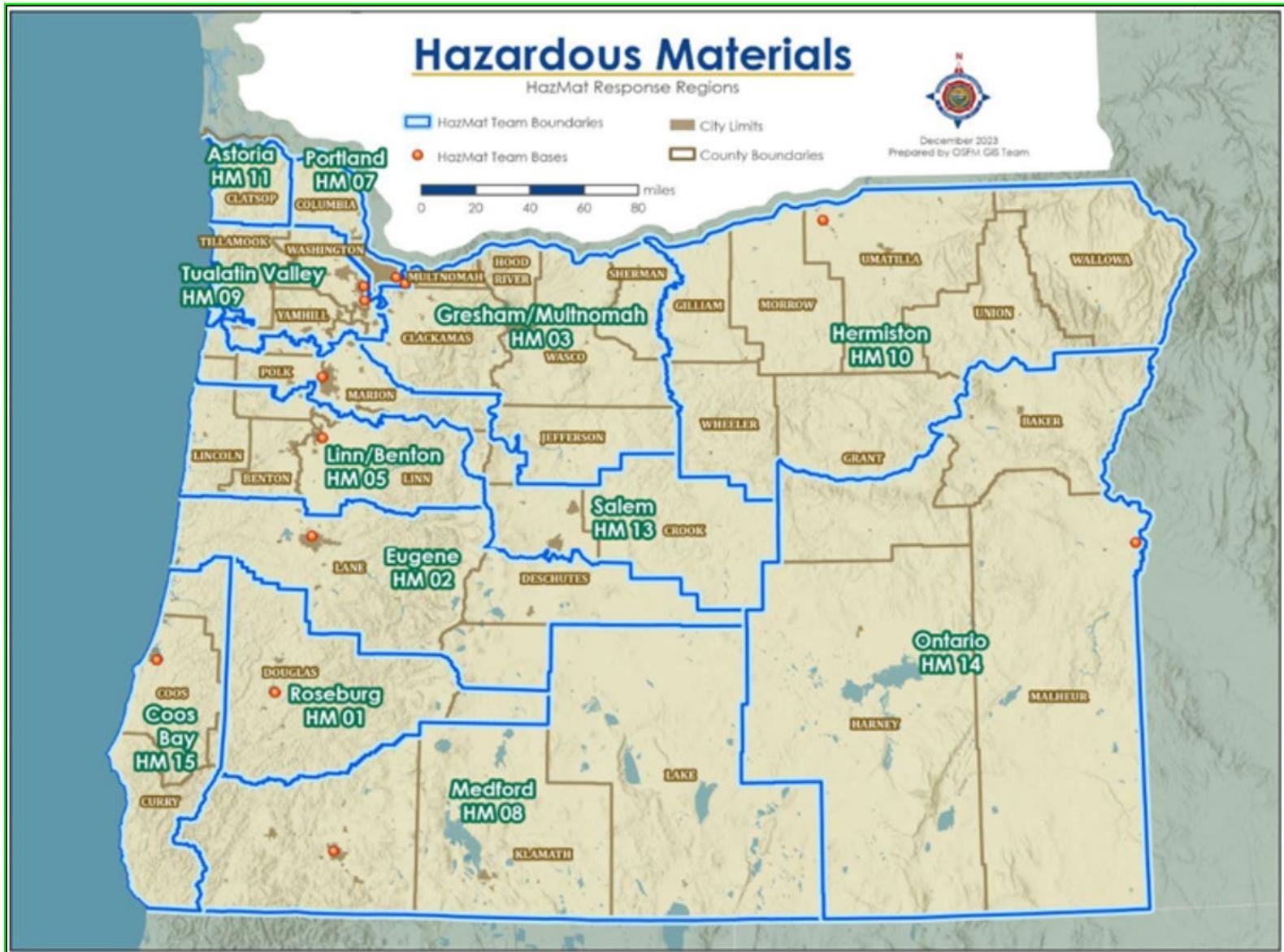
While enroute, the HAZMAT team will contact the appropriate individual on-scene (e.g., incident commander, operations section chief) to acquire incident details and initiate research and planning. Upon arrival at the scene, the HAZMAT team typically operates under the Operations Section of the local incident command structure. A representative from the team will liaison with the IC to obtain an incident action plan briefing and determine how the team will assist in achieving established incident objectives. The team conducts tactical operations at the incident site as directed to mitigate the adverse effects of a hazard release and achieve incident objectives. Such activities may include on-site reconnaissance, hazard sampling and identification, and conducting offensive operations to stop the hazard release.

4.5 Other State HAZMAT Resources

When a HAZMAT incident exceeds the capacity of the local first responders and the local HAZMAT teams, the incident commander may request additional resources from the state such as additional RHMRTs or the 102nd CST. The RHMRTs are strategically distributed throughout the state while the CST is based in Salem, Oregon. Upon arrival at the scene, the CST will operate under the Operations Section of the Incident Command System. This highly trained and equipped 22-person team advises, assists, identifies and assesses at the scene to support and execute established incident objectives. The IC requests additional support through the OERS.



Figure 4-2: Regional HAZMAT Response Team Area of Responsibility Map



4.6 Federal Agencies

When local and state resources are exhausted or specialized services are required, federal resources and response activities are coordinated and requested as outlined in the 2024 Northwest Area Contingency Plan (NWACP) developed by the Region 10 Regional Response Team and the Northwest Area Committee. The NWACP provides Federal Agency jurisdictional boundaries and outlines response authorities and policies for the region.



5 HAZARD IDENTIFICATION AND RISK ASSESSMENT

The following sections below provide the risk assessment results and supporting data. Attachment 1 describes the methodology used to complete this risk assessment. Attachment 5 includes a risk profile sheet for the EHS facilities in Tillamook County.

5.1 Stationary Sources

Experts analyzed Tier II reports maintained in Oregon's CR2K online database and conducted a risk assessment to identify the highest risk facilities. Attachment 5 displays the profile sheets for the EHS (EPCRA 302) facilities alphabetically, facility response capabilities (when a facility completed and returned the questionnaire), at-risk/vulnerable facilities located within the estimated Acute Exposure Guideline Level (AEGL)-2 airborne concentration levels or within one-half-mile (when analysts did not conduct plume modeling) and the assigned fire department based on the facility's location and department's designated area of responsibility. When a facility did not complete a questionnaire, ASG entered the phone number and owner-operator email listed in the CR2K database into the Emergency Coordinator field of the facility profile sheet. Analysts obtained at-risk and vulnerable facilities from the Oregon's GEOHub website and data layers maintained in the CR2K database. An at-risk facility refers to facilities with individuals or groups whose needs are not fully addressed or who feel they cannot safely use the standard resources offered during preparedness, response, and recovery efforts. These include the physically or mentally disabled, senior citizens, and/or children. A vulnerable facility refers to a facility whose individuals are subject to potential harm from a hazard such as a downwind chemical plume. Section 5-2 below describes socially vulnerable populations within the region who may require additional community outreach and engagement from planners and responders to minimize the adverse impacts of a HAZMAT release.

5.2 Social Vulnerability Lens

To assist planners with identifying socially vulnerable populations around high-risk facilities, analysts reviewed several socioeconomic data layers within the Federal Emergency Management Agency's (FEMA) Resilience Analysis and Planning Tool (RAPT). These layers provided block-level data for neighborhoods representative of low-income, linguistic isolation, limited education (less than a high school education), those over the age of 65, households without a broadband subscription and households without a smartphone. Analysts selected these layers based on their association with disproportionate disaster outcomes compared with other populations. Additional services, outreach, coordination, and risk communication may be necessary to ensure improved outcomes in preparing the whole community for a HAZMAT incident. For example, implementation of public protection actions may require mobility assistance, risk message translation and contextualization, or financial assistance. Community outreach and engagement with socially vulnerable populations near high-risk facilities can improve outcomes with enhanced preparedness. Plans should also address specific methods used to assist socially vulnerable populations in preparing, responding to, and recovering from disasters. Population data and statistics within the RAPT is based on U.S. Census Data. Figures 5-1 through 5-6 display the socioeconomic layers used in the analysis and the location of the EHS facilities represented by an orange-colored dot on the map. These files have been provided to LEPC stakeholders engaged in awareness and outreach programs for additional planning. Planners can access this free FEMA tool online and zoom into a specific area to view census data statistics for a user-selected layer. Based on our analysis with the social vulnerability lens, we are recommending the following next steps to improve outcomes from HAZMAT risks among at-risk populations:

- Census tracts where EHS facilities are located indicate 6.9-16.7% of the population living below the poverty level as displayed in Figure 5-1. Areas in central Tillamook County have the highest percentage of



populations living below the poverty level while the city of Tillamook and the northern-most census tract within the county have a lower percentage when compared to the national average. This indicates that some residents may lack the financial capacity to evacuate, shelter adequately, and sustain their well-being during a prolonged HAZMAT incident. Coordinate with emergency planners and outreach to determine more specific needs which may include transportation/evacuation assistance, establishing shelters for displaced residents, shelter-in-place protective action guidance, and educational materials describing access to available resources during a HAZMAT incident.

- In Figure 5-2, there are households with limited English proficiency predominantly located within the city of Tillamook (7.8%). Most of the other census blocks within the county had percentages of less than one percent. The Tillamook County Creamery is a high-risk EHS facility located just north of the city. Collaborate with social services to identify the various languages represented placing a priority on areas surrounding the Tillamook County Creamery to include the city of Tillamook. Consistent with local policies related to translation needs, provide LEPC HAZMAT awareness, risk, and protective action literature in primary languages to ensure effective risk communication. Ensure notification, alerts, and warnings can be disseminated in these languages.
- Figure 5-3 illustrates areas of the population greater than age 25 years old that have not obtained a high school diploma. Individuals with a limited education may have difficulty interpreting emergency messages. To ensure that the whole community understands emergency messages, it is a good practice to standardize communications at an 8th grade reading level when communicating complex, technical information to include public protective actions. Utilize ChatGPT as a resource to review and suggest written materials that the whole community will understand.
- Figure 5-4 displays areas where elderly populations are concentrated (age 65 and older). Elderly populations may indicate dependency on others for basic needs to include transportation, assisted living, on-going medical care, and communication. The concentrated areas may include nursing or assisted living facilities with larger populations of elderly. Collaborate with these facilities that are vulnerable to a HAZMAT incident to ensure adequate evacuation and shelter-in-place plans exist along with notification methods. Coordinate with social services and community-based organizations to ensure that viable communications and support can be provided to isolated elderly members of the community during a HAZMAT incident.
- Figure 5-5 displays the percentage of population without a broadband subscription while Figure 5-6 shows the RAPT's estimated percentage of households without a smartphone. Residents that have limited access internet access or do not have a smartphone are less likely to receive prompt emergency notification messages via social media or smartphone emergency notification applications such as alert text messaging systems which could hinder response efforts. Planners need to ensure that alternate dissemination methods are available to enhance public protective action outcomes from a HAZMAT incident release.



Figure 5-1: Tillamook County Population Below Poverty Level

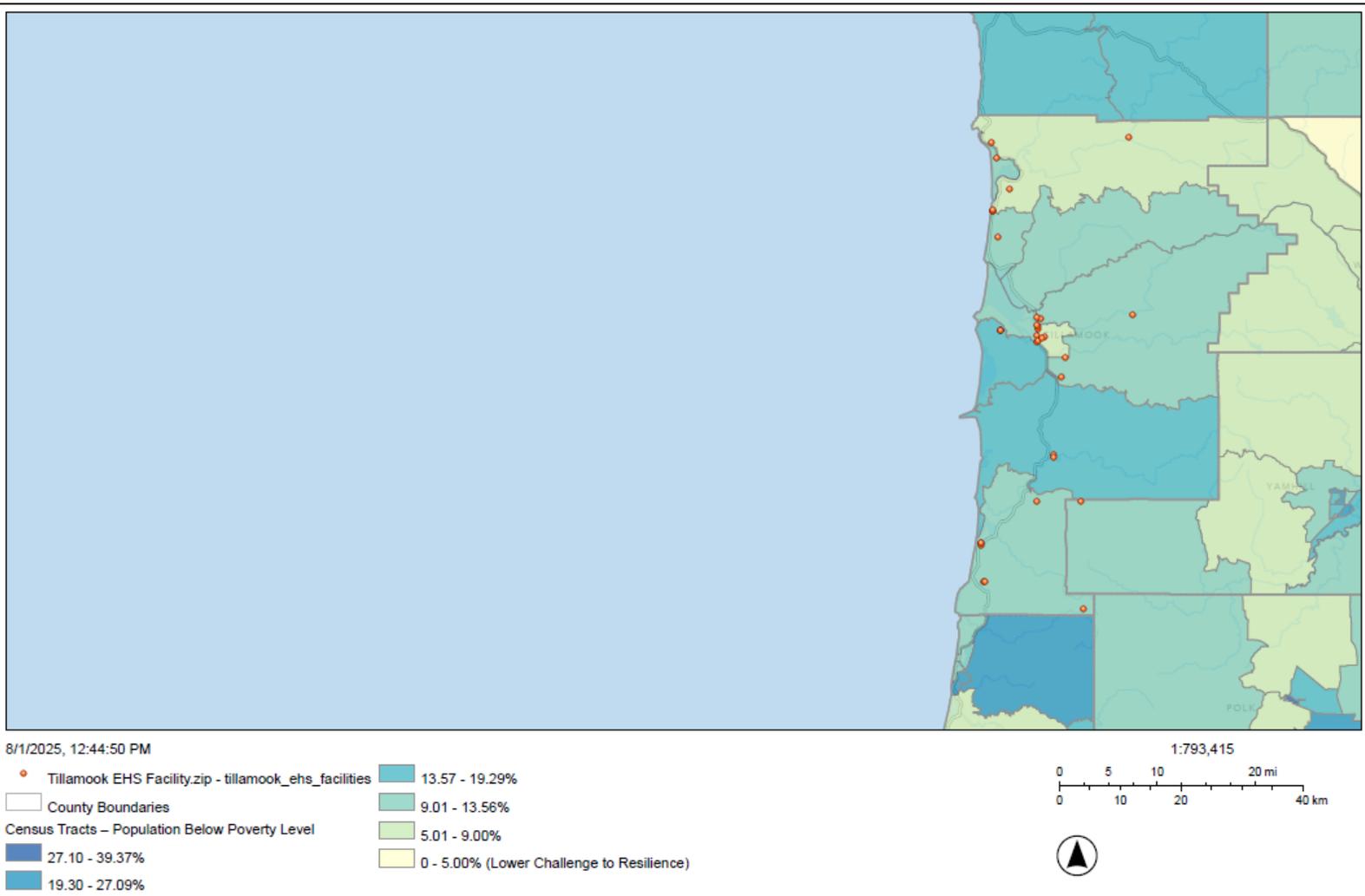




Figure 5-2: Tillamook County Households with Limited English

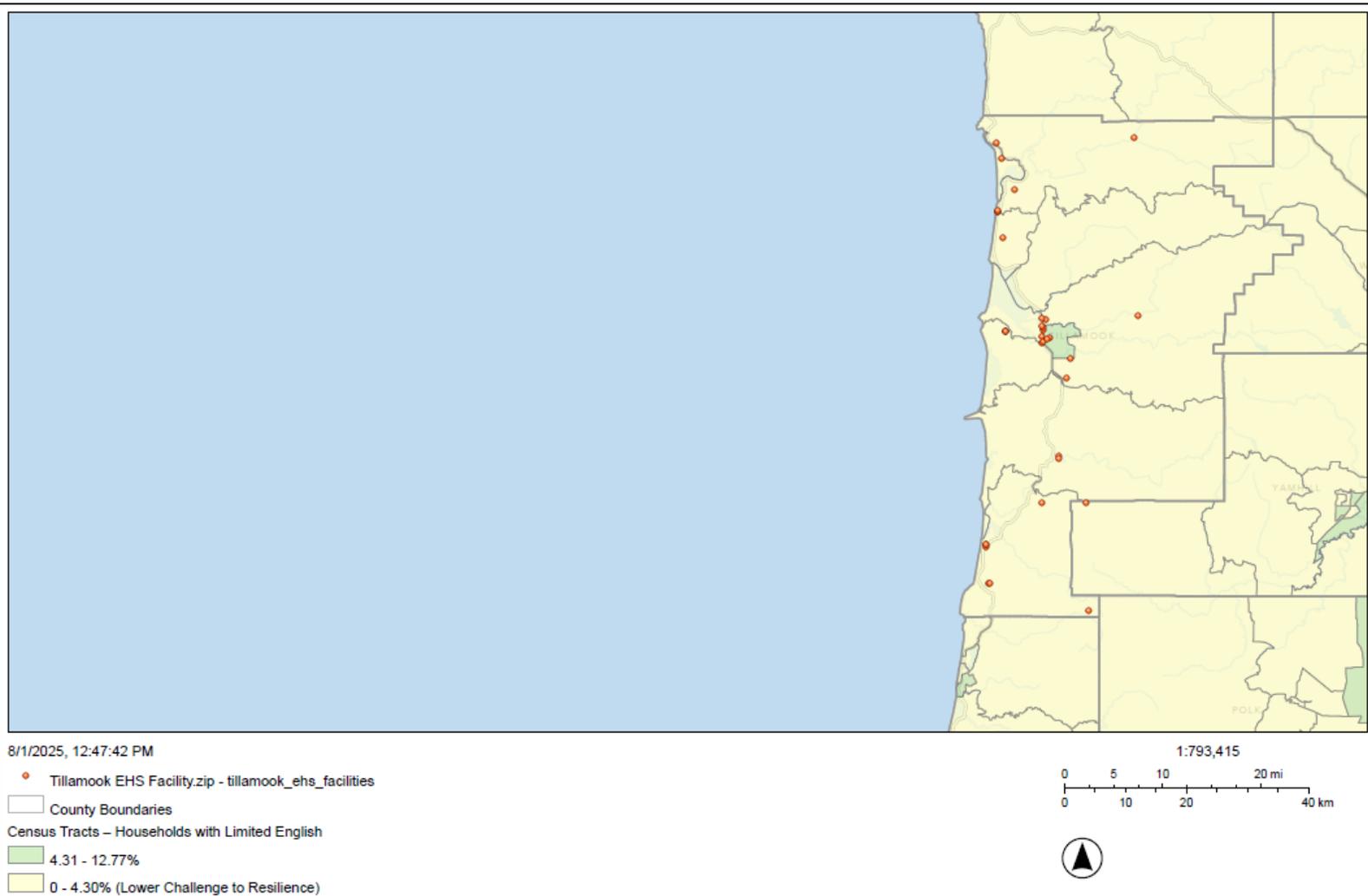




Figure 5-3: Tillamook County Population without a High School Diploma

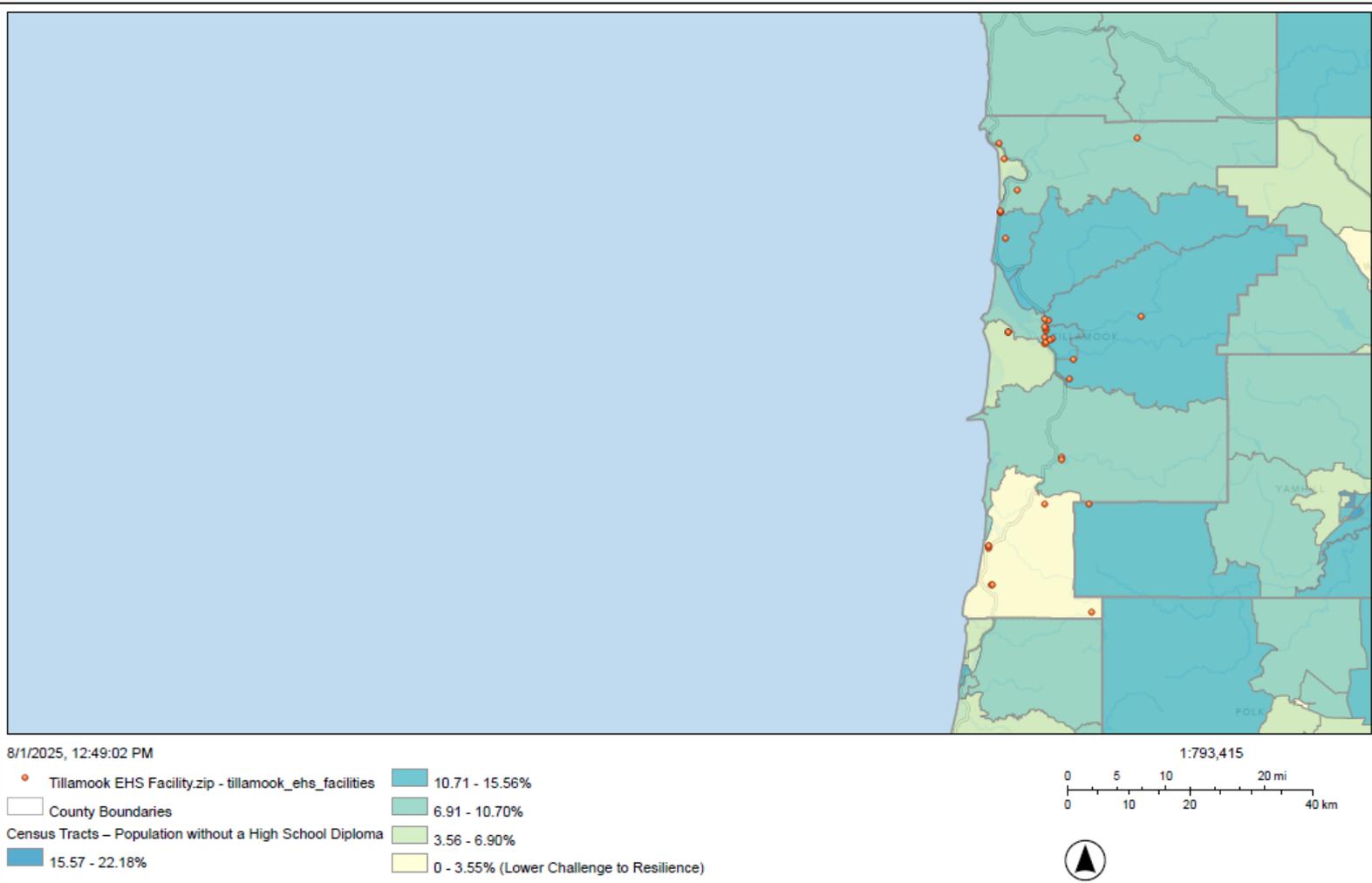




Figure 5-4: Tillamook County Population Age 65 and Older

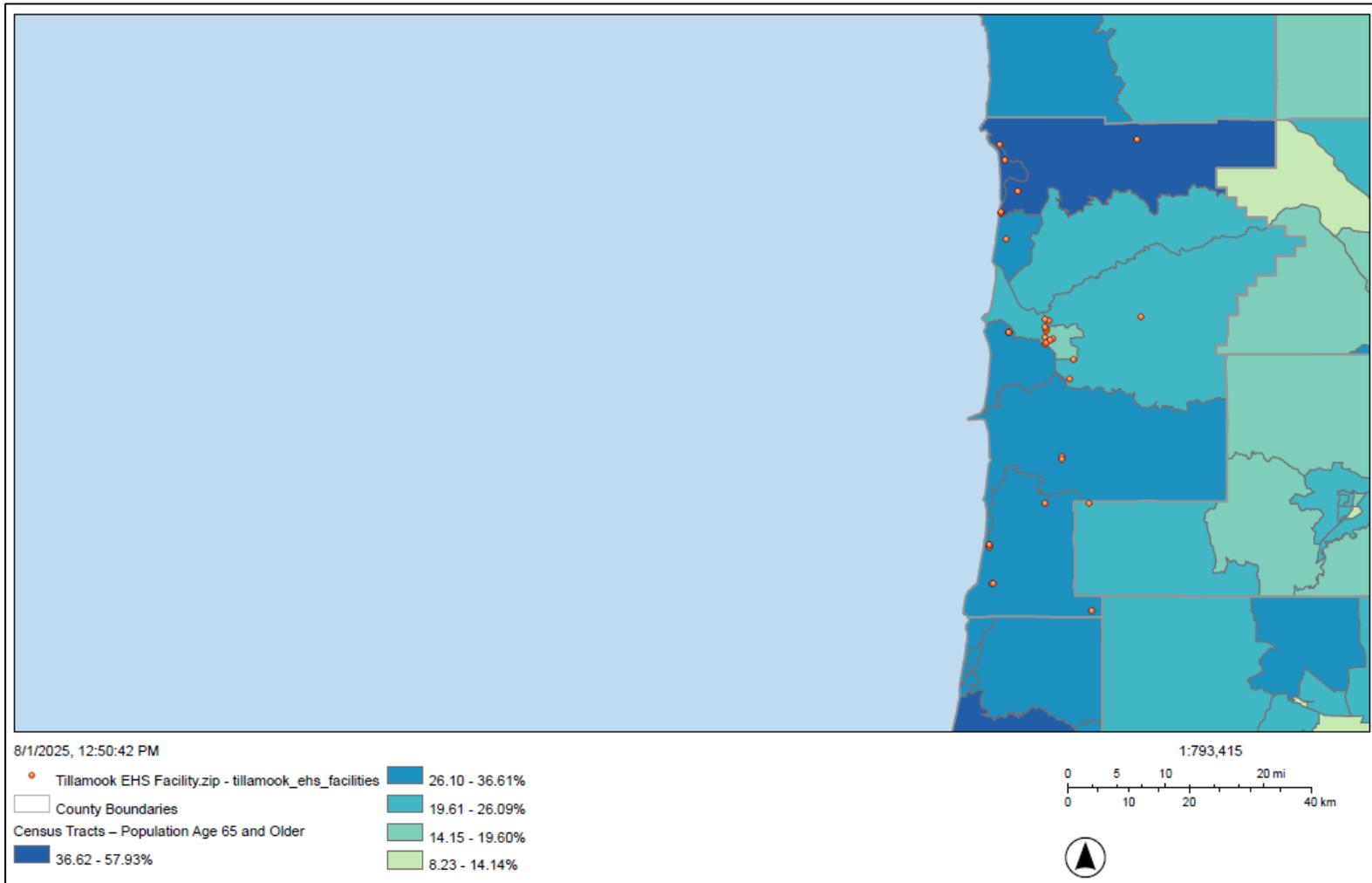




Figure 5-5: Tillamook County Population without a Broadband Subscription

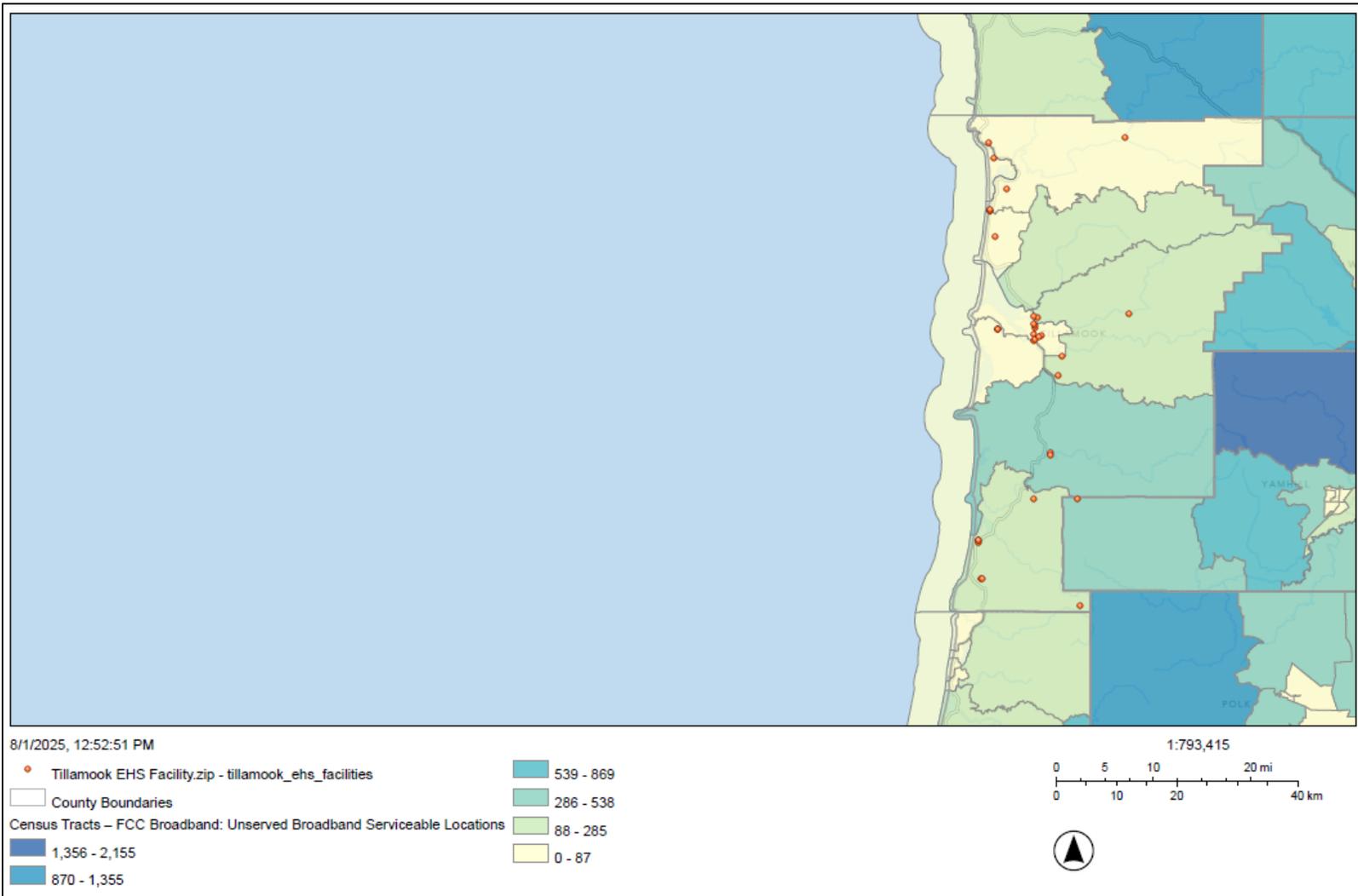
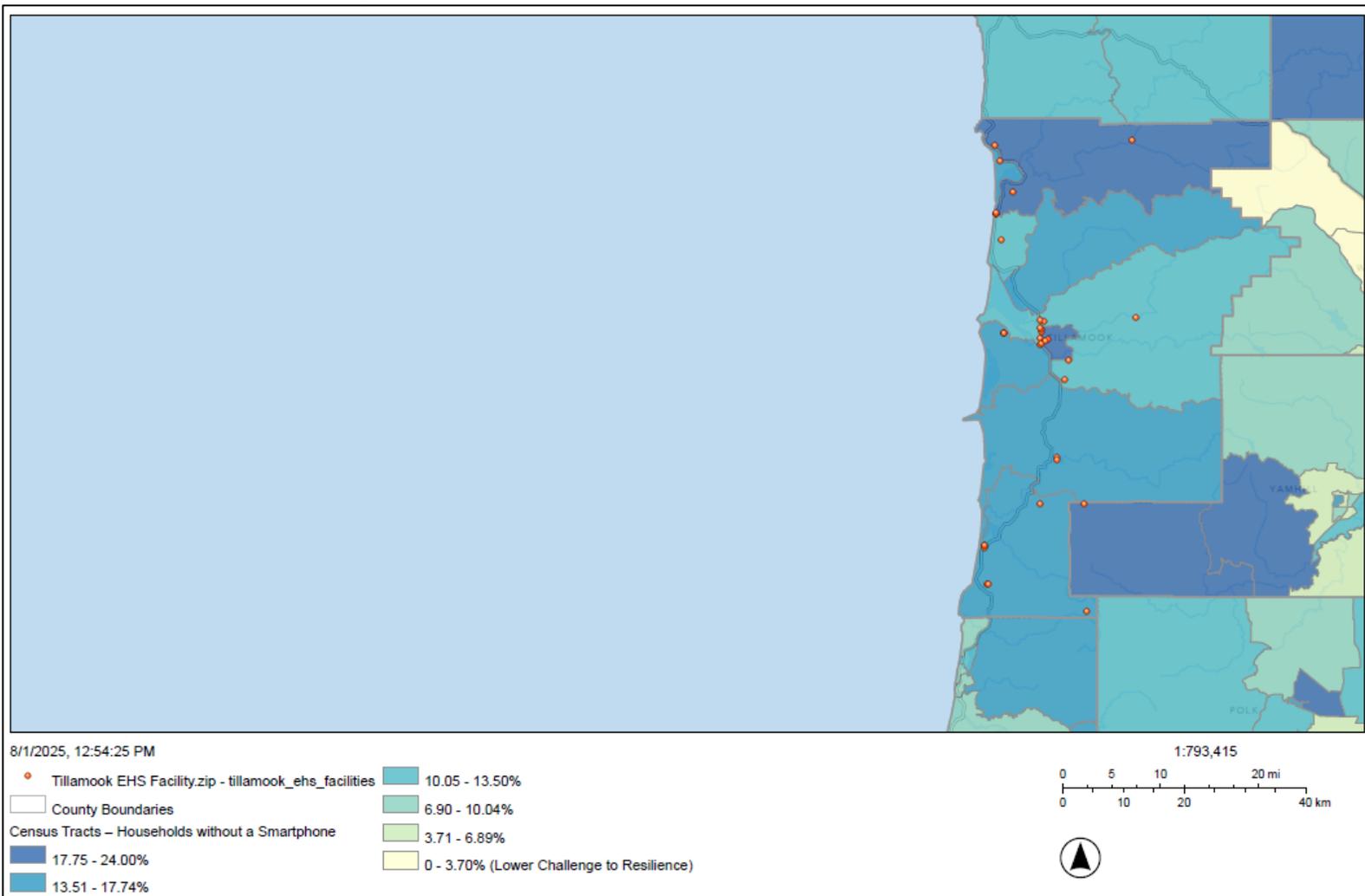




Figure 5-6: Tillamook County Households without a Smartphone



5.3 Model Outputs

Analysts used the Areal Locations of Hazardous Atmospheres (ALOHA) Program to conduct plume modeling and estimate the airborne concentrations in the event of a HAZMAT release. Based on the plume modeling outputs, experts identified anhydrous ammonia, nitrous oxide, and propane as the top three risks to Tillamook County based on a review of Tier II data, accident probability and population at risk (severity rating). Analysts conducted plume modeling for selected chemical hazards at EHS and Tier II facilities (except for those facilities storing petroleum-based products) to estimate impacts and population at risk. For each plume model, analysts used the maximum hazard quantity reported on the Tier II report as the release amount and represents a bulk release. Plume models supporting this risk assessment assumed a worst-case, total release since there are many different scenarios that could cause a release such as a natural disaster, fire, explosion, deliberate act, or an accident.

The Environmental Protection Agency establishes Acute Exposure Guideline Levels (AEGLs) for various chemicals to describe the human health effects from rare exposures to airborne chemicals. They are designed to protect the elderly and children, and other susceptible individuals. AEGLs are calculated for five relatively short, unprotected exposure periods to include 10-minutes, 30-minutes, 60-minutes, four-hours and eight-hours. Three AEGL levels



expressed as parts per million (ppm) or milligrams per cubic meter (mg/m^3) exist and are defined as follows:

- AEGL-1: represents the airborne concentration of a substance above which it is predicted the general public, including susceptible individuals, could experience notable discomfort, irritation, or certain asymptomatic non-sensory effects (non-disabling and reversible).
- AEGL-2: represents the airborne concentration of a substance above which it is predicted the general public, including susceptible individuals, could experience irreversible or other serious, long-lasting adverse health effects or an impaired ability to escape.
- AEGL-3: represents the airborne concentration of a substance above which it is predicted the general public, including susceptible individuals, could experience life-threatening health effects or death.

Figures 5-7 and 5-8 display the worst-case plume modeling result among the EHS and non-EHS facilities when analysts conducted plume modeling (dependent upon reporting facility hazards and whether the ALOHA plume modeling program's library included the chemical of concern). Analysts used the Mapping Application for Response, Planning, and Local Operational Tasks (MARPLOT) Program to obtain the total population within the orange-colored ring which represents the AEGL-2 airborne concentration contour. The populations within these areas represent the risk assessment's severity factor. The red dots represent vulnerable facilities while a blue cross symbol depicts a high-risk facility since a HAZMAT release from one of these facilities could cause airborne chemical exposures to downwind populations as estimated by the plume modeling outputs. ALOHA model and MARPLOT files have been provided to the Tillamook County Office of Emergency Management to support future response planning.

Figure 5-7: -High-Risk Facilities in Tillamook County

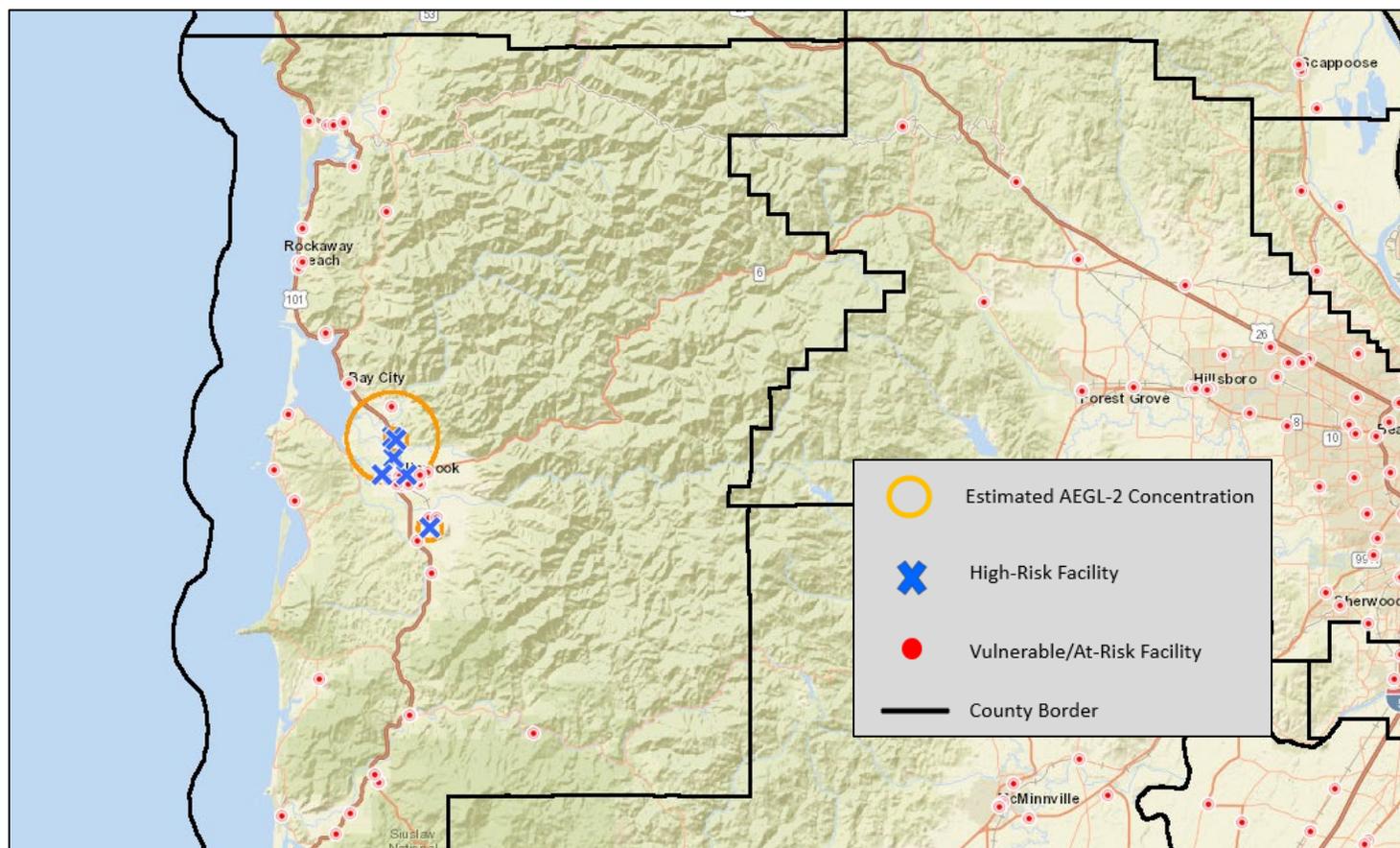
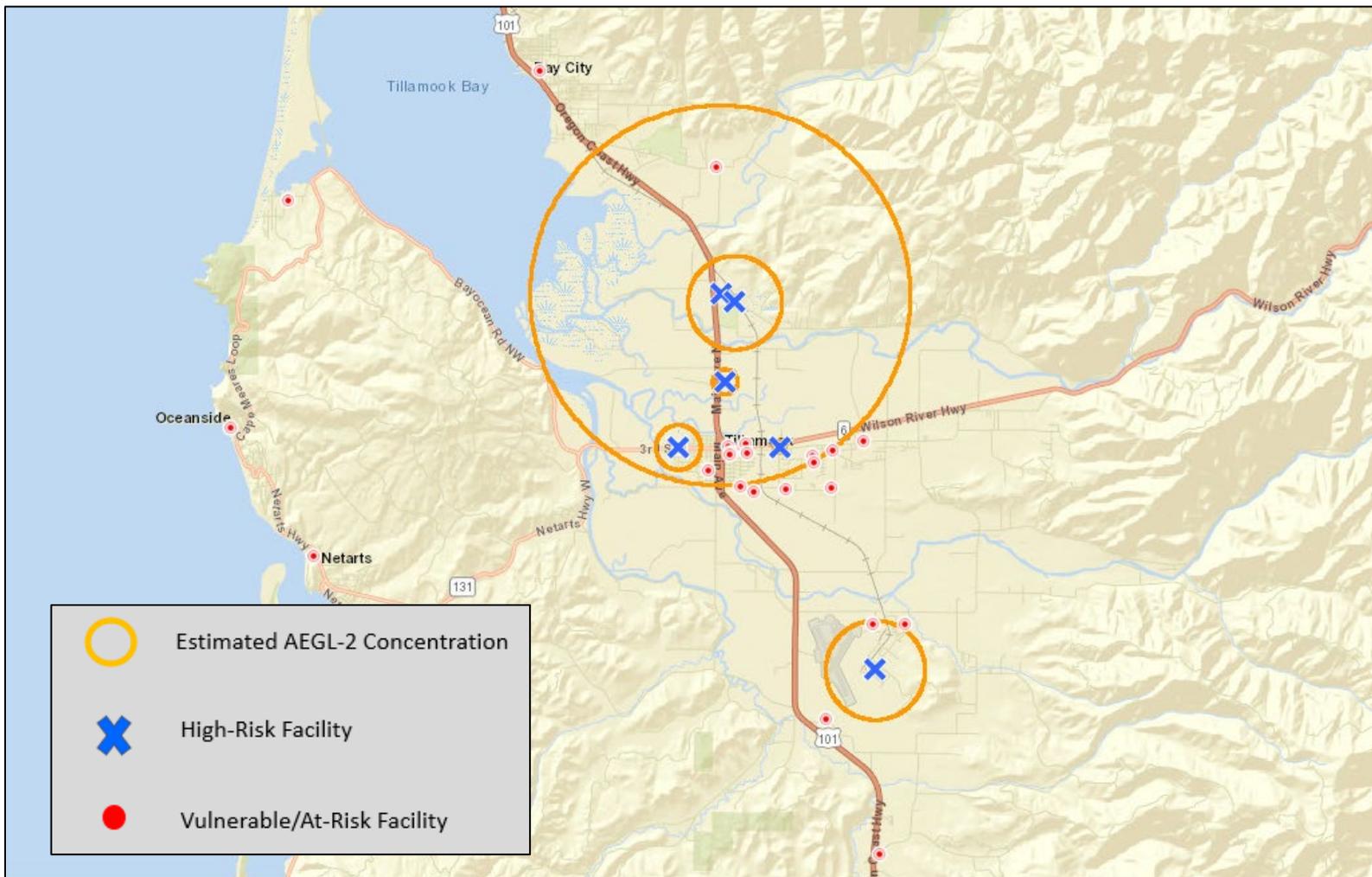




Figure 5-8: High Risk Facilities in and Near Tillamook, OR





5.4 HAZMAT Transportation Model Outputs

Analysts analyzed railroad HAZMAT transportation routes within Tillamook County. The analysis revealed that the Oregon Coast Scenic Railroad Company operates a passenger train for tourists under an agreement with the Port of Tillamook Bay who own the rail route. Freight trains with the potential to transport HAZMAT do not operate within the county.

Highway routes utilized by tanker trucks for the transportation of hazards are difficult to predict and are dependent upon where the commodity originates from and the endpoint destination. Figure 5-9 displays the highway routes most likely to be used for the transportation of hazards through the county. These routes include Highways 6, 22, and 101. Analysts conducted plume modeling for chlorine, hydrochloric acid, and ammonia due to the high volume of these chemicals identified on submitted Tier II data within Oregon and the potential toxic airborne hazards they present when released. Table 5-10 displays the estimated downwind hazard distances as determined from the plume model release point. The red shaded areas displayed along the highway route below represent the AEGL-2 airborne concentration contours as estimated by the ALOHA model. Analysts used the MARPLOT Program to obtain the total population within the red shaded areas; the population within these areas represents the severity factor for the risk assessment. Figures 5-11 through 5-13 display the worst-case plume model results for the top three hazards based on severity, estimated AEGL-2 hazard areas, and any vulnerable facilities located within or near this hazard area. Planners can zoom in on an area to identify specific facility names within the electronic MARPLOT file if desired. ASG provided the ALOHA model and MARPLOT files to the Tillamook County Office of Emergency Management to support future response planning activities.

Figure 5-9: Probable Highway HAZMAT Routes in Tillamook County

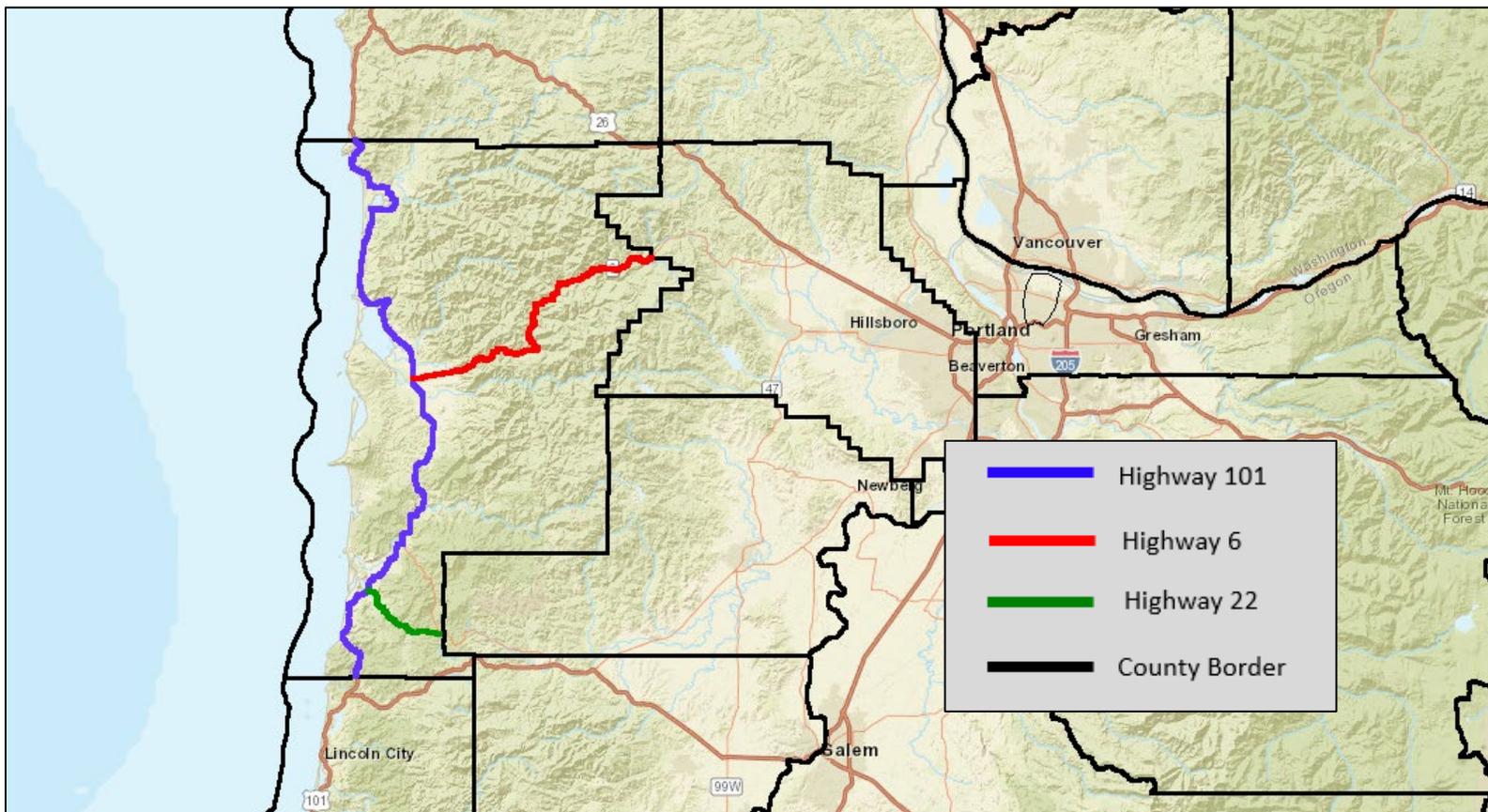




Table 5-10: ALOHA Plume Model Estimated Hazard Distances

Hazard	AEGL-1 Distance (miles)	AEGL-2 Distance (miles)	AEGL-3 Distance (miles)
3,000 Gallon Chlorine Tanker Truck Release	> 6	> 6	2.5
6,000 Gallon Anhydrous Ammonia Tanker Truck Release	4.1	2.1	1
1-Ton Chlorine Cylinder Release	4.7	2.9	1.3
6,000 Gallon Hydrochloric Acid (42%) Tanker Truck Release	2.4	0.86	0.44

Figure 5-11: Tillamook County – 3,000 Gallon Chlorine Tanker Truck Release

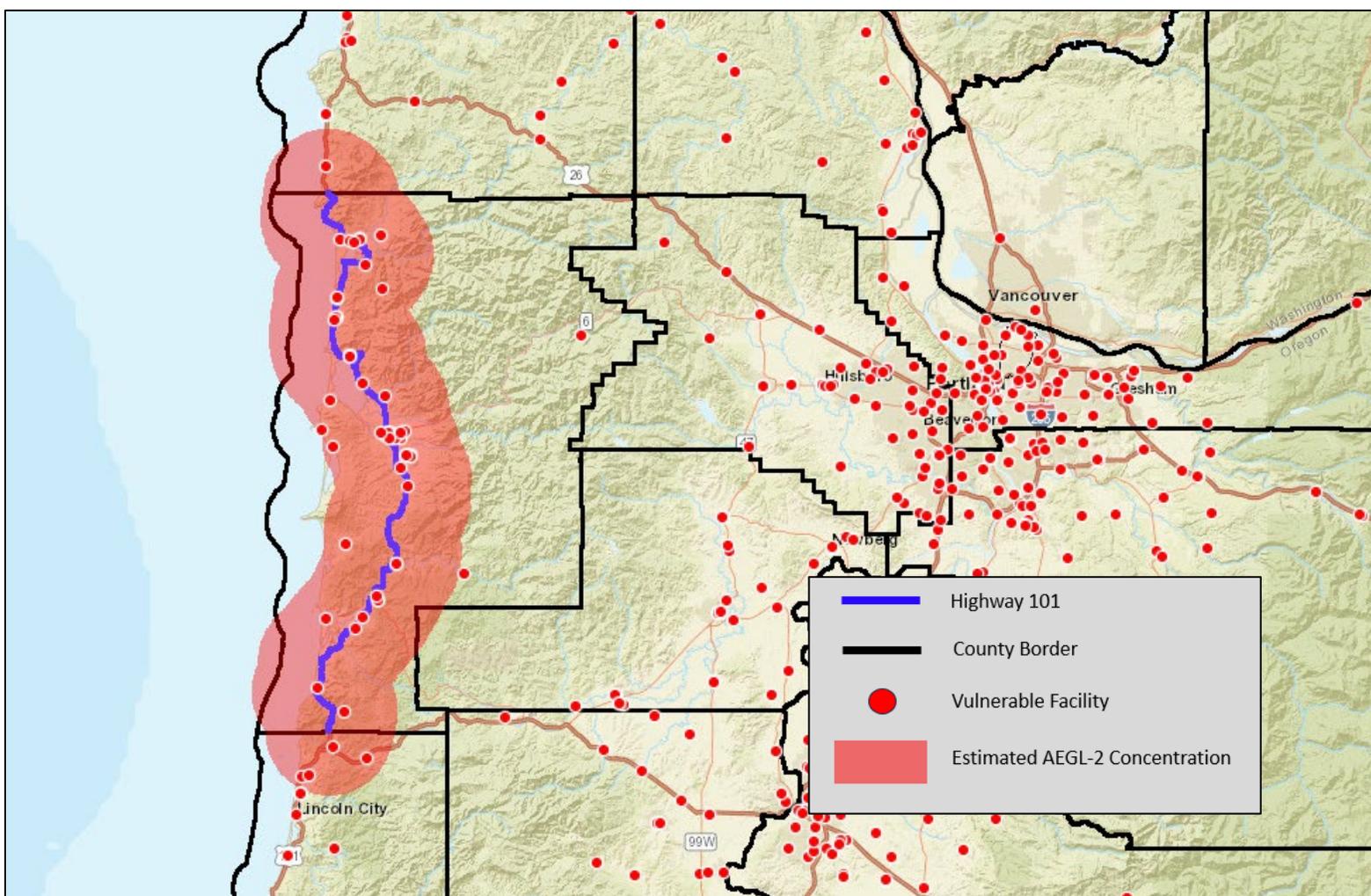




Figure 5-12: Tillamook County – 6,000 Gallon Ammonia Tanker Truck Release

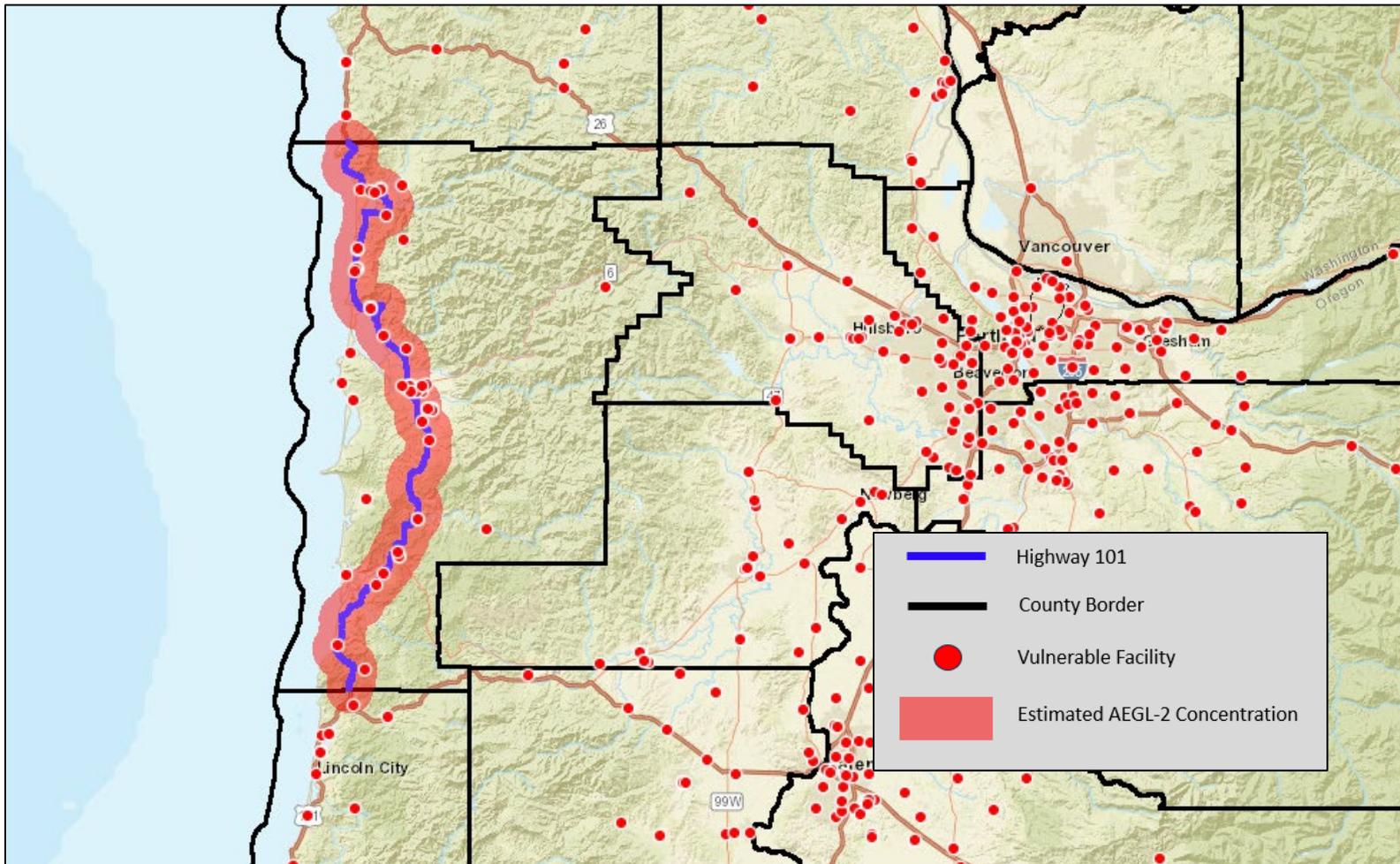
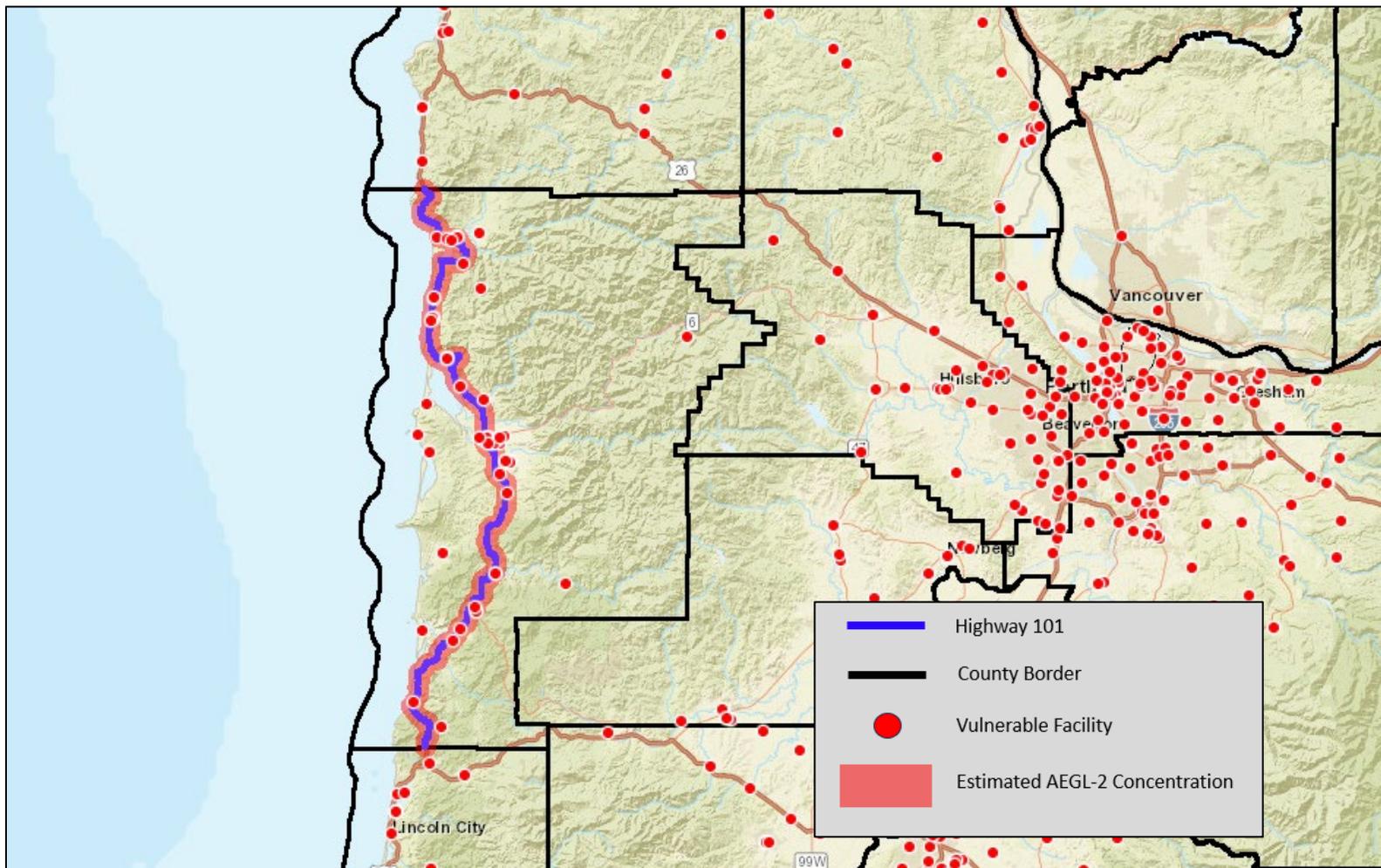




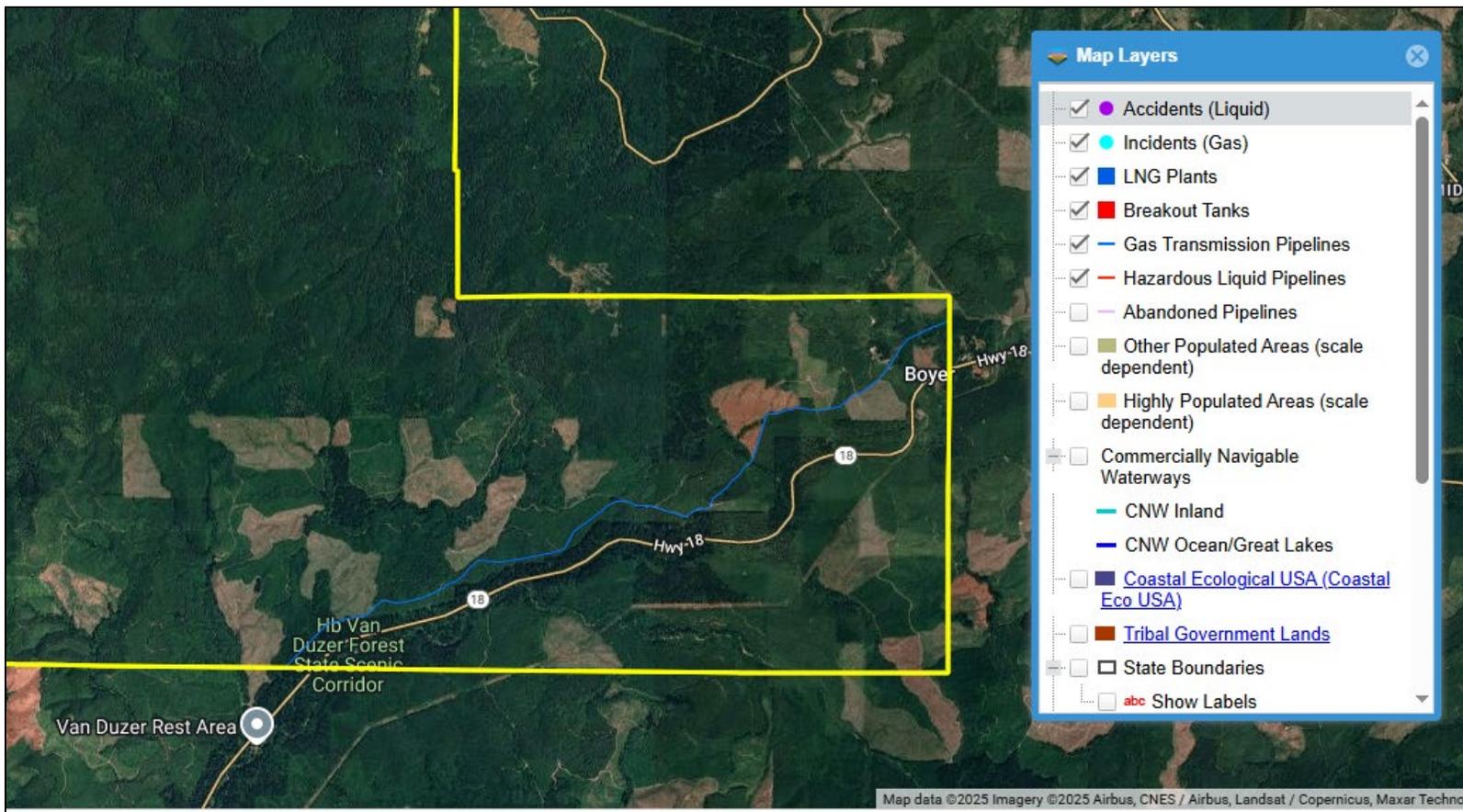
Figure 5-13: Tillamook County – 6,000 Gallon Hydrochloric Acid Tanker Truck Release



5.5 Pipelines

Analysts conducted a pipeline route assessment for Tillamook County using the National Pipeline Mapping System Program and identified an underground pipeline owned and operated by the Northwest Natural Gas Company located in the southeastern corner of the county. The company uses this pipeline to transport natural gas. Figure 5-14 below displays the pipeline’s location as represented by the blue colored while the yellow line depicts the county border. Planners can zoom in further on the public viewer map if desired (<https://pvnpm.phmsa.dot.gov/PublicViewer/>).

Figure 5-14: Tillamook County Pipeline Routes



5.6 Chemical Explosion and Detonations

This analysis considered the potential for flammable materials such as gasoline or propane stored in above ground storage tanks or tanker trucks to explode as a result of fire, detonation, accident or other means. Based upon calculated overpressure radii distance results, a diesel fuel explosion from a tanker truck represents a worst-case transportation scenario with the one pound per square inch (psi) impact area estimated at 478 meters, 239 meters for the 8-psi impacted area and 96 meters for the 100- psi impact area. The red shaded areas in figures 5-15 through 5-17 represent the eight psi impact areas for a tanker truck transporting diesel fuel explosion along Interstate 101. Figures 5-18 through 5-20 display the worst-case stationary source explosion scenarios for gasoline, diesel fuel, and propane. Analysts selected these facilities based on the large quantities reported on submitted Tier II Reports and the presence of above ground storage tanks identified through satellite imagery analysis. The figures also display the vulnerable facilities located within or near these hazard areas. ASG provided the explosive overpressure calculation



spreadsheet and corresponding results to the Tillamook County Office of Emergency Management to support disaster planning.

Figure 5-15: Highway 101 Diesel Fuel Tanker Truck Explosion 8 psi Impact Area – Northern Tillamook County

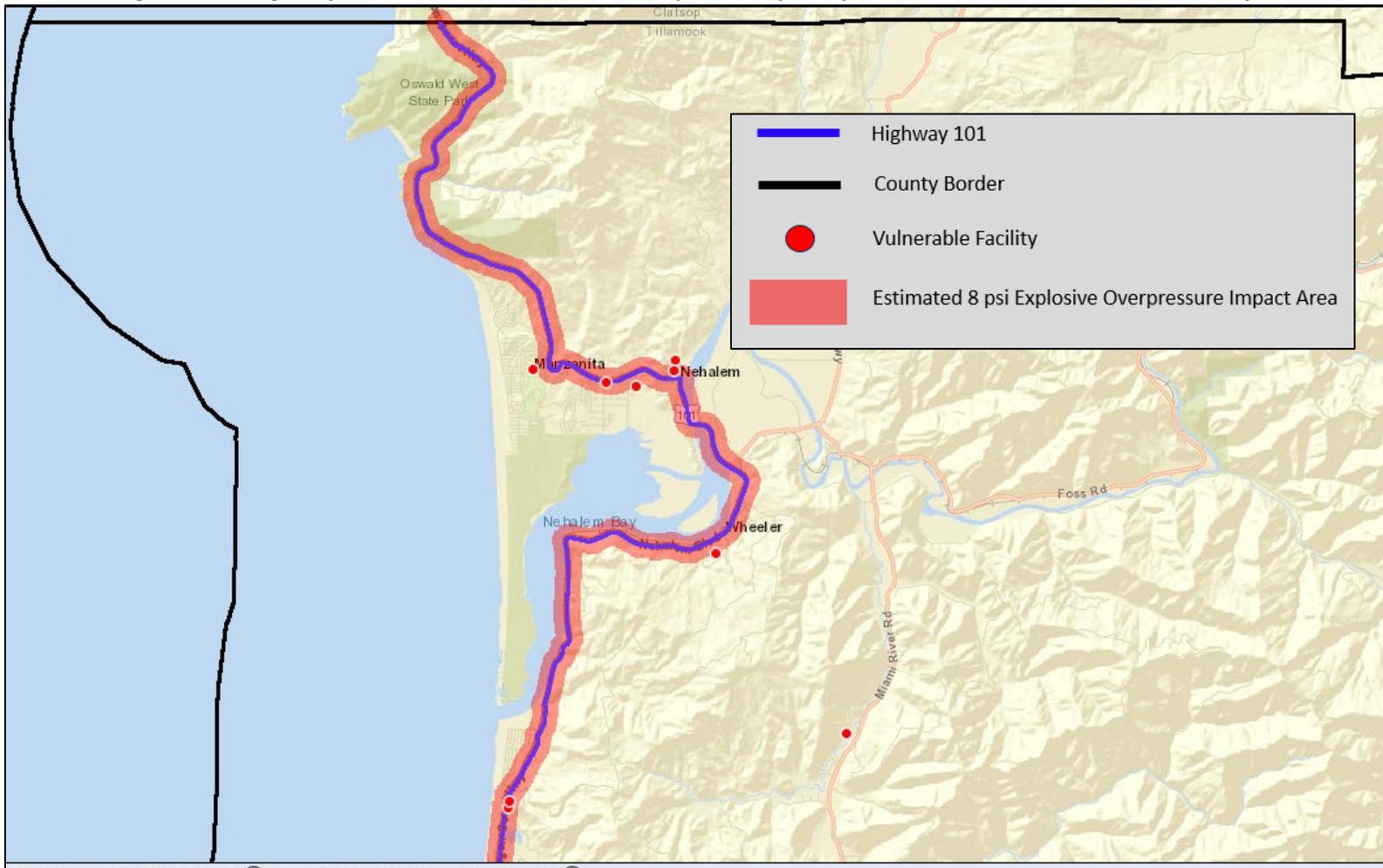




Figure 5-16: Highway 101 Diesel Fuel Tanker Truck Explosion 8 psi Impact Area – Central Tillamook County

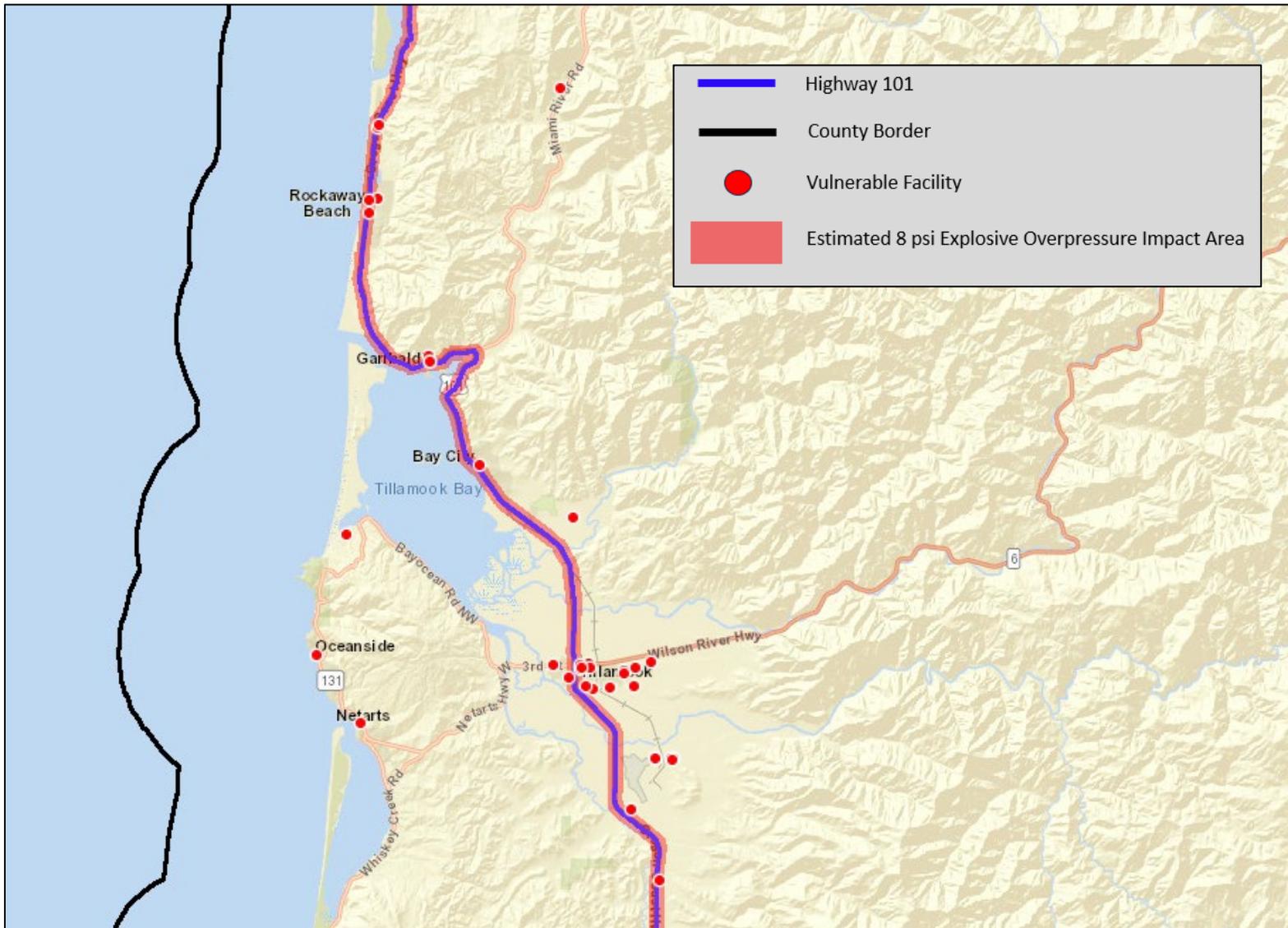




Figure 5-17: Highway 101 Diesel Fuel Tanker Truck Explosion 8 psi Impact Area – Southern Tillamook County

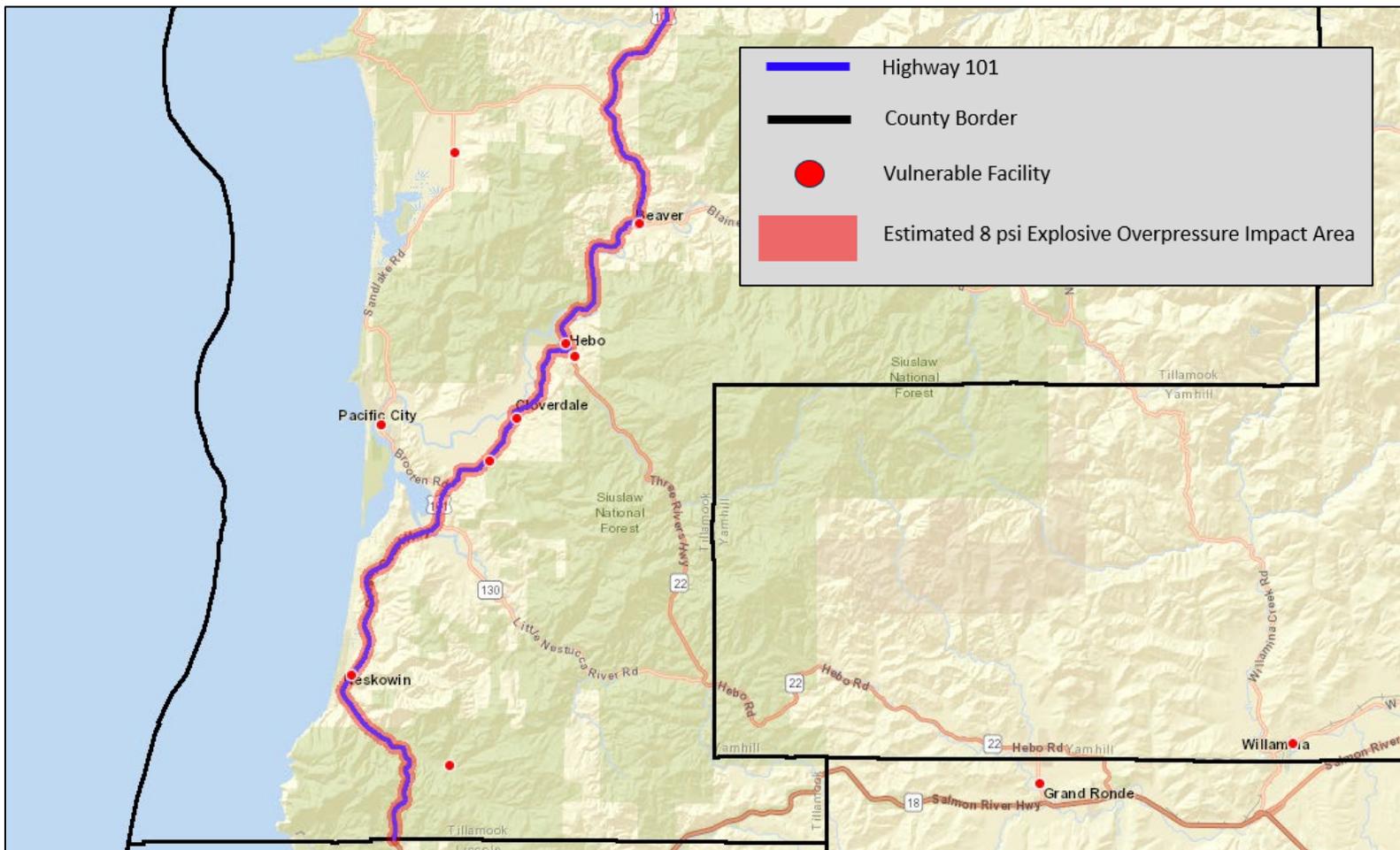


Figure 5-18: 59,800 Gallon Gasoline Explosion-South Prairie Store

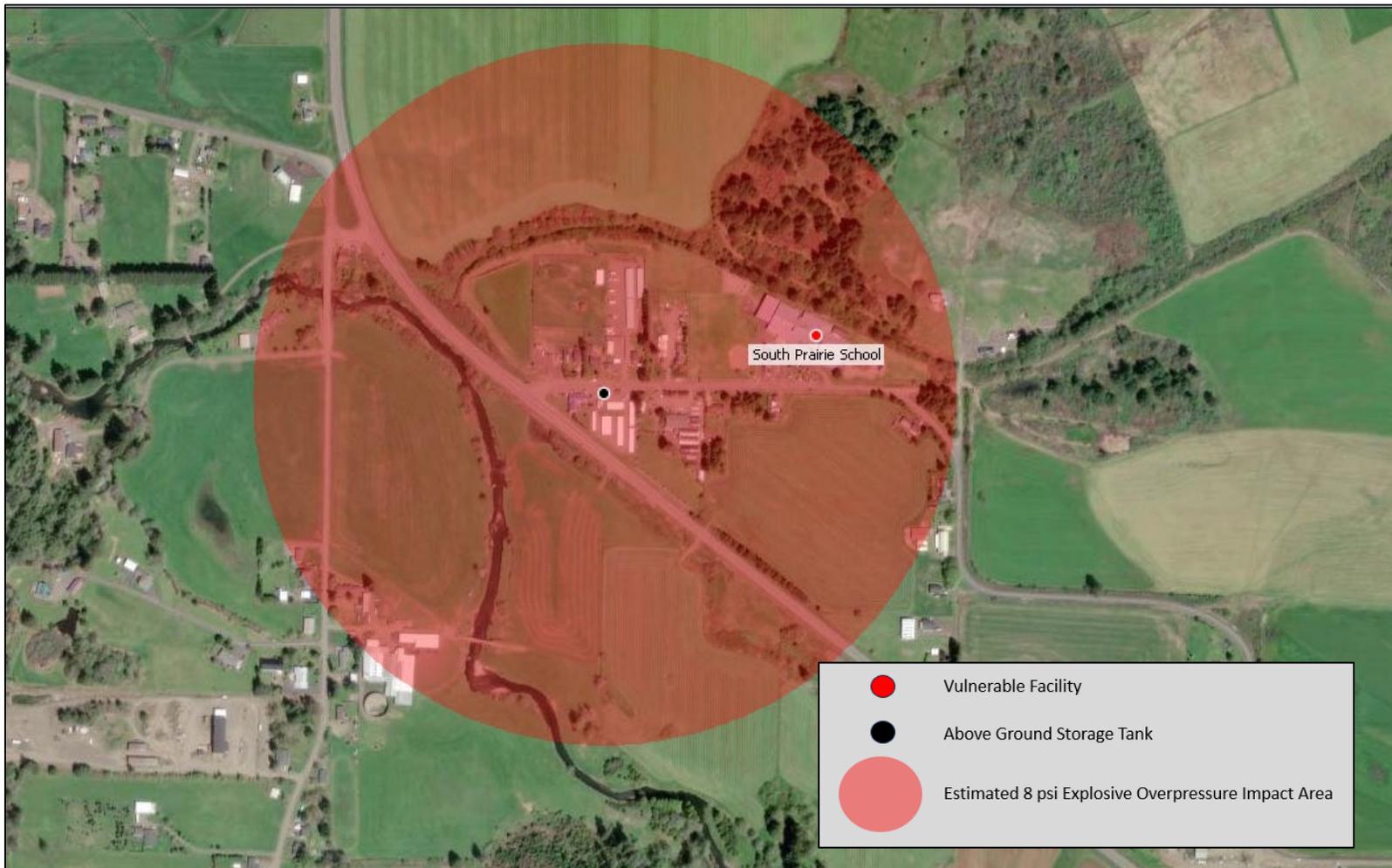


Figure 5-19: 60K Gallon Diesel Fuel Explosion-Tillamook Creamery

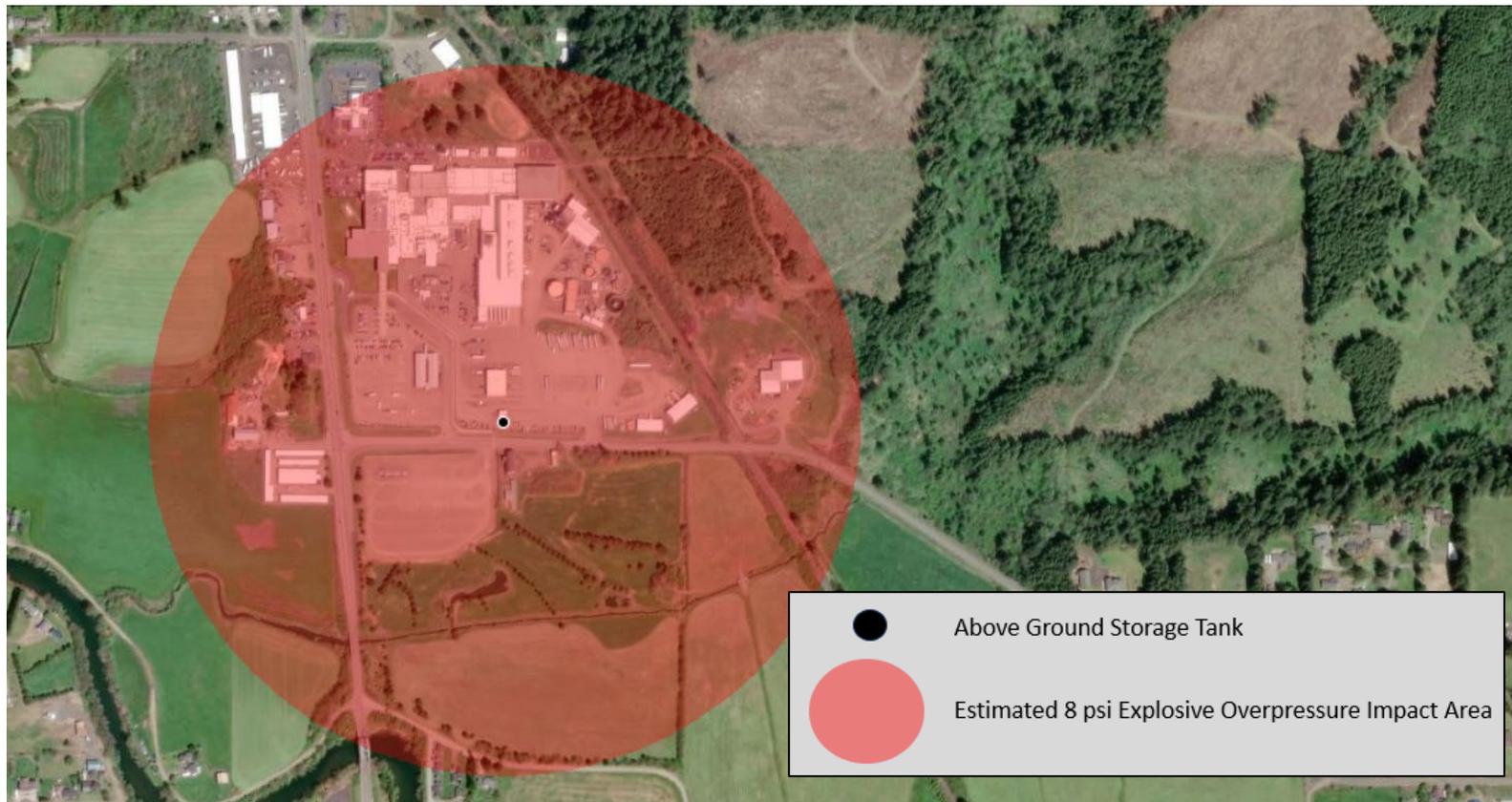
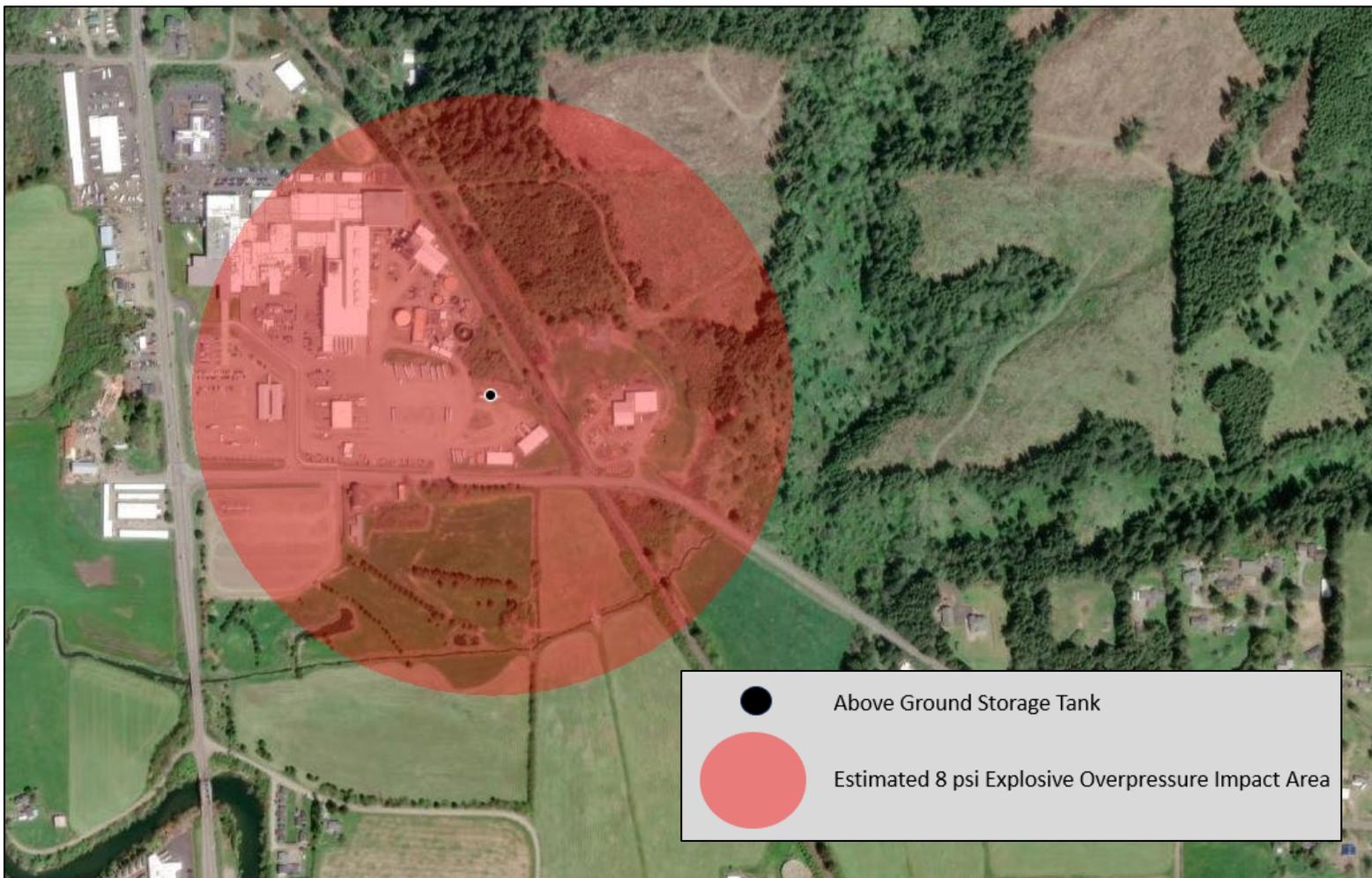


Figure 5-20: 50K Gallon Propane Explosion-Tillamook Creamery



5.7 Radioactive Materials

Analysts reviewed the CR2K inventory to identify locations of radioactive materials (RAM) stored in Tillamook County. The Tillamook Adventist Medical Center stores radiation chemotherapy drugs. Analysts provided the inventory which includes detailed RAM information to the Tillamook County Office of Emergency Management for future reference.



5.8 Public Protective Actions (PPAs)

When a hazard release occurs, there are two likely PPAs available to the risk manager: evacuate or shelter-in-place. Evacuation has been used to minimize public exposure to dangerous levels of chemicals for many years. When enough time exists to safely evacuate threatened areas, it is the optimal choice. Shelter-in-place (SIP) is preferable when a leak is fast, quickly overtakes a community, or the health hazard is low.

This analysis used the Fast Local Emergency Evacuation Times (FLEET) Program to analyze the feasibility and evacuation impact to areas near the Tillamook Creamery facility (highest risk facility). This program estimates vehicle traffic evacuation times in the event of a disaster to include a hazard release incident. The model predicts how long it will take to evacuate a defined geographical area based on user defined input and model parameter assumptions. The model output provides responders with this estimate to support PPA decisions. Analysts selected the following parameters for the scenario:

- An evacuation participation rate of 85% of the population using all available roads with no shelters open;
- 97% of the participating population using their own vehicles (three persons per vehicle) and 3% walking from the area; and
- Daytime, work-week population with a medium non-evacuation related competing traffic flow.

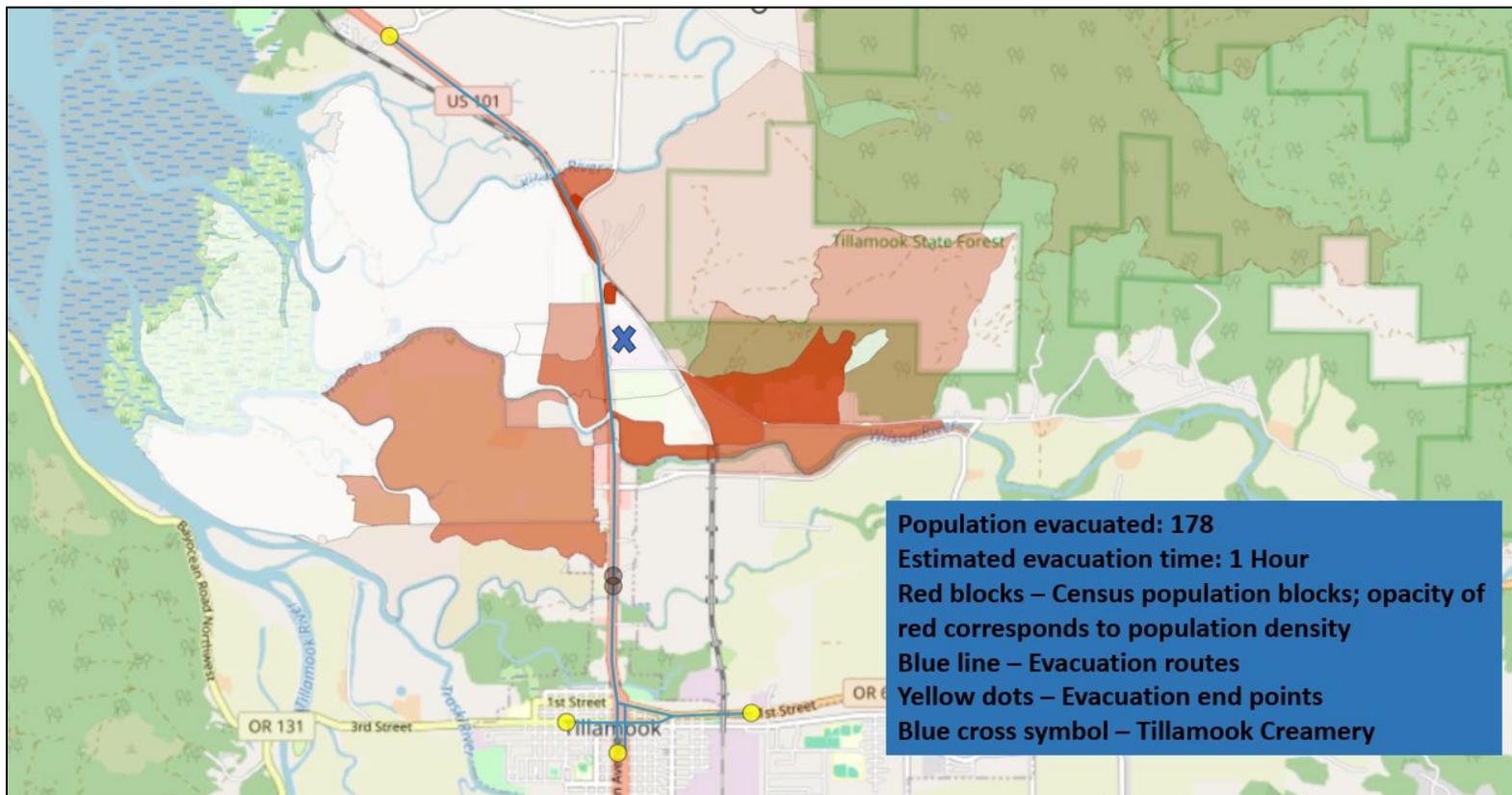
FLEET captures the entire population from predetermined U.S. Census population blocks. The FLEET population data is more conservative for planning, as a buffer zone around the hazard areas will also require evacuation.

ASG analysts assessed the locations near the Tillamook Creamery facility since a HAZMAT release from this facility presents the greatest risk based on plume modeling estimates. The FLEET model estimates that evacuating 85% of the population from each area will require approximately one hour. Based on this estimate, SIP may be a more viable option for a HAZMAT incident occurring at the Tillamook Creamery facility when worst-case winds move airborne concentrations toward populated areas. Additional factors that make SIP a more desirable option for this scenario include the length of time required to make initial public warning notifications.

Based upon the calculated average annual wind speed (7 mph), residents located three miles downwind of a HAZMAT release incident site will have approximately 34 minutes to safely evacuate while populations five miles away will have about 57 minutes to safely evacuate. Figure 5-21 displays the evacuation time estimate following a HAZMAT incident for areas located near the Tillamook Creamery.



Figure 5-21: Tillamook FLEET Evacuation Estimate





5.9 Drinking Water Vulnerability

According to the City of Tillamook's Water Operations website and the Oregon Department of Environmental Quality (DEQ) Drinking Water Protection Interactive Map, surface and ground water serve as the primary drinking water sources for county residents. The City of Tillamook supplies water to city residents and sells surplus water to the Port of Tillamook Bay and 11 rural water districts. The city's water supply consists of filtered surface water from Killiam and Fawcett Creeks located southeast of the city, and groundwater from two wells located on the east side of the city. A third well is located near Highway 101 crossing on the Trask River. Water from the two surface sources is treated and delivered entirely by gravity to all customers. Analysts obtained community water system (CWS) wells and smaller service well locations from DEQ's Mapping and GIS data page (<https://www.oregon.gov/deq/wq/dwp/Pages/DWP-Maps.aspx>) and imported this data as a layer into the MARPLOT GIS tool. Figures 5-23 through 5-25 display the approximate locations of groundwater well locations in the county whereas table 5-22 below lists the EHS facilities located within a groundwater well-source protection area in Tillamook County. While the figures display many CWS and service well locations along primary HAZMAT transportation routes and populated areas, they do not account for all wells within the county such as residential or business wells.

Analysts assessed the potential of surface water source contamination from EHS and Tier II facilities located on or near the banks of Killiam and Fawcett Creeks. The Boaz Ag Services LLC facility located at 8120 South Prairie Road in Tillamook is situated about 0.13 miles north of Killiam Creek. This facility stores a variety of chemical cleaning compounds in liquid or solid form in smaller volumes (135 to 2,875 gallons). The analysis did not reveal any other obvious contamination sources other than highway 101 which crosses both creeks. A tanker truck incident at or near the creek could result in contamination; however, the risk of contamination to surface water is considered low.

The analysis revealed several EHS facilities situated within designated source water protection areas; however, multiple requests to gather well depth and soil composition (sand, gravel, and clay layers) information from the county proved unsuccessful. Based on information gathered from other counties within the state, the risk of HAZMAT contamination following a spill is likely minimal when cleaned up promptly. Well depth and soil composition vary throughout the county but generally range from 250-600 feet deep. Analysts could not verify well depth and soil composition in Tillamook County. ASG provided the MARPLOT Program file to the Tillamook County Office of Emergency Management to enable response stakeholders to zoom into well locations and designated well protection areas if desired.

Table 5-22: EHS Facilities Located within Designated Well Water Protection Areas

Facility Name	Facility Address
Verizon Wireless - ID:1011545	Sunset Drive and U.S. Highway 101 Nehalem, OR 97131
New Cingular Wireless PCS, LLC - USID79606	1906 First Street Tillamook, OR 97141
BPA	15 Evergreen Drive E Tillamook, OR 97141
Werner Gourmet Meat Snacks Inc.	2807 3 rd Street Tillamook, OR 97141
OR-9655 Charter Communications Tillamook	1014 Pacific Avenue Tillamook, OR 97141
Les Schwab Tire Center	1220 Main Avenue



Tillamook, OR 97141

Figure 5-23: Northern Tillamook County Drinking Water Well Locations

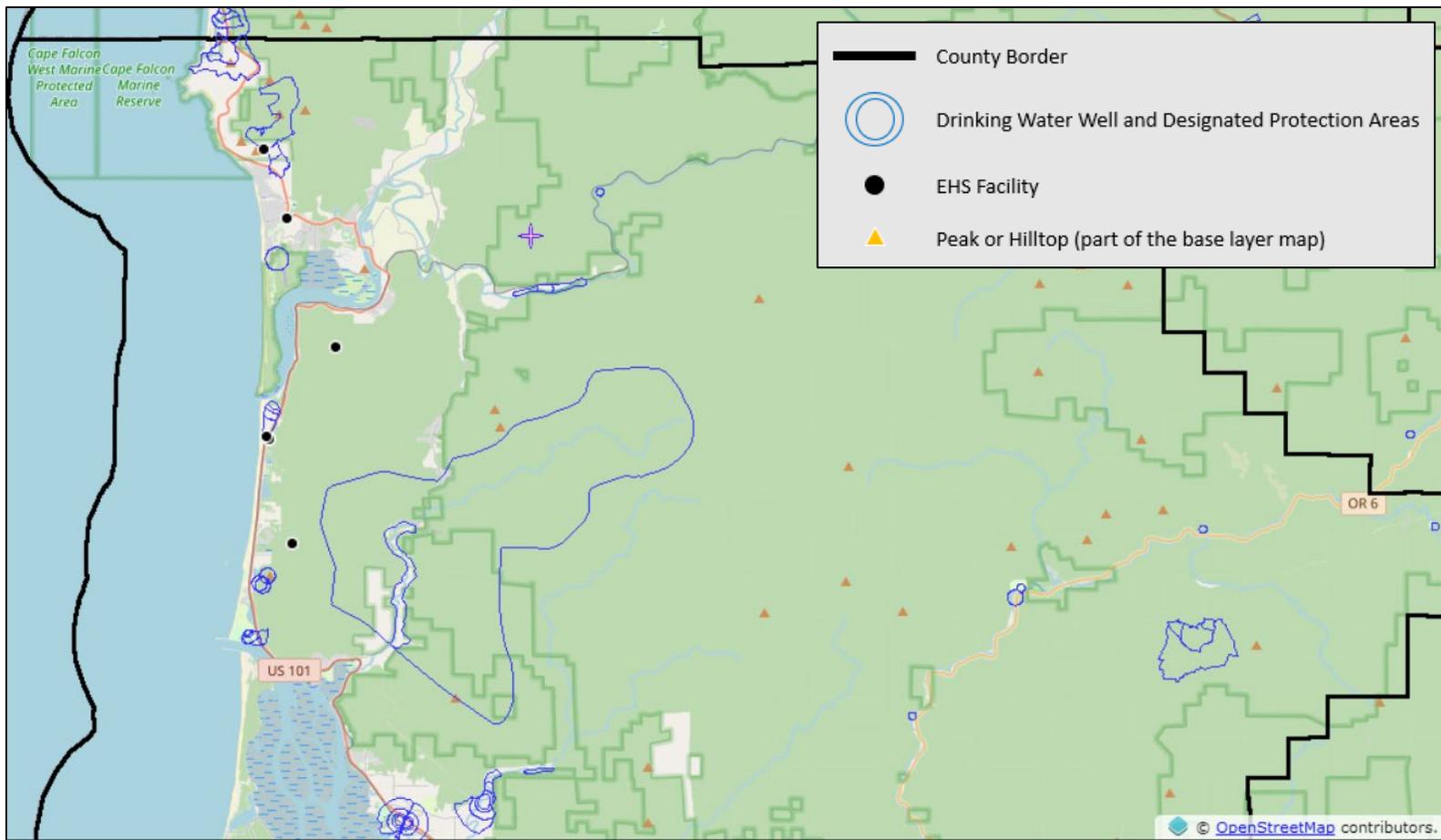




Figure 5-24: Drinking Water Wells in Central Tillamook County

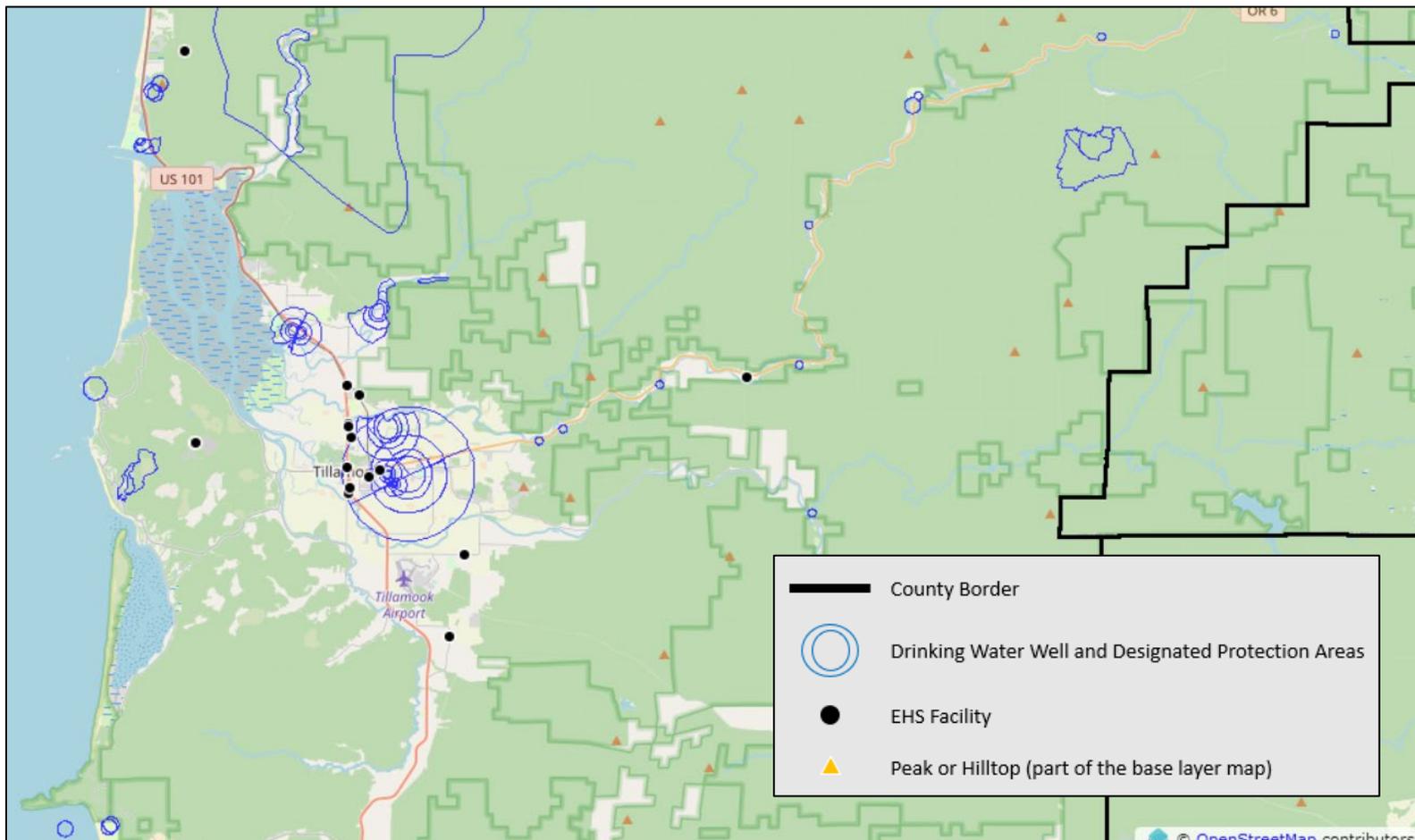
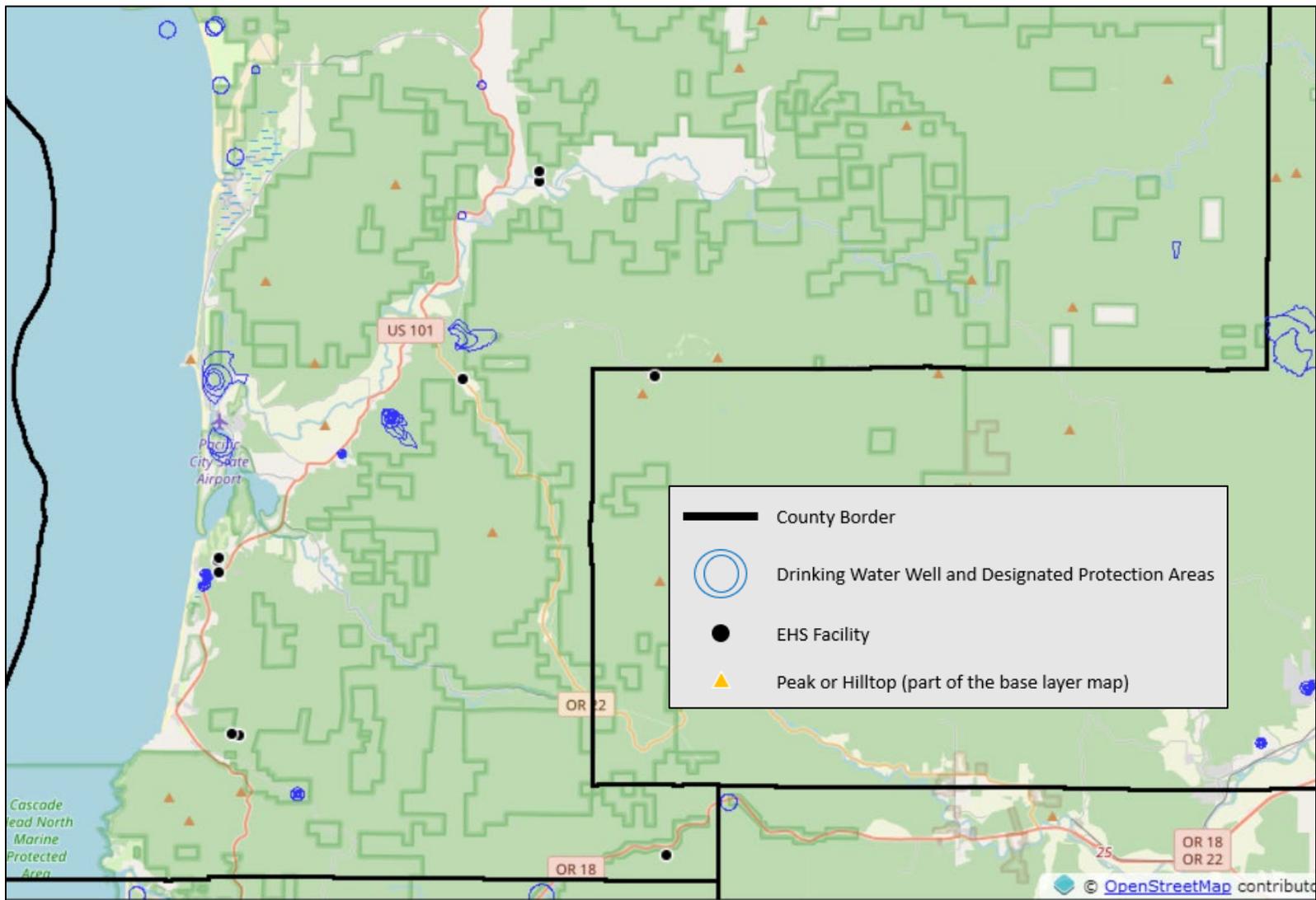




Figure 5-25: Drinking Water Wells – Southern Tillamook County



5.10 Environmentally Sensitive Areas

In addition to the drinking water vulnerability assessment addressed in Section 5.9 above, analysts reviewed the Oregon Department of Transportation’s TransGIS site to identify environmentally sensitive areas within Tillamook County. Environmentally sensitive areas include lakes, irrigation canals, rivers, streams, and large wetland areas. Many of these waterways contain fish, support waterfowl, aquatic organisms, and wildlife. Maintaining awareness of these sensitive areas is critical to minimizing the environmental impacts that may occur during a HAZMAT release incident. Figures 5-26 through 5-28 display the environmentally sensitive areas, primary highway HAZMAT routes, and EHS facility locations. Furthermore, many roadways used to transport HAZMAT transit through these sensitive areas. County officials can zoom into a selected area of interest on the MARPLOT electronic file to identify environmentally sensitive areas in relation to a HAZMAT release. ASG provided the electronic MARPLOT file to the Tillamook County Office of Emergency Management.

Figure 5-26: Northern Tillamook County Environmentally Sensitive Areas

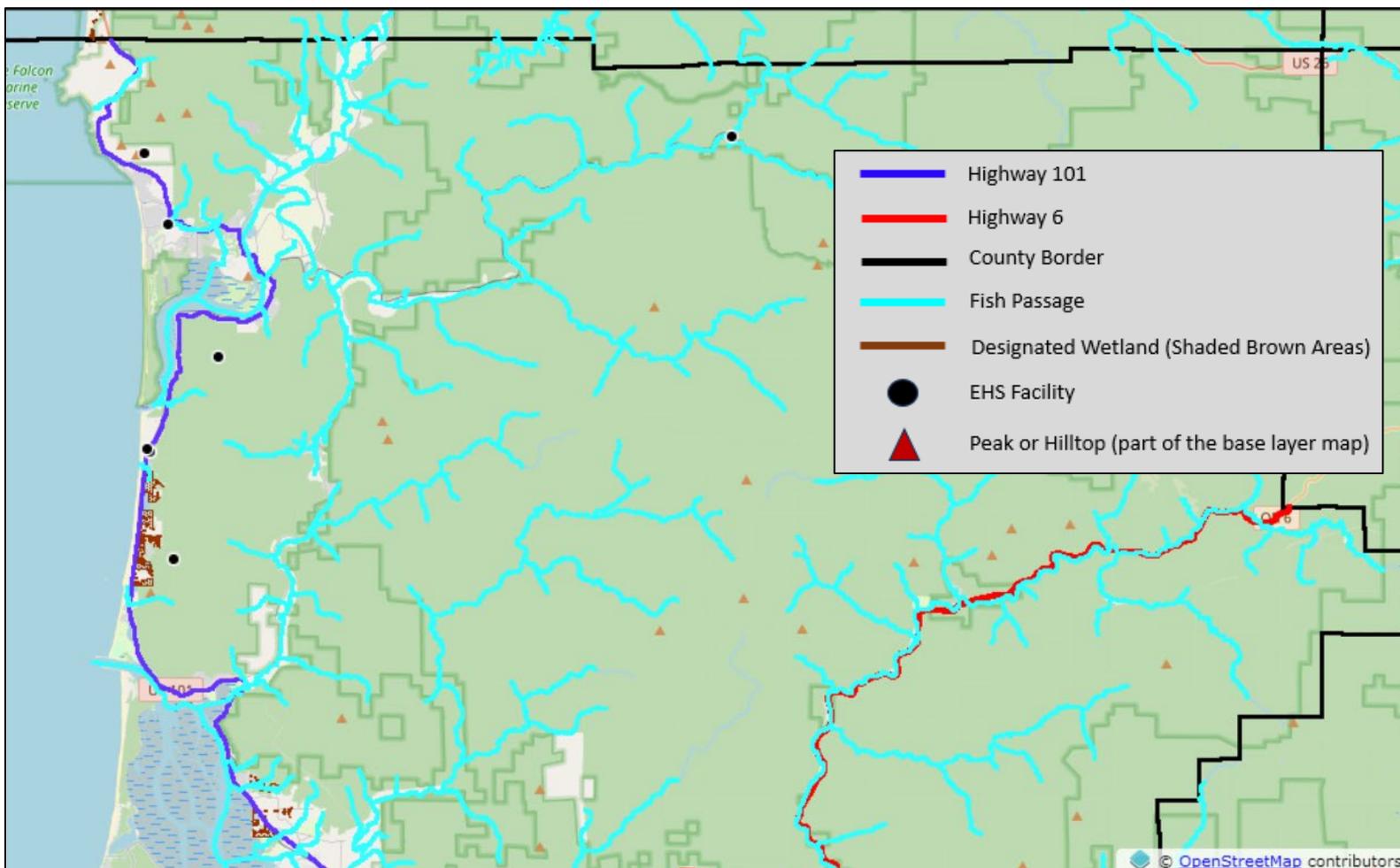




Figure 5-27: Environmentally Sensitive Areas in Central Tillamook County

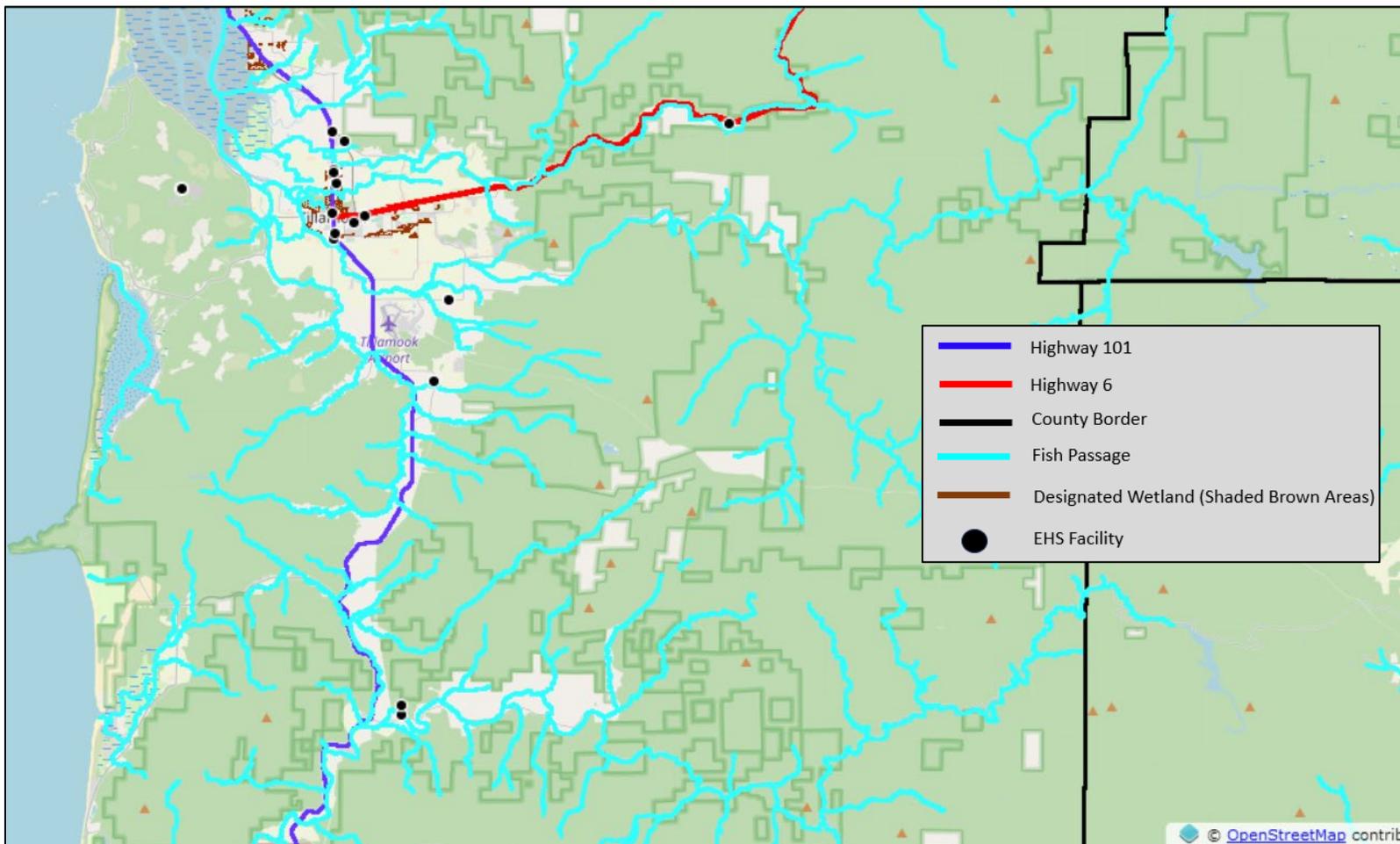
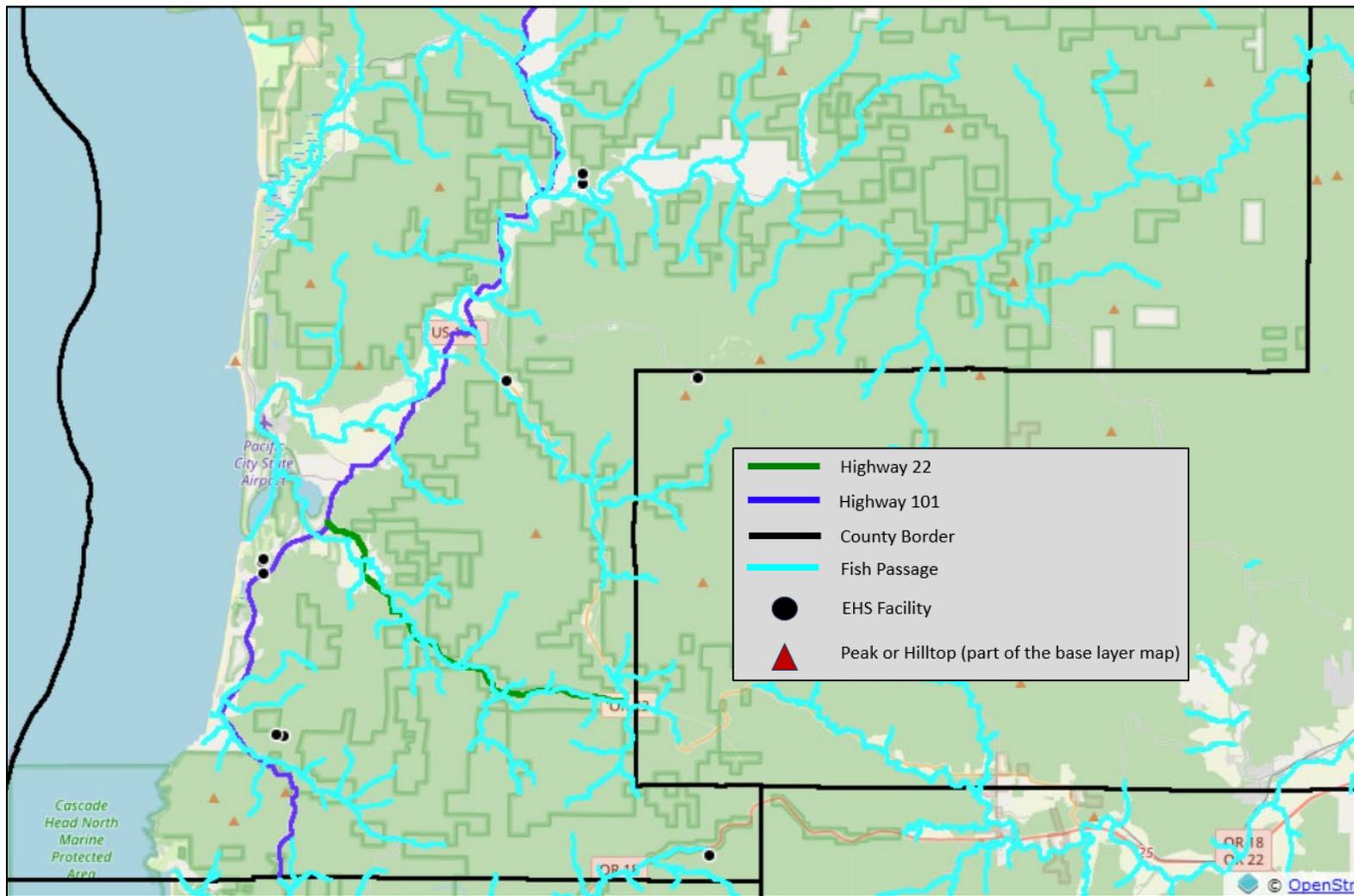




Figure 5-28: Environmentally Sensitive Areas in Southern Tillamook County





5.11 Risk Assessment Results

Specific risk assessment results have been excluded from this plan due to the sensitive nature of the information. Based upon risk assessment results, scenarios involving the release of a hazard posing a significant airborne inhalation hazard such as ammonia or nitrous oxide present the greatest risk to the county. The risk of a chemical explosion from common petroleum-based hazards such as propane or gasoline was lower due to the low probability and corresponding severity of an event. Analysts provided all supporting risk assessment materials used to identify the top threats electronically to the Tillamook County Office of Emergency Management for future reference and planning.



6 ANALYZING RISK CONTROLS AND RECOMMENDATIONS BASED ON SCENARIOS

ASG analysts used the Plans, Organization, Equipment, Training, Exercises (POETE) framework to identify shortfalls, limiting factors, and risk control measures for each HAZMAT release scenario. To support the analysis, analysts sent questionnaires to the following response stakeholders: city and county law enforcement agencies, fire departments, RHMRT nine and thirteen, and EMS. ASG did not receive any completed questionnaires from these stakeholders. Analysts intended to assess questionnaire responses and use the information gathered to identify any potential shortfalls and limiting factors that could inhibit a responder’s ability to respond or counter a HAZAT release incident. Analysts also gathered information from completed questionnaires and phone interviews with some of EHS facilities to inquire about Emergency Action Plans, response capabilities and procedures, available personal protective equipment and employee training related to HAZMAT. Based on an analysis of the returned questionnaires and phone interviews, analysts identified the following potential shortfalls and limiting factors that could inhibit a HAZMAT release incident response. Recommendations are associated with each shortfall and limiting factor to improve the community’s response posture. Planners rank ordered each recommendation from 1 through 4 (1=highest priority) to establish priority actions to address the gaps. ASG adopted and included many of the gaps identified in the table below based on trends observed throughout the state and not from information gathered from returned questionnaires.

Table 6-1: Gap Analysis Results and Recommendations

Category	Limiting Factor/Shortfall	Recommendations	Priority
Plans	Many facilities designated as critical/vulnerable by Disaster Management have not developed evacuation or shelter-in-place plans or have not shared them with the County Emergency Management Office. Hazard models estimate that many of these facilities may be impacted by a HAZMAT release or explosion hazard.	Share information about potential hazards and impacts to vulnerable facilities and multi-agency partners. As appropriate, assist facility owners in developing and exercising evacuation and/or shelter-in-place plans.	1
Plans	Pre-incident plans have not been developed for several high-risk industrial facilities.	Develop pre-incident plans in accordance with NFPA Standard 1620 for facilities that manufacture, store or use hazardous materials in the county and utilize the EHS facility listing identified in this plan to prioritize plan development. Direct HAZMAT response teams to conduct integrated training with facilities after pre-incident plan development to enhance working relationships and tactical response capabilities specific to each facility.	1



Category	Limiting Factor/Shortfall	Recommendations	Priority
Plans	Analysts were unable to conduct an accurate risk assessment of groundwater source protection areas due to a lack of well depth and soil composition information.	Contact the public works department to obtain well depth and soil composition information. Conduct a vulnerability assessment to determine the risk to groundwater sources and add the findings to Section 5.9 of this plan.	2
Training	Response stakeholders have not conducted training with high-risk facilities to ensure that both parties understand their respective roles, responsibilities, and resources available for managing an incident.	Conduct incident command training with high-risk facilities to ensure that both parties understand their respective roles, responsibilities, and resources available for managing an incident.	2
Organization	First responder stakeholders have not completed the POETE framework questionnaires to identify potential HAZMAT response gaps and capture existing HAZMAT response capabilities as listed in Attachment 4.	Ensure that first responders complete and add the current HAZMAT response capabilities into Attachment 4 of this plan. Include any additional gaps as line items in this table (6-1).	2
Training/ Exercises	Several Tillamook County response agencies may require a need for additional training and exercises in the following areas: functional response capabilities, Hazardous Materials Awareness Level, gross and patient decontamination, command and control, and public protective action decision-making and dissemination processes.	Develop and implement a training and exercise plan that addresses the risks identified in this plan. After completion of training, conduct tabletop exercises, drills, and/or functional exercises on a routine basis to enhance county response capabilities and preparedness. Utilize the analyses provided in this plan to develop risk-based training and exercises across these functions.	2
Plans	Written plans and procedures ensuring that Tillamook County responders are notified of a HAZMAT release in bordering jurisdictions do not exist.	Collaborate with neighboring county communication/dispatch centers to establish procedures that include making notifications to bordering counties that may be impacted from a HAZMAT release incident.	4



Category	Limiting Factor/Shortfall	Recommendations	Priority
Plans	An analysis of Washington's Department of Ecology Worldwide Response Resource List (WRRL) revealed that most response equipment and resources within Tillamook County have not been entered into the WRRL tool. This tool can assist responders and planners with identifying available resources within the county for use during a HAZMAT spill.	Spill response organizations within the county should consider entering their HAZMAT spill equipment resources into the WRRL database (https://www.wrri.us/) to aid stakeholders with pre-incident planning and response activities.	4



7 INCIDENT AND PUBLIC NOTIFICATION

7.1 Initial Emergency Notification Process

Timely emergency notification is essential for minimizing the adverse effects caused by a HAZMAT release incident. Analysts reviewed the county EOP and conducted interviews with key stakeholders to assess the adequacy of public notification procedures following an incident. Experts traced the emergency notification process from the reporting source to responder notification to ensure that the EOP adequately addresses incident notification procedures. The Tillamook County Emergency Communications District (Tillamook 9-1-1) provides emergency dispatch services for all incident types within the county.

The flow charts below illustrate from left to right, the incident notification procedures as identified in the County EOP and locally developed procedures. Analysts validated these procedures through correspondences with the Tillamook 9-1-1 Administrator and industrial facility representatives. The emergency notification procedures outlined below help ensure a timely, organized response.

Incident Reporting Source: **Public citizen**



Incident reporting source: **Industrial Facility**



Depending upon the location of a HAZMAT release within the county, local fire department response times range from 5 to 30 minutes. If the IC requests RHMRT support, response times range from 60 to 90 minutes from the initial notification. However, the OSFM Standards of Coverage for RHMRTs guidance document establishes a response time goal of two hours for at least one RHMRT to respond to an incident occurring in rural areas of the state. Based on the information obtained, the incident notification procedures outlined above are effective in supporting a timely response to an incident in Tillamook County.

7.2 Community Water System Notification Procedures

Analysts traced established notification procedures to ensure that a Community Water System (CWS) is promptly notified of a HAZMAT release so that the CWS can implement procedures (e.g., shut off drinking water source intakes) to avoid cross contamination of the water treatment plant and supporting infrastructure. The flow chart below illustrates from left to right, the CWS notification procedures as identified through interviews with WTP operators, the Oregon Emergency Response System (OERS), Oregon Department of Environmental Quality (DEQ), and the Oregon Health Authority (OHA).



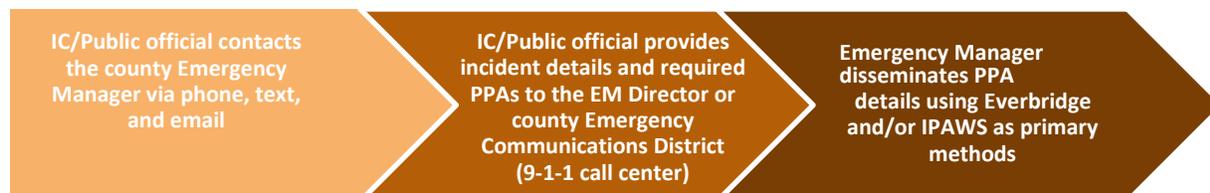
When an incident involving a HAZMAT release occurs:

- The OERS notifies various agencies via email, text messages, and pagers, to include the DEQ Emergency Response and OHA Public Health Preparedness (PHP) Duty Officer.
- When the DEQ receives this notification, their Emergency Response Duty Officer will correspond with the OERS within 15 minutes (24/7/365).
- When the OHA Public Health Preparedness (PHP) Duty Officer receives the initial notification from OERS, they will:
 - Reply to the OERS within 15 minutes (24/7/365).
 - Determine if CWS notification is necessary based on consultation with the Drinking Water Duty Officer, the spill location, quantity, material released, and proximity to downstream users.
 - If determined that a CWS needs to be notified, the Drinking Water Duty Officer will make notifications to the CWS.

These procedures should ensure prompt notifications of a HAZMAT incidents of concern to the CWS operator.

7.3 Public Notification Procedures

The Tillamook Office of Emergency Management supervises warning dissemination within the county. County responders will relay emergency notifications and warnings to the Emergency Management Director and Tillamook County Emergency Communications District (9-1-1 dispatch) via traditional communication methods such as land lines, cell phones, pagers, emails, and radios throughout the incident response. Personnel from the Tillamook County Emergency Communications District and Office of Emergency Management staff the EOC as needed to support emergency notification processes. The Emergency Manager or designee issues and disseminates emergency warning messages to county residents. If the Emergency Manager or designee are unavailable, the Tillamook County Emergency Communications District also maintains the capability to disseminate emergency messages to the public. When a HAZMAT incident poses an immediate threat to life, the acting IC or any authorized public official may issue emergency information or warning employing the method displayed below.



The IC must notify and update the Tillamook Office of Emergency Management as soon as possible to facilitate further notifications and actions. Ultimately, the assigned Public Information Officer (PIO) develops and coordinates the release of information to incident personnel, media, and the public throughout the incident until



termination. The PIO participates in a Joint Information Center if established. Tillamook County utilizes the following methods to disseminate warning information to emergency service coordinators, cities, and public and private sectors:

- Everbridge Emergency Notification System
- Integrated Public Alert and Warning System (IPAWS)
- RACES/ARES emergency repeater 147.22 MHz NOAA
- Social media to include Twitter and Facebook
- Oregon Emergency Response System provides 24-hour alert, warning, and notification service to county/local warning points
- Emergency Alert System (EAS) utilizes AM and FM radio and television broadcast stations to disseminate emergency information
- Vehicles equipped with sirens and public-address systems may be used for warning the public during localized, small-scale HAZMAT release by rail emergencies
- Door to door contact if time and emergency conditions allow
- ODOT 1650 AM emergency radio
- Emergency Alert System (EAS) KTIL Radio and Coast 105 FM radio
- National Alert and Warning System (NAWS)

7.4 Incident Termination

For small-scale HAZMAT incidents (no EOC activation), the on-scene IC has authority to terminate operations. When the County has activated the EOC and the response phase of the incident has been completed, the on-scene Incident Commander, EOC Incident Commander, and Board of Commissioners make the decision to deactivate the EOC. The Board of Commissioners has the final approval authority for activation and closure of the EOC. EOC closure notifications must be disseminated to the same agencies that were notified of its activation.



8 EXERCISE AND TRAINING

8.1 Training Analysis

Experts conducted an analysis of HAZMAT training offered to County responders to determine adequacy and recommend additional training as needed to match desired capability targets. Primary fire agency personnel receive HAZMAT Awareness training, and a few may receive HAZMAT Operations Level training. The majority of RHMRT members receive HAZMAT Technicians Level Training.

The OSFM offers advanced HAZMAT courses (optional) to include the following:

- HAZMAT Rail Emergency Response Awareness: a 3-hour course designed to provide responders with basic knowledge and awareness level training related to a HAZMAT rail response.
- HAZMAT Rail Emergency Response Operations: an 8-hour course designed to provide basic knowledge and operations level training in response to a HAZMAT by rail incident.
- HAZMAT Tank Car Specialist: a 40-hour course that provides technical knowledge pertaining to tank cars including damage assessment, oversight for product removal, and movement of damaged tank and rail cars.
- HAZMAT Incident Commander: a 16-hour course designed to meet OSHA and NFPA standards to qualify incident commanders to manage HAZMAT incidents.

Additionally, the Federal Emergency Management Agency (FEMA) suggests completing the following online independent study courses offered by FEMA's Emergency Management Institute:

- IS-100.c: Introduction to the Incident Command System (ICS)
- IS-200.b: ICS for Single Resources and Initial Action Incidents
- IS-235.c: Emergency Planning
- IS-700.b: National Incident Management (NIMS) – An Introduction
- IS-800.d: National Response Framework, an Introduction
- ICS 300: Intermediate ICS for Expanding Incidents
- IS-5.a: An Introduction to Hazardous Materials

Other courses the county may want to consider include the ICS-200 and ICS-400. Based on the County's desired capability target for initial responders (conduct defensive operations until the RHMRT arrives), existing HAZMAT training is adequate. Attachment four provides training level details for primary County responders to include the RHMRTs serving Tillamook County.

8.2 Exercise and Evaluation Plan

To test plans and capabilities, the Homeland Security Exercise and Evaluation Program (HSEEP) recommends employing a multi-year exercise and evaluation program to enable organizations to participate in a series of increasingly complex exercises that build upon each other. County planners agree with this approach and as a result, the following exercise and evaluation plan detailed in Table 8-1 below has been recommended.

As Risk Management Plan (RMP) facilities implement the latest RMP rule, regulated facilities will be required to conduct exercises and enhance their planning and coordination with the public sector. This may present an opportunity to become more familiar with regulated facility hazards, personnel, processes and resources. These exercises should enable responders to validate planning assumptions, capabilities, plans, procedures, communication and incident command with private facilities.



Table 8-1: Recommended Exercise and Evaluation Plan

Time Period	Action/Exercise Type	Recommended Frequency	Recommended Objectives
Year 1	Seminar	Within 1 month	<ul style="list-style-type: none"> • Orient response organizations to Emergency Response Plan and/or EOP.
Year 1	Tabletop	Within 3-6 months	<ul style="list-style-type: none"> • Enhance Emergency Response Plan awareness and validate the plan. • Verify identification of roles and responsibilities among HAZMAT response stakeholders. • Verify that the plan provides decision makers with the information needed to support decision making during the pre-incident phase.
Year 1	Drill	Within 6-12 months and as necessary thereafter	<ul style="list-style-type: none"> • Validate notification procedures and response times. • Assess effectiveness of a specific function (e.g. establishment of a Unified Command, shelter-in-place procedures for vulnerable facilities, high-risk facility Emergency Action Plan procedures, technical decontamination set-up time and layout, etc.).
Year 2	Functional Exercise	Within 12-18 months	<ul style="list-style-type: none"> • Provide and implement initial PPAs upon initial notification to protect downwind populations potentially affected by a HAZMAT release. • Complete a downwind hazard analysis to support implemented PPA procedures. • Develop and disseminate emergency messages through alert and warning systems. • Notify CWSs of HAZMAT release that could affect source water. • Test EOC notification and command and control functions. • Establish a Unified Command and demonstrate effective command and control operations.



Year 2	Full-Scale Exercise	Within 18-24 months	Objectives listed in rows above may apply. Other recommended objectives include: <ul style="list-style-type: none">• Implement recovery and restoration operations to protect environmental resources.• Assess patient triage, medical transport efficiency and medical surge capacity within the county.• Validate effectiveness of unified command between private and public sectors.
--------	---------------------	---------------------	--



9 SUPPORTING PLANS

Several plans support and align with this ERP. Planners should maintain interoperability with the plans identified below by reviewing these plans when this ERP is being revised to ensure consistency.

- State of Oregon Emergency Operations Plan, June 2024
- Hazardous Materials Transportation by Rail State Agency Response Coordination Plan Appendix within Emergency Support Function # 10 of the Oregon Emergency Operations Plan
- Northwest Area Contingency Plan, 2024
- Tillamook County Emergency Operations Plan, Jan 2007 (Rev. March 2017)
- Oregon State Fire Marshal Standards of Coverage for Regional Hazardous Material Emergency Response Teams, December 2023
- Pre-Incident Fire Plans



ATTACHMENT 1: RISK ASSESSMENT METHODOLOGY

A1.1. Method and Process

Technological hazards are industrial chemicals or materials that may be toxic, biohazardous, explosive, or radioactive. The technological hazard assessment methodology mirrors the risk management process. This ensures a risk-based approach to planning, which assists decision-makers in prioritization and resource allocation for countering these threats. This assessment focuses on EPCRA Section 302 (EHS facilities) and some 312 facilities (Tier II facilities) that store chemicals and hazardous substances in quantities greater than reportable quantities established by the Environmental Protection Agency.

Potential sources of technological hazards include but are not limited to manufacturing plants, warehouses, hospitals, waste storage and disposal sites, water/wastewater treatment plants, service stations tanker trucks, and pipelines. The information in this attachment describes the methodology used to complete the risk assessment presented in section 5 above.

A1.2. Identify the Hazards

ASG analysts used the following sources to identify and develop a hazard inventory for Tillamook County:

- Facility Tier II reports maintained in the Oregon CR2K online database
- Toxic Release Inventory Form R Reports
- Google Earth satellite/aerial photos
- Area maps
- Oregon Department of Transportation TransGIS website
- National Pipeline Mapping System (NPMS)

The hazard inventory consisted of approximately 677 hazards stored at 150 facilities across the county. Based on the findings, the top chemicals of concern included anhydrous ammonia, nitrous oxide, and propane. Analysts obtained radioactive material (RAM) information from the CR2K database. ASG compiled an inventory of RAM hazards for the county from this data. The Tillamook Office of Emergency Management Office maintains an electronic copy of the comprehensive hazard inventory.

A1.3 Prioritizing Hazards

To create a prioritized list of hazards from the initial inventory, planners adopted chemical severity ratings from a 2011 report published by the Naval Research Laboratory titled, *Prioritization and Sensitivity Analysis of the Inhalation/Ocular Hazard of Industrial Chemicals*. This report provided a targeted list of 49 chemical hazards and assigned a Toxic Operational Hazard Score for each.

The Naval Research Laboratory used several factors when formulating the Toxic Operational Hazard Score (TOHS) to include toxicity, stability, and the physical state of each chemical hazard. For toxicity, the Naval Research Laboratory reviewed the Environmental Protection Agency's (EPA) assigned AEGL-3 or the Emergency Response Planning Guideline level three (ERPG -3) assigned by the American Industrial Hygiene Association. The Naval Research Laboratory assigned the following values for toxicity based on these assigned AEGL-3/ERPG-3 values:



Table A1-1: Naval Research Laboratory Assigned Toxicity Rating Scores

Established AEGL-3/ERPG-3 Value	Assigned Toxicity Rating Score
< 1 part per million (ppm)	5
1.1 to 10 ppm	4
10.1 to 100 ppm	3
100.1 to 1,000 ppm	2
1,000.1 to 2,000 ppm	1
>2,000 ppm	0

To determine the stability portion of each chemical’s TOHS, the Naval Research Laboratory used the average of both the chemical’s flammability and reactivity as determined by the National Fire Protection Association (NFPA). The Naval Research Laboratory assigned the following values for both flammability and reactivity:

Table A1-2: Naval Research Laboratory Assigned Reactivity Rating Scores

NFPA Flammability and Reactivity Values	Score
0	5
1	4
2	3
3	2
4	1

The Naval Research Laboratory assigned these values with the assumption that the more flammable and reactive a chemical is, the less toxic it is from an inhalation standpoint. The team inserted these values into the following equation to determine the chemical’s stability rating:

$$S = (F+R)/2$$

S = Stability
F = Flammability Score
R = Reactivity Score

For the physical state, the Naval Research Laboratory applied the following scoring system:

Table A1-3: Naval Research Laboratory Assigned Physical State Scores

Physical State of Chemical	Score
Gas	5
Liquid	2.5
Solid	1

To determine the final TOHS for each chemical, the Naval Research Laboratory used the following equation:

$$\text{TOHS} = (T + S + P)$$

TOHS = Total Operational Hazard Score
T = Toxicity
S = Stability
P = Physical State

Table A1-4 displays the Naval Research Laboratory’s targeted chemical listing and associated TOHS for each.

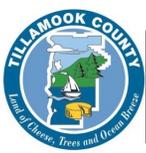


Table A1-4: Toxic Operational Hazard Score Listing

Chemical	CAS Number	Toxic Operational Hazard Score
Phosgene	75-44-5	14.4
Chlorine	7782-50-5	13
Sulfur Dioxide	7446-09-5	13
Nitric Oxide	10102-43-9	13
Nitrogen Dioxide	10102-44-0	13
Sulfur Tetrafluoride	7783-60-0	12.8
OMPA	152-16-9	12.5
Hydrogen Chloride	7647-01-0	12.4
Hydrogen Fluoride	7664-39-3	12.4
Boron Trifluoride	7637-07-2	12.4
Chlorine Trifluoride	7790-91-2	12.1
Hydrogen Bromide	10035-10-6	12
Formaldehyde (Formalin solution – 37% methanol)	50-00-0	11.8
Tungsten Hexafluoride	7783-82-6	11.8
Hexafluoroacetone	684-16-2	11.8
Silicon Tetrafluoride	7783-61-1	11.8
Germanium Tetrafluoride	7783-58-6	11.8
Mercury	7439-97-6	11.5
Bromine	7726-95-6	11.5
Chlorine Dioxide	10049-04-4	11.5
Oleum-E3	8014-95-7	11.5
Methyl Bromide	74-83-9	11.4
Phosphoryl Trichloride	10025-87-3	11.3
Arsine	7784-42-1	11.3
Fluorotrichloromethane	75-69-4	11
Pentachlorophenol	87-86-5	11
Acetylene Tetrabromide	79-27-6	10.9
O-Anisidine	90-04-0	10.9
Sulfur Trioxide	7446-11-9	10.8
Hydrogen Iodide	10034-85-2	10.8
Toluene-2, 4-Diisocyanate	584-84-9	10.6
Parathion	56-38-2	10.6
Nitric Acid	7697-37-2	10.5
Hydrogen Sulfide	7783-06-4	10.5
Molybdophosphoric Acid	51429-74-4	10.5
Fluorine	7782-41-4	10.5
Malathion	121-75-5	10.5
Ethylene Dibromide	106-93-4	10.5
1, 1, 2, 2-Tetrachloroethane	79-34-5	10.5
Ammonia	7664-41-7	10.4
Azinphosmethyl	86-50-0	10.4
Sulfuric Acid	7664-93-9	10.3



Phosphorus Trichloride	7719-12-2	10.3
Boron Trichloride	10294-34-5	10.3
Phosphine	7803-51-2	10.3
Chlorosulfonic Acid	7790-94-5	10.3
Boron Tribromide	10294-33-4	10.3
Thionyl Chloride	7719-09-715	10.3
Methylphenyldichlorosilane	149-74-6	10.3
Phosphorus trichloride	7719-12-2	10.3
Boron trichloride	10294-34-5	10.3
Phosphine	7803-51-2	10.3
Chlorosulfonic acid	7790-94-5	10.3
Boron tribromide	10294-33-4	10.3
Thionyl chloride	7719-09-715	10.3
Benzene	71-43-2	8.8

Analysts identified the chemicals in the table above from within the Tillamook County hazard inventory and conducted plume modeling for the hazard if the chemical was included in the ALOHA plume modeling program's library. Planners then identified other potential inhalation hazards within the Tillamook inventory and conducted plume modeling if the reported quantity had the potential to generate downwind exposure effects.

A1.4. Assessing the Risk

Risk is a function of probability and severity. Analyzing historical and statistical data and applying probability models enabled ASG to estimate the probability of a hazard release incident occurring within the county. ASG determined severity for each release by plume modeling hazards or calculating explosive overpressure distance radii at county facilities. Analysts also assessed hazards likely transported along county highways to determine the impact on the community in terms of casualty estimates. Analysts calculated the overall risk for each incident by multiplying the probability and severity factors.

A1.4.1. Probability

A1.4.1.1 Natural Threats

The overall probability of a release is a function of the individual probability of an accident occurring that could lead to a release. For the initial risk assessment, planners used a probability constant of one for each release scenario since all facilities lie within Tillamook County. The probability of a release occurring from a natural disaster will be equal across the board except for flood hazards. After determining locations of high risk facilities, analysts further evaluated the probability of release for facilities taking into account flood zones. Planners assigned a probability factor of one percent (0.01) for each facility located within a designated high-risk flood zone and one half of one percent (0.005) for facilities located outside a designated flood zone as determined from FEMA flood maps. ASG applied a common probability of zero for tornados, wildfires, and earthquakes.

A1.4.1.2 Stationary Source Accidents and Incidents

ASG calculated the probability of a hazard release from a stationary source within a 5-year period (2020-2024) by dividing the annual average of releases (8,253) by the total manufacturing, industrial, and chemical plants in the United States (457,892). We obtained this data from the National Response Center and Bureau of Labor Statistics. The probability of a hazard release from a stationary source is 0.018. For the explosive probability, ASG divided the average number of explosions from 2020-2024 (60.2) by the total chemical plants (457,892) to



obtain a total probability of 0.00013. We obtained this data from the Bureau of Labor Statistics and the National Response Center.

A1.4.1.3 Mobile Source Accidents and Incidents

Analysts based the probability of a hazard release from a tanker truck on the proportion of annual releases from this mode of transportation apportioned to the mileage of interstate and arterial roads within the county. ASG calculated this apportionment factor by estimating from maps the total miles of road likely used by tanker trucks within the county (112 miles) divided by the total miles of interstate and arterial roads in the United States (707,278 miles). We calculated the probability by multiplying the annual serious hazardous material incident release rate (1,945) by the mileage apportionment factor (0.00016). The calculated annual probability of a hazard release from tanker trucks in Tillamook County is 0.31 meaning planners should anticipate 31 hazard releases per hundred years within Tillamook County. ASG applied this same methodology towards determining the explosion probability for tanker trucks. We multiplied the annual average of explosions over the past five years (1.6) by the apportionment factor (0.00016) to obtain an explosion probability of 0.00026. This method assumes that hazard releases are distributed evenly along these roads throughout the United States. ASG obtained hazardous material release statistics from the Department of Transportation, Bureau of Transportation Statistics' 2012 commodity flow study for commercial vehicles. We derived the frequency for each specific chemical listed and applied it to the tanker truck probability of release. This resulted in a specific probability for each chemical based on the frequency of transport.

A1.4.2. Meteorological Data

Meteorological data includes wind speed and direction. For each scenario, ASG plume modeled releases based on the average overall wind speed obtained from the Weather Spark internet site. Monthly wind speed averages ranged from 5.7 mph to 8.8 mph. ASG used a wind speed of 6 mph for each ALOHA plume model. Wind direction had a less significant impact since analysts created a 360°-hazard area using the AEGL-2 contour obtained from the plume modeling output. Other plume model parameters applied included a scenario date of 15 August 2024, time of 1:00 p.m., air temperature of 69°F, humidity of 80% and partly cloudy conditions.

A1.4.3. Severity

ASG calculated the severity of each incident by determining the population impacted for each scenario. We used the ALOHA Program to model hazard release impacts within the county. One limitation of the ALOHA software is that it does not model beyond six miles from a hazard release point. For each modeled scenario, ASG reviewed submitted Tier II reports to identify the quantity and entered this into the ALOHA plume modeling program. For tanker trucks, planners research typical tanker truck volume capacity for each modeled hazard and entered this quantity into the plume model. The ALOHA model output displays the estimated airborne concentration expressed as an AEGL. We used the demographic layers within the MARPLOT Program to estimate the number of casualties within the AEGL-2 plume modeling contours for each facility release scenario. For tanker truck models, ASG measured the distance from the model's point of release to the AEGL-2 downwind edge and determined the severity by totaling populations within these hazard areas on each side of the roadway. For example, if analysts measured 500 meters from the point of the release to the downwind edge of the AEGL-2 contour, we totaled the populations within 1,000 meters of the highway (500 meters on each side) along its entirety within the county and used this total as the severity factor for that scenario. Analysts conducted plume modeling along routes most likely to be used for the transport of hazards to include Highways 6, 22, and 101.

A1.4.4. Chemical Explosions and Detonations

ASG considered the potential for large quantity flammable chemicals stored at facilities or transported in tanker



trailers to explode as a result of fire, detonation, accident, or other means. Analysts applied a model that is based on a vapor cloud explosion and uses a commonly accepted formula, known as the TNT-equivalency formula, for determining overpressure distances of explosions resulting from vapor clouds (USEPA, 1999). The method used to calculate the overpressure severity and distance is shown below.

- Determine quantity of substance released, expressed in kilograms
- Estimate hazard zones

Hazard zones for explosives are represented by three concentric circles from the point of explosion. These zones are defined by the approximate overpressure, expressed in psi, at the limit of the zone. ASG used the equation below to calculate the distance from an explosion source to an overpressure limit of one psi.

$$\text{Equation: } D = 1.60 * (m*hc)^{0.33}$$

D = distance to 1-psi overpressure (feet)

1.60 = constant for 1-psi overpressure, maximum yield, and
metric conversion factor m = mass of substance (kg)

hc = heat of combustion (kJ/kg)

This model assumes that 10% of the substance participates in the explosion. This is a conservative assumption applied by EPA in worst-case analyses of chemical explosions (USEPA, 1999). Based on the distance, D, determined above, three hazard zones are defined: Zone 1, radius equal to 1/5 times D; Zone 2, radius equal to 1/2 times D; and Zone 3, radius equal to D. These distances are based on the approximation that overpressure is proportional to 1/distance cubed ($1/D^3$). Zones 1, 2, and 3 correspond to the 100 psi, 8 psi, and 1 psi overpressure distances.

Structural building failures begin to occur at 1 to 3 psi. At approximately 8 psi, most buildings would collapse and eardrums may rupture. Finally, complete building collapse can be expected at 100 psi. For explosion scenarios, ASG used the MARPLOT Program to determine the total population within the 8 and 100 psi impacted areas around facilities and along highway transportation routes. This served as the severity factor for the risk assessment.

A1.4.5. Risk Estimate

ASG calculated the risk estimate by multiplying the probability by the impacted population for each scenario. We then ranked the incidents from highest relative risk to the lowest relative risk. This risk rating represents the number of individuals at risk from each scenario within a year. While some of the assumptions are conservative, the standardized approach ensures that the output from the process results in a relative risk rating from each threat. The electronic tool used to calculate the risk contains the final risk assessment results and has been provided to the Tillamook Office of Emergency Management.

A1.5. Analyzing Risk Controls

ASG reviewed the spectrum of response and controls that can be employed to control risks from hazard releases. We used the POETE framework for the analysis. The review included reviews of maps, existence of mutual aid agreements, equipment inventories, interviews, and local response capabilities. ASG sent questionnaires to key response agencies to gain a better understanding of response roles, responsibilities and capabilities. Considering the community's response capability, we conducted an impact analysis based on the top risks. The POETE framework served as a tool to identify shortfalls and limiting factors within the county. For each shortfall and limiting factor, analysts identified potential solutions and ranked each based on their respective level of capability enhancement so that a prioritized list could be developed.



Throughout the report, we detailed assumptions and approaches used to evaluate the risks of potential hazard releases. It was not intended to precisely predict consequences from actual chemical releases or explosions. This assessment details the top hazard release scenarios based on risk, it does not represent all possible scenarios that may affect the community. Furthermore, this methodology does not address terrorist use of chemical, biological, radiological, nuclear, and explosive materials, or by-products from physical/chemical processes after a substance is released such as fire, thermal effects, or reactions.



ATTACHMENT 2: FIRST RESPONDER INITIAL HAZMAT RESPONSE CHECKLIST

Analysts designed an initial response actions checklist to assist county responders during the initial phases of a HAZMAT release at a facility or transportation incident. This checklist assumes that first responders will only conduct defensive operations until specialized HAZMAT teams arrive on-scene to execute offensive operations (i.e. contain/stop the leak, firefighting, spill cleanup, etc.). The procedures listed in the checklist below align with those identified in the County EOP.

Tillamook County Initial HAZMAT Response Checklist

PURPOSE

This checklist addresses incident management and response actions to take in the event of a HAZMAT release incident within Tillamook County following the initial incident notification. This checklist incorporates defensive measures to consider until the RHMRT or other specialized teams arrive to conduct offensive operations at the incident.

	INCIDENT MANAGEMENT	YES	NO	N/A	NOTES
1	9-1-1 call center notifies the responsible fire department, law enforcement, and EMS based upon incident location.				
2	Emergency Management coordinates with the IC to determine the level of county support needed and activates the EOC as appropriate/if deemed necessary. Primary EOC Location: Tillamook County Emergency Communications District 2311 3 rd Street Tillamook, OR 97141 Alternate EOC Location: Tillamook County Sheriff's Office 5995 Long Prairie Road Tillamook, OR 97141				
3	Emergency Management notifies EOC staff based on incident needs.				
4	Emergency Management informs the Oregon Emergency Response System of EOC activation and requests support as directed by IC (i.e. Regional HAZMAT Support Team) at 800-452-0311.				
5	Facility, trucking or pipeline representative (dependent on type of incident) contacts the National Response Center to report HAZMAT spill that exceeds reportable quantity at 800-424-8802.				
6	Communications link established between EOC and the on-scene IC.				
7	Identify incident needs, in coordination with the on-scene IC.				



8	Protective measures for the public determined and implemented (evacuation and/or Shelter-in-place).				
9	Shelter and housing needs addressed for displaced populations. Detailed directions/instructions provided to displaced populations.				
10	Adjacent county Emergency Management Office notified if a HAZMAT release in Tillamook County may potentially impact that county.				
RESPONSE ACTIONS		YES	NO	N/A	
1	Staging area location for the incident determined (upwind, uphill, and safe distance from the site).				
2	First responders provided a safe route to the scene (based upon wind conditions and to include fire, police, EMS ambulance).				
3	Arriving first responders conduct a scene size-up of the incident site from a safe upwind location, and report findings to IC upon arrival.				
4	IC conducts a risk assessment and directs actions based on the assessment findings (i.e. contain leak, rescue casualties, and provide medical treatment, etc.).				
5	IC Collaborates with facility leaders and responders to integrate response operations with initial procedures shown in the appropriate facility profile sheet (attachment 5).				
6	IC determines the need for and requests RHMRT assistance through the OERS or 9-1-1 dispatch.				
7	Protective measures for the public determined and implemented (evacuation and shelter-in-place) in accordance with procedures illustrated in Section 7.3 of this ERP.				
8	Traffic control actions implemented to ensure that persons do not travel into contaminated areas/plumes.				
9	Staging area team constantly assesses incident site visually from a safe distance and reports any changes to the IC until the arrival of the regional HAZMAT team.				
10	Gross decontamination is established initially for potentially exposed victims. If requested, technical decontamination is set-up as directed by the IC.				



ATTACHMENT 3: TECHNOLOGICAL HAZARD INVENTORY

Analysts did not include the Tillamook County technological hazard inventory data in this attachment due to the sensitive nature of the material. ASG provided inventory data to the Tillamook County Office of Emergency Management for future reference.



ATTACHMENT 4: RESPONSE CAPABILITIES AND EQUIPMENT

Analysts compiled the inventory below to identify capabilities of regional responders. The inventory below is not all-inclusive as county first response agencies did not complete the questionnaire.

Table A4-1: Tillamook County HAZMAT Response Capabilities

Organization	Manpower/Training	Personal Protective Equipment	HAZMAT Equipment	Decontamination Capabilities	Estimated Response Time
102 nd CST (Salem, OR)	22 HAZMAT Technicians	Multiple level A, B and C suits available Drager SCBAs and PAPR respirators with a variety of cartridges available 12 SCBA tanks (60-minute tanks) Multiple types of gloves available	Multiple five-gas meters (PID, LEL, O2, CO, H2S) Several AreaRAEs and MultiRAEs available HAZMAT ID Portable gas chromatograph/mass spectroscopy unit (Hapsite) Ahura Defender HAZMAT identifier Alpha, beta and gamma radiation detection meters Radiation isotope identifier Radiation personal dosimeters Satellite communication truck with secure communication system	Technical decontamination (intended for responders only)	Depart within 90 minutes upon notification Estimated 90 minutes travel time (traffic dependent)



Organization	Manpower/Training	Personal Protective Equipment	HAZMAT Equipment	Decontamination Capabilities	Estimated Response Time
Tualatin Valley RHMRT 9	HAZMAT Technician: 30 HAZMAT Technician Level Training	3-Level A suits 4-Kappler Zytron Protection 300 level B suits 8 Tychem level B suits Scott SCBAs with 60- minute bottles 8 – MT94 suites (Level A capabilities)	2-MultiRAE five gas meters (PID, LEL, O2, CO, H2S) 2-ToxRAE meters with CL2 sensor 1-Sensit hydrocarbon monitor 1-Drager X=ACT 5000 with HCl, HF acid and ammonia detection 4-Canberra radiation detectors 4-Ludlam radiation detectors Radioisotope Identifier D-TEK Stratus (refrigerant and CO2 leak detector) XP1A Refrigerant Leak Detector 1 UltraRAE 3000 (PID/benzene) 1-MiniRAE PID 1 HAZMAT ID 360 pH paper Thermal imaging camera	Gross and technical	90 – 120 minutes



Organization	Manpower/Training	Personal Protective Equipment	HAZMAT Equipment	Decontamination Capabilities	Estimated Response Time
RHMART 13 (Salem)	HAZMAT Technician: 24	5- Level A suits 6- Kappler Zytron Protection 300 level B suits 8 Tychem level B suits Scott SCBAs with 60-minute bottles	2-MultiRAE five gas meters (PID, LEL, O2, CO, H2S) 2-ToxRAE meters with CL2 sensor 1-Sensit hydrocarbon monitor 1 -Toxic industrial monitor 1-Drager X=ACT 5000 with HCl, HF acid and ammonia detection 4-Canberra radiation detectors 4-Ludlam radiation detectors Radioisotope Identifier 1 UltraRAE 3000 (PID/benzene) 1-MiniRAE PID 1 HAZMAT ID 360 pH paper Thermal imaging camera	Gross and Technical	90-120 minutes



ATTACHMENT 5: FACILITY PROFILE SHEETS FOR EHS FACILITIES

Analysts developed a risk profile sheet for each EHS facility and a few high-risk non EHS (Tier II) facilities based on data gathered from completed gap analysis questionnaires. For facilities that did not return a completed questionnaire, ASG developed a modified facility risk profile sheet by including only the facility name, address, facility contact information (ASG entered the owner/operator phone number as listed in the CR2K database), name of the initial responding fire department, vulnerable/at-risk facilities within hazard areas around the EHS facility, and a map image to include the worst-case plume modeling result for each facility (when analysts conducted plume modeling). For chemicals not contained in the ALOHA plume modeling program library, analysts traced a half-mile radius circle around the facility to highlight vulnerable/at-risk facilities and EHS facilities. An at-risk facility refers to facilities with individuals or groups whose needs are not fully addressed or who feel they cannot safely use the standard resources offered during preparedness, response, and recovery efforts. These include the physically or mentally disabled, senior citizens, and/or children. A vulnerable facility refers to a facility whose individuals are subject to potential harm from a hazard such as a downwind chemical plume. The facility profile sheets for Tillamook County are displayed alphabetically by the facility name below.



Figure A5-1: ACS Cable Systems LLC Facility Profile Sheet

<p>Facility Name: ACS Cable Systems LLC</p>	<p>Facility Address: 25589 Highway 101 N Rockaway Beach, OR 97136</p>	<p>Facility Coordinator: Thomas Brewer (503) 466-8680 Thomas.brewer@ACSALASKA.COM</p>	<p>Responding Fire Dept: Rockaway Beach Fire Department</p>	<p>Vulnerable/At-Risk Facilities</p> <ul style="list-style-type: none"> • Neah-Kah-Nie Middle School (S) • Neah-Kah-Nie High School (S)
<div data-bbox="1081 479 1522 730"> <p>○ Half-mile radius</p> <p>● Vulnerable/At-Risk Facility</p> <p>● EHS Facility</p> </div> <div data-bbox="871 1128 1543 1323"> <ul style="list-style-type: none"> • This facility stores about 1k gallons of diesel fuel and 16k pounds of lead/acid batteries onsite • Sulfuric acid is contained inside the sealed batteries and does not present a hazard under normal operations • Sulfuric acid has a low volatility and is not listed in the ALOHA plume modeling library • Sulfuric acid is highly corrosive to the skin and eyes if released </div>				
<p>Plans *Facility did not complete the 2025 online gap analysis questionnaire</p>	<p>Organization</p>	<p>Equipment</p>	<p>Training</p>	<p>Exercises</p>



Figure A5-2: Boaz Ag Services LLC Facility Profile Sheet

<p>Facility Name: Boaz Ag Services LLC</p>	<p>Facility Address: 8120 S Prairie Road Tillamook, OR 97141</p>	<p>Facility Coordinator: Unknown (503) 812-4039 admin@bozagservices.com</p>	<p>Responding Fire Dept: Tillamook Fire District</p>	<p>Vulnerable/At-Risk Facilities</p> <ul style="list-style-type: none"> • None noted
<div data-bbox="1108 428 1549 678" style="border: 1px solid black; padding: 5px;"> <ul style="list-style-type: none"> ○ Half-mile radius ● Vulnerable/At-Risk Facility ● EHS Facility </div> <div data-bbox="117 1040 936 1252" style="border: 1px solid black; padding: 5px;"> <ul style="list-style-type: none"> • This facility stores many cleaning compounds and detergents some of which contain sulfuric acid and hydrogens peroxide • Sulfuric acid is not listed in the ALOHA library; this acid has a low volatility • Sulfuric acid is highly corrosive to the skin and eyes if released • Hydrogen peroxide is a strong oxidizing agent and a strong skin and eye irritant • Hydrogen peroxide plume model result indicates no immediate downwind impacts; exposures expected to be localized to facility employees if released </div>				
<p>Plans *Facility did not complete the 2025 online gap analysis questionnaire</p>	<p>Organization</p>	<p>Equipment</p>	<p>Training</p>	<p>Exercises</p>



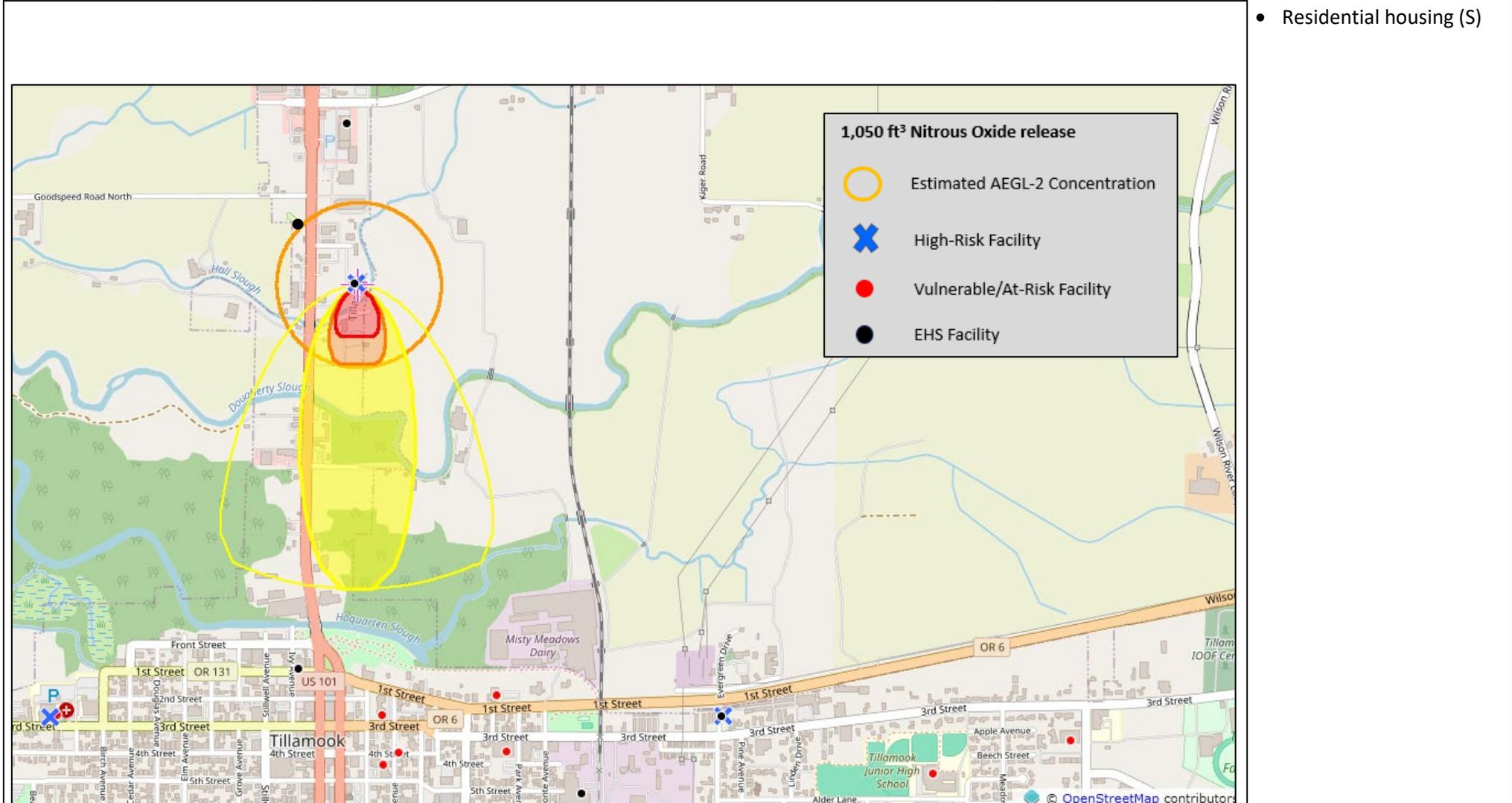
Figure A5-3: BPA Facility Profile Sheet

<p>Facility Name: BPA</p>	<p>Facility Address: 15 Evergreen Drive E Tillamook, OR 97141</p>	<p>Facility Coordinator: Unknown (503) 304-5900 PHSEVER@BPA.GOV</p>	<p>Responding Fire Dept: Tillamook Fire District</p>	<p>Vulnerable/At-Risk Facilities</p> <ul style="list-style-type: none"> Residential housing
<p>Plans *Facility did not complete the 2025 online gap analysis questionnaire</p>	<p>Organization</p>	<p>Equipment</p>	<p>Training</p>	<p>Exercises</p>



Figure A5-4: Buss Welding and Machine Facility Profile Sheet

Facility Name: Buss Welding and Machine Inc.	Facility Address: 2175 Larson Road Tillamook, OR 97141	Facility Coordinator: Ken Buss Jr. (503) 842-7764 info#@busswelding.com	Responding Fire Dept: Tillamook Fire District	Vulnerable/At-Risk Facilities <ul style="list-style-type: none"> • Tillamook Farmers Co Op (W) • Residential housing (S)
--	---	--	---	---





Plans/procedures summary: The facility has developed an Emergency Action Plan, but specific employee action information was not provided. The facility has not developed an evacuation or shelter-in-place plan.

Organization summary: This facility operates one shift, five days a week. Responders can access the facility after hours if necessary. Reported onsite hazards include welding gases such as carbon dioxide, argon, acetylene, oxygen and nitrous oxide.

Equipment/resources summary: This facility does not have any automated leak detection systems or portable HAZMAT detection equipment. Personal protective equipment consists of typical welding protection (shaded helmets, leather gloves, etc.). This facility is not equipped with a fire suppression system.

Training/exercise summary: Employee training information was not provided. HAZMAT release exercises are not conducted.

Plans

- HAZMAT ERP
- Emergency Action Plan (EAP)
- SPCC Plan
- Risk Management Plan
- Hazardous Waste Large Quantity Generator Plan
- Stormwater Pollution Prevention Plan
- Evacuation Plan

Organization

- Onsite HAZMAT Team
Yes No
- Eyewash stations
- Water showers
- Arrangements in place with third party emergency response or spill cleanup contractors Yes No

Equipment

- Facility leak detection systems:
Yes No
- Secondary containment present where bulk liquid HAZMAT is stored:
- Facility fire suppression system present: Yes No

Training

- Hazard Communication (HAZCOM)
- HAZMAT Awareness
- HAZWOPER
- HAZMAT Transportation (DOT)
- HAZMAT Operations
- HAZMAT Technician

Exercises

- Facility HAZMAT release exercises conducted:
Yes No



Figure A5-5: Charter Communications Facility Profile Sheet

<p>Facility Name: OR-9655 Charter Communications</p>	<p>Facility Address: 1014 Pacific Avenue Tillamook, OR 97141</p>	<p>Facility Coordinator: Zachary King (509) 222-2506 zachary.king@charter.com</p>	<p>Responding Fire Dept: Tillamook Fire District</p>	<p>Vulnerable/At-Risk Facilities</p> <ul style="list-style-type: none"> • Residential neighborhoods (N, NE, E, W, NW) • Pacific Christian School (NNE) • Tillamook Police Department (NNE) • Tillamook Fire Department Station 71 (NNE) • Tillamook County Emergency Communications District 9-1-1 dispatch (NNE) • Wilson School (NE) • Tillamook Early Learning Center (ESE) • Tillamook High School (ESE) • Liberty Elementary School (NW)
<p>Plans *Facility did not complete the 2025 online gap analysis questionnaire</p>	<p>Organization</p>	<p>Equipment</p>	<p>Training</p>	<p>Exercises</p>



Figure A5-6: Fred Meyers Stores Inc. Facility Profile Sheet

<p>Facility Name: Fred Meyers Stores Inc.</p>	<p>Facility Address: 2500 N Main Street Tillamook, OR 97141</p>	<p>Facility Coordinator: Todd Kammeyer (503) 815-1400 Todd.kammeyer@fredmeyer.com</p>	<p>Responding Fire Dept: Tillamook Fire District</p>	<p>Vulnerable/At-Risk Facilities</p> <ul style="list-style-type: none"> Buss Welding and Machine (SE)
<div data-bbox="625 1136 1606 1258" style="border: 1px solid black; padding: 5px;"> <ul style="list-style-type: none"> This facility reported 3,900 pounds of lead/acid batteries and propane onsite Sulfuric acid is not listed in the ALOHA library; this acid has a low volatility Sulfuric acid is highly corrosive to the skin and eyes if released </div>				
<p>Plans *Facility did not complete the 2025 online gap analysis questionnaire</p>	<p>Organization</p>	<p>Equipment</p>	<p>Training</p>	<p>Exercises</p>



Figure A5-7: Les Schwab Tire Center Facility Profile Sheet

<p>Facility Name: Les Schwab Tire Center #222</p>	<p>Facility Address: 1220 Main Avenue Tillamook, OR 97141</p>	<p>Facility Coordinator: Headquarters (541) 416-4136 Safety.department@lesschwab.com</p>	<p>Responding Fire Dept: Tillamook Fire District</p>	<p>Vulnerable/At-Risk Facilities</p> <ul style="list-style-type: none"> Residential neighborhoods (N, E, W) Tillamook Fire District Station 71 (NNE) Tillamook County Emergency Communications District 9-1-1 dispatch Tillamook Early Learning Center (E) Tillamook High School (E) Liberty Elementary School (NNW)



Plans/procedures summary: The facility's Emergency Action Plan (EAP) directs employees to contact headquarters following a HAZMAT incident. Headquarters will contact Safety Kleen for assistance if needed. The evacuation plan directs employees to assemble at store's sign following notification over the intercom. This organization does not have a Shelter-in-Place that addresses sheltering in the event of a HAZMAT incident.

Organization summary: This facility operates one shift, 24 hours a day, Monday through Saturday, 8:00 a.m. to 6:00 p.m. Chemicals consist of oils and lubricants, and lead/acid batteries. The organization has agreements in place with Safety Kleen to perform HAZMAT cleanup operations when needed; estimated response time is two or more hours from initial notification.

Equipment/resources summary: This facility does not have any automated leak detection systems or portable handheld HAZMAT detection equipment. Adequately sized secondary containment is in place as well as spill containment resources (e.g., booms and pads). Lead/acid battery charging operations occur in a room with exhaust ventilation to prevent the buildup of explosive gases. Employees have access to acid neutralizing kits. The organization provides employees with access to rubber gloves, aprons, goggles and face shields. A fire suppression adequately reaches all areas of the facility in the event of a fire.

Training/exercise summary: All employees receive hazard communication training; HAZMAT release exercises are not conducted.

<u>Plans</u>	<u>Organization</u>	<u>Equipment</u>	<u>Training</u>	<u>Exercises</u>
HAZMAT ERP <input type="checkbox"/> Emergency Action Plan (EAP) <input checked="" type="checkbox"/> SPCC Plan <input type="checkbox"/> Risk Management Plan <input type="checkbox"/> Hazardous Waste Large Quantity Generator Plan <input type="checkbox"/> Stormwater Pollution Prevention Plan <input type="checkbox"/> Evacuation Plan <input type="checkbox"/>	Onsite HAZMAT Team Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Eyewash stations <input checked="" type="checkbox"/> Water showers <input type="checkbox"/> Arrangements in place with third party emergency response or spill cleanup contractors Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Facility leak detection systems: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Secondary containment present where bulk liquid HAZMAT is stored: <input checked="" type="checkbox"/> Facility fire suppression system present: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Hazard Communication (HAZCOM) <input checked="" type="checkbox"/> HAZMAT Awareness <input type="checkbox"/> HAZWOPER <input type="checkbox"/> HAZMAT Transportation (DOT) <input type="checkbox"/> HAZMAT Operations <input type="checkbox"/> HAZMAT Technician <input type="checkbox"/>	Facility HAZMAT release exercises conducted: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>



Figure A5-8: Manzanita Fresh Foods Facility Profile Sheet

<p>Facility Name: Manzanita Fresh Foods</p>	<p>Facility Address: 730 Manzanita Avenue Manzanita, OR 97130</p>	<p>Facility Coordinator: Scott Welsh (503) 368-5250 scott@welshcorp.com</p>	<p>Responding Fire Dept: Nehalem Bay Fire and Rescue</p>	<p>Vulnerable/At-Risk Facilities</p> <ul style="list-style-type: none"> • Manzanita Public Safety (W) • Residential neighborhoods (S, SW, W, NW, N)
<div style="display: flex; justify-content: space-between;"> <div data-bbox="201 423 657 678" style="border: 1px solid black; padding: 5px;"> <p>○ Half-mile radius</p> <p>● Vulnerable/At-Risk Facility</p> <p>● EHS Facility</p> </div> <div data-bbox="165 396 1562 1240"> </div> </div> <div data-bbox="170 1117 1213 1235" style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <ul style="list-style-type: none"> • This facility reported 2,200 pounds of lead/acid batteries and 800 gallons of propane onsite • Sulfuric acid is not listed in the ALOHA library; this acid has a low volatility • Sulfuric acid is highly corrosive to the skin and eyes if released </div>				
<p>Plans *Facility did not complete the 2025 online gap analysis questionnaire</p>	<p>Organization</p>	<p>Equipment</p>	<p>Training</p>	<p>Exercises</p>



Figure A5-9: New Cingular Wireless Facility Profile Sheet

Facility Name:	Facility Address:	Facility Coordinator:	Responding Fire Dept:	Vulnerable/At-Risk Facilities
New Cingular Wireless (multiple tower sites)	Multiple site locations in Tillamook County	Jeremy McGrue (469) 295-2319 G43573@att.com	Various departments (location dependent)	<ul style="list-style-type: none"> View MARPLOT GIS layer for vulnerable facilities near cell phone towers
<div data-bbox="67 467 934 597" style="border: 1px solid gray; padding: 5px;"> <ul style="list-style-type: none"> Unmanned tower locations reported up to 20k pounds of lead/acid batteries onsite depending on the tower Sulfuric acid is not listed in the ALOHA library; this acid has a low volatility Sulfuric acid is highly corrosive to the skin and eyes if released </div> <div data-bbox="142 1170 688 1388" style="border: 1px solid gray; padding: 5px;"> <p>New Cingular Operated Cell Phone Towers</p> <ul style="list-style-type: none"> Cell Phone Tower Location Vulnerable/At-Risk Facility </div> <div data-bbox="709 451 1690 1409"> </div>				



Plans/procedures summary: Organization plans direct technicians to notify the Environmental Health and Safety hotline upon discovery of a HAZMAT incident at an unstaffed tower. Plans address procedures for establishing an incident command system and Unified Command. Procedures to shut down battery operations are in place. The evacuation plan directs employees to exit through the main gate and assemble at a safe distance. Plans are reviewed annually and updated as needed.

Organization summary: These unstaffed cell phone tower locations operate 24/7, 365 days a year. When a location is staffed, one shift operates 8:00 a.m. to 4:00 p.m. There are arrangements in place with Patriot Environmental Services to perform HAZMAT response, cleanup, and remediation services. The estimated response time is about 1-2 hours. Buildings where HAZMAT is stored are placarded with the NFPA 704 four-colored diamond sign. Lead/acid battery charging operations occur at the sites and acid neutralizing kits are available onsite.

Equipment/resources summary: The isolated cell tower sites do not have any, showers, or personal protective equipment onsite other than rubber gloves. Emergency eyewash stations (bottled eyewash water) are available at the tower sites. The facilities have an automated Veeder Root system to monitor low fuel and high-water levels. Another automated system remotely monitors battery temperatures. Adequately sized secondary containment and spill containment supplies such as pads and booms are in place. There are fire suppression systems in place at the remote sites. Responders can access the fenced sites via a knox box.

Training/exercise summary: Employees receive hazard communication and HAZMAT awareness level training. HAZMAT exercises are not routinely conducted.

<u>Plans</u>	<u>Organization</u>	<u>Equipment</u>	<u>Training</u>	<u>Exercises</u>
HAZMAT ERP <input type="checkbox"/> Emergency Action Plan (EAP) <input checked="" type="checkbox"/> SPCC Plan <input type="checkbox"/> Risk Management Plan <input type="checkbox"/> Hazardous Waste Large Quantity Generator Plan <input type="checkbox"/> Stormwater Pollution Prevention Plan <input type="checkbox"/> Evacuation Plan <input type="checkbox"/>	Onsite HAZMAT Team Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Eyewash stations <input checked="" type="checkbox"/> Water showers <input type="checkbox"/> Arrangements in place with third party emergency response or spill cleanup contractors Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Facility leak detection systems: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Secondary containment present where bulk liquid HAZMAT is stored: <input checked="" type="checkbox"/> Facility fire suppression system present: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Hazard Communication (HAZCOM) <input checked="" type="checkbox"/> HAZMAT Awareness <input checked="" type="checkbox"/> HAZWOPER <input type="checkbox"/> HAZMAT Transportation (DOT) <input type="checkbox"/> HAZMAT Operations <input type="checkbox"/> HAZMAT Technician <input type="checkbox"/> HAZMAT Specialist <input type="checkbox"/>	Facility HAZMAT release exercises conducted: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>



Figure A5-10: ODFW Facility Profile Sheet

<p>Facility Name: ODFW</p>	<p>Facility Address: 33465 Highway 22 Hebo, OR 97122</p>	<p>Facility Coordinator: Unknown (503) 392-3485 Jrreezy10@hotmail.com</p>	<p>Responding Fire Dept: Nestucca Rural Fire Protection District</p>	<p>Vulnerable/At-Risk Facilities</p> <ul style="list-style-type: none"> • None noted
<div style="display: flex; justify-content: space-between;"> <div data-bbox="233 488 642 597" style="border: 1px solid gray; padding: 5px;"> Half-mile radius </div> <div data-bbox="128 399 1549 1222" style="flex-grow: 1;"> </div> </div> <div data-bbox="128 1062 974 1222" style="border: 1px solid gray; padding: 5px; margin-top: 10px;"> <ul style="list-style-type: none"> • This facility reported 660 gallons of formalin solution (formaldehyde) onsite and 500 gallons of gasoline • Formaldehyde is not included in the ALOHA plume modeling library • Formaldehyde exposure (inhalation and skin and/or eye contact) causes irritation to the eyes, nose, throat and respiratory system </div>				
<p>Plans *Facility did not complete the 2025 online gap analysis questionnaire</p>	<p>Organization</p>	<p>Equipment</p>	<p>Training</p>	<p>Exercises</p>



Figure A5-11: O'Reilly Auto Parts Retail Store Facility Profile Sheet

<p>Facility Name: O'Reilly Auto Parts #3805</p>	<p>Facility Address: 2207 N Main Street Tillamook, OR 97141</p>	<p>Facility Coordinator: Unknown (503) 815-3840 jbounds2@oreilyauto.com</p>	<p>Responding Fire Dept: Tillamook Fire District</p>	<p>Vulnerable/At-Risk Facilities</p> <ul style="list-style-type: none"> • Buss Welding and Machine facility (SSE) • Fred Meyers facility (NW)
<p>Plans *Facility did not complete the 2025 online gap analysis questionnaire</p>	<p>Organization</p>	<p>Equipment</p>	<p>Training</p>	<p>Exercises</p>



Figure A5-12: Tillamook County Creamery Facility Profile Sheet

Facility Name: Tillamook County Creamery Association	Facility Address: 4175 Highway 101 N Tillamook, OR 97141	Facility Coordinator: Richard Burnis (503) 815-1389 rburnis@tillamook.com	Responding Fire Dept: Tillamook Fire District	Vulnerable/At-Risk Facilities
<div data-bbox="128 488 1098 597" style="border: 1px solid gray; padding: 5px;"> <ul style="list-style-type: none"> This facility stores many chemicals to include anhydrous ammonia, propane(50k gallons), gasoline, diesel fuel, and acid-based cleaners (list not all-inclusive) Most chemicals are stored in drums or above ground storage tanks </div> <div data-bbox="107 461 1625 1419"> </div>				<ul style="list-style-type: none"> Griffin House Nursing Home (N) Tillamook Junior High School (SSE) Tillamook School District (S) Wilson School (S) Tillamook Police Department (S) Tillamook Fire District (S) Tillamook County Emergency Communications District 9-1-1 dispatch (S) Pacific Christian School (S) Liberty Elementary School (S) Tillamook Early Learning Center (S) Adventist Health Hospital (SSW)



Plans/procedures summary: Established plans include a plume model study and stormwater impact risk assessment, response and escalation procedures, communication protocols to include procedures to establish a Unified Command with local responders, and stabilization/recovery procedures. Plans direct employees to dial 9-1-1 if a HAZMAT release presents a risk to external stakeholders. The evacuation plan directs employees to assemble at one of three external points (exact point locations not provided). This organization has a Shelter-in-Place Plan that addresses sheltering in the event of a HAZMAT incident. HAZMAT shutdown procedures are in place and take 10 to 120 minutes depending on the process. Plans are reviewed annually and updated as needed.

Organization summary: This facility operates three shifts, 24 hours a day, seven days a week, 365 days a year. The organization maintains a trained onsite HAZMAT response team that is onsite 24/7 with 4-6 members available during shift 1, two available during shift 2, and one onsite during shift 3 and on weekends. Members are trained to conduct offensive operations during an ammonia release or oil/chemical incidents within the property's boundary. HAZMAT response team members have access to a variety of glove types, Level A, B, and C suits, rubber boots, air purifying and self-contained breathing apparatuses (SCBA). HAZMAT shipments are received weekly via truck. Acid neutralizing kits are available onsite. Brian Rose, brose@tillamook.com, (503) 815- 1306 and Daniel Lusby, d Lusby@tillamook.com, (503) 815-6751 are listed as alternate contacts for this organization.

Equipment/resources summary: This facility has an automated leak detection system equipped to activate local alarms and strobe lights. Available portable HAZMAT detection equipment includes an ammonia meter, 5 and 4-gas meters, a PID and colorimetric tubes. The organization maintains a mobile pop-up decontamination tent that is exercised three times per year. Adequately sized secondary containment is in place as well as spill containment resources (e.g., booms and pads). Employees do not have access to any personal protective equipment (PPE) (other than HAZMAT response team members).

Training/exercise summary: All employees receive hazard communication, HAZMAT awareness level training, and ammonia training. HAZMAT response team members received HAZMAT technician level training. HAZMAT release exercises are conducted.

<u>Plans</u>	<u>Organization</u>	<u>Equipment</u>	<u>Training</u>	<u>Exercises</u>
HAZMAT ERP <input checked="" type="checkbox"/> Emergency Action Plan (EAP) <input checked="" type="checkbox"/> SPCC Plan <input checked="" type="checkbox"/> Risk Management Plan <input checked="" type="checkbox"/> Hazardous Waste Large Quantity Generator Plan <input type="checkbox"/> Stormwater Pollution Prevention Plan <input checked="" type="checkbox"/> Evacuation Plan <input checked="" type="checkbox"/>	Onsite HAZMAT Team Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Eyewash stations <input checked="" type="checkbox"/> Water showers <input checked="" type="checkbox"/> Arrangements in place with third party emergency response or spill cleanup contractors Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Facility leak detection systems: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Secondary containment present where bulk liquid HAZMAT is stored: <input checked="" type="checkbox"/> Facility fire suppression system present: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Hazard Communication (HAZCOM) <input checked="" type="checkbox"/> HAZMAT Awareness <input checked="" type="checkbox"/> HAZWOPER <input type="checkbox"/> HAZMAT Transportation (DOT <input type="checkbox"/>) HAZMAT Operations <input type="checkbox"/> HAZMAT Technician <input checked="" type="checkbox"/>	Facility HAZMAT release exercises conducted: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>



Figure A5-13: Tillamook Country Smokers Facility Profile Sheet

<p>Facility Name: Tillamook Country Smokers</p>	<p>Facility Address: 8335 Highway 101 North Bay City, OR 97107</p>	<p>Facility Coordinator: Mark Shultz (920) 240-6566 mark.schultz@tcsjerkyk.com</p>	<p>Responding Fire Dept: Bay City Fire Department</p>	<p>Vulnerable/At-Risk Facilities</p> <ul style="list-style-type: none"> • None noted
<div data-bbox="1100 516 1646 748" style="border: 1px solid black; padding: 5px;"> <p>9,950-gallon propane explosion</p> <ul style="list-style-type: none"> ○ 8-psi Explosive Overpressure Radius ● Above Ground Storage Tank (AST) </div> <div data-bbox="422 1247 1661 1370" style="border: 1px solid black; padding: 5px; margin-top: 20px;"> <ul style="list-style-type: none"> • This facility stores nearly 16,000 pounds of lead/acid batteries and 300 gallons of sulfuric acid onsite • Sulfuric acid is not listed in the ALOHA library; this acid has a low volatility • Sulfuric acid is highly corrosive to the skin and eyes if released </div>				



Plans/procedures summary: Established plans direct the Maintenance and Environmental Managers to notify the National Response Center, OERS, and the emergency response contractor (NRC Environmental). Plans establish an internal Incident Command System (ICS). The evacuation plan directs employees to evacuate using the nearest exit and assemble in the front gravel parking lot (packaging and office personnel) or the back parking lot (processing and warehouse personnel). This organization does not have a Shelter-in-Place Plan that addresses sheltering during a HAZMAT incident. Plans are reviewed monthly and updated as needed.

Organization summary: This facility operates three shifts, 12:00 a.m. to noon. The organization does not have a trained onsite HAZMAT response team. Agreements are in place with Chemstation to provide HAZMAT spill cleanup services; the estimated response time is one hour. Liquid nitrogen shipments are received quarterly and propane daily via truck. Buildings where HAZMAT is stored are placarded with the NFPA 704 four-colored diamond sign. HAZMAT first responders can access the facility after hours using the provided access badges and maps of the facility. Heather Redmon, heather.redmon@tcsjerky.com, (360) 624-7861 and TJ Bollinger, tj.bollinger@tcsjerky.com, (479) 283-7783 are listed as alternate Emergency Coordinators for this organization.

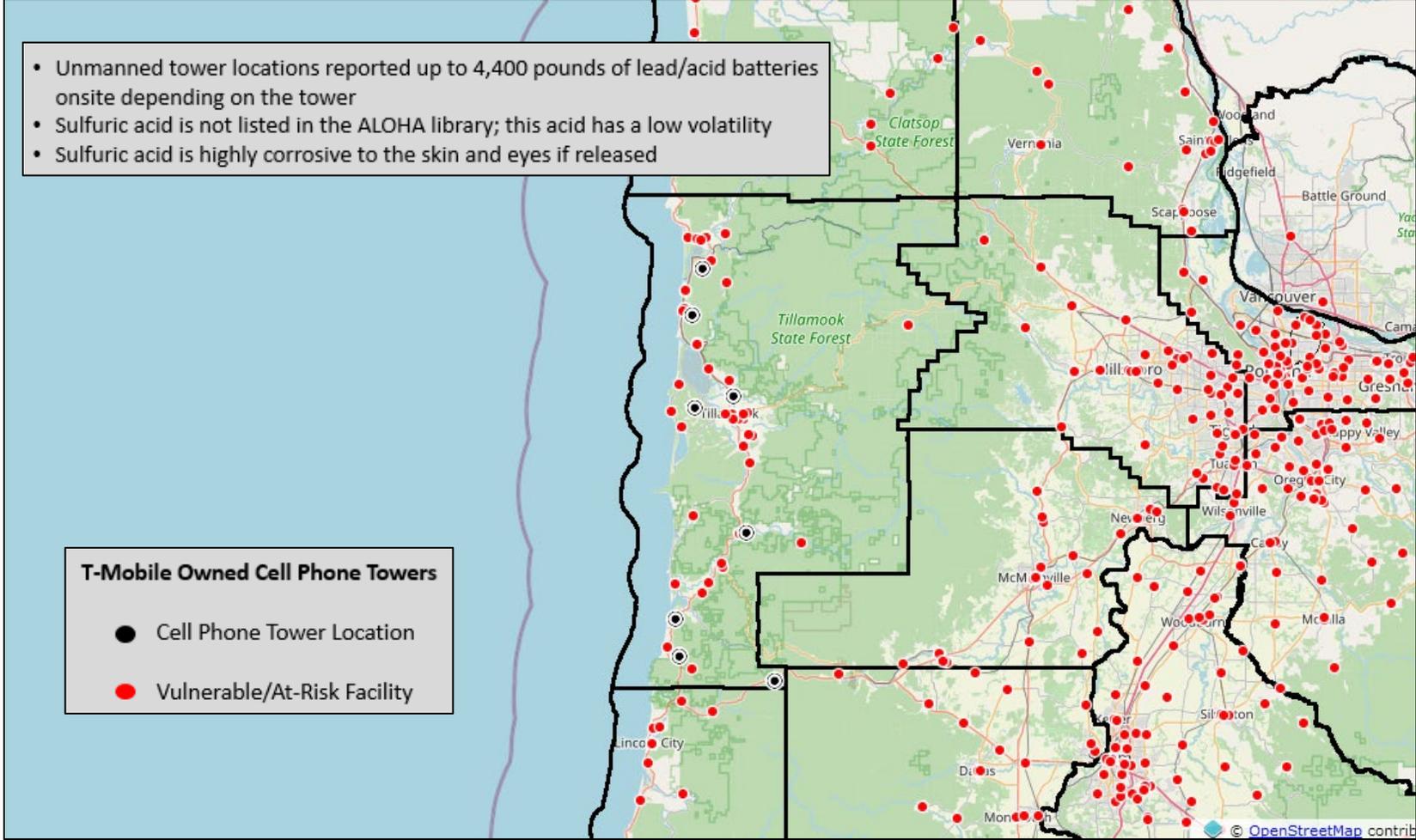
Equipment/resources summary: This facility does not have any automated leak detection systems installed. Available portable HAZMAT detection equipment includes a portable hydrogen sulfide gas monitor. Adequately sized secondary containment is in place as well as spill containment resources (e.g., booms and pads). Acid neutralizing kits are available onsite. Employees do not have access to any personal protective equipment (PPE). The facility has a fire suppression system installed, but it does not reach all interior areas.

Training/exercise summary: All employees receive spill and stormwater training. HAZMAT release exercises are not conducted.

<u>Plans</u>	<u>Organization</u>	<u>Equipment</u>	<u>Training</u>	<u>Exercises</u>
HAZMAT ERP <input type="checkbox"/> Emergency Action Plan (EAP) <input type="checkbox"/> SPCC Plan <input checked="" type="checkbox"/> Risk Management Plan <input type="checkbox"/> Hazardous Waste Large Quantity Generator Plan <input type="checkbox"/> Stormwater Pollution Prevention Plan <input checked="" type="checkbox"/> Evacuation Plan <input checked="" type="checkbox"/>	Onsite HAZMAT Team Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Eyewash stations <input checked="" type="checkbox"/> Water showers <input checked="" type="checkbox"/> Arrangements in place with third party emergency response or spill cleanup contractors Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Facility leak detection systems: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Secondary containment present where bulk liquid HAZMAT is stored: <input checked="" type="checkbox"/> Facility fire suppression system present: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Hazard Communication (HAZCOM) <input type="checkbox"/> HAZMAT Awareness <input type="checkbox"/> HAZWOPER <input type="checkbox"/> HAZMAT Transportation (DOT) <input type="checkbox"/> HAZMAT Operations <input type="checkbox"/> HAZMAT Technician <input type="checkbox"/>	Facility HAZMAT release exercises conducted: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>



Figure A5-14: T-Mobile Communications Facility Profile Sheet

Facility Name:	Facility Address:	Facility Coordinator:	Responding Fire Dept:	Vulnerable/At-Risk Facilities
T-Mobile Cell Phone (multiple tower sites)	Multiple site locations in Tillamook County	Kirk Barnes (503) 515-5475 kirk.barnes@t-mobile.com	Various departments (location dependent)	<ul style="list-style-type: none"> View MARPLOT GIS layer for vulnerable facilities near cell phone towers
<div data-bbox="73 483 1003 630" style="border: 1px solid black; padding: 5px;"> <ul style="list-style-type: none"> Unmanned tower locations reported up to 4,400 pounds of lead/acid batteries onsite depending on the tower Sulfuric acid is not listed in the ALOHA library; this acid has a low volatility Sulfuric acid is highly corrosive to the skin and eyes if released </div> <div data-bbox="121 1065 569 1256" style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>T-Mobile Owned Cell Phone Towers</p> <ul style="list-style-type: none"> ● Cell Phone Tower Location ● Vulnerable/At-Risk Facility </div> 				



Plans/procedures summary: Organization plans direct technicians to contact the contracted emergency response service upon discovery of an incident. The technicians then contact the T-Mobile emergency response service and their manager. The Emergency Response Service then contacts T-Mobile EHS. Plans instruct employees to evacuate the facility and return to their company vehicle after discovery of an incident and initial incident notifications. HAZMAT shutdown procedures are only implemented if the cell site has an emergency generator. When an incident occurs while an employee is at the site, the individual will press a shutdown button. The organization does not have any HAZMAT response teams.

Organization summary: These unstaffed cell phone tower locations operate 24/7, 365 days a year. There are arrangements in place with CURA Emergency Services to perform HAZMAT cleanup and remediation services. Buildings where HAZMAT is stored are placarded with the NFPA 704 four-colored diamond sign. The T-Mobile Network Operation Control Center, (888) 662-4662 is listed as an alternate contact. Cathy Ngo, Cathy.Ngo3@T-Mobile.com, (425) 383-2077 or (877) 604-7233 (after hours number) is listed as a secondary point of contact for this organization. Lead/acid battery charging operations occur at the sites in a designated area with exhaust ventilation.

Equipment/resources summary: The isolated cell tower sites do not have any emergency eyewash stations, showers, or personal protective equipment onsite. Responders can access the fenced sites if a knox box is on site or by cutting the gate's padlock. The facility has an automated I system to monitor battery performance and heat build-up inside a battery cabinet. An alarm will sound at the network operation center (not at the cell site). A technician will be dispatched to investigate any alarm. Acid neutralizing kits are not available onsite. Adequately sized secondary containment is in place and above ground storage tanks are double walled. There are no fire suppression systems in place at the remote sites.

Training/exercise summary: Employees are not expected to respond to a spill incident and are trained to call the environmental response service. HAZMAT exercises are not conducted.

<u>Plans</u>	<u>Organization</u>	<u>Equipment</u>	<u>Training</u>	<u>Exercises</u>
HAZMAT ERP <input checked="" type="checkbox"/> Emergency Action Plan (EAP) <input checked="" type="checkbox"/> SPCC Plan <input type="checkbox"/> Risk Management Plan <input type="checkbox"/> Hazardous Waste Large Quantity Generator Plan <input type="checkbox"/> Stormwater Pollution Prevention Plan <input type="checkbox"/> Evacuation Plan <input type="checkbox"/>	Onsite HAZMAT Team Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Eyewash stations <input type="checkbox"/> Water showers <input type="checkbox"/> Arrangements in place with third party emergency response or spill cleanup contractors Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Facility leak detection systems: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Secondary containment present where bulk liquid HAZMAT is stored: <input checked="" type="checkbox"/> Facility fire suppression system present: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Hazard Communication (HAZCOM) <input checked="" type="checkbox"/> HAZMAT Awareness <input checked="" type="checkbox"/> HAZWOPER <input type="checkbox"/> HAZMAT Transportation (DOT) <input checked="" type="checkbox"/> HAZMAT Operations <input type="checkbox"/> HAZMAT Technician <input checked="" type="checkbox"/> HAZMAT Specialist <input type="checkbox"/>	Facility HAZMAT release exercises conducted: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>



Figure A5-15: Verizon Wireless Facility Profile Sheet

<p>Facility Name: Verizon Wireless</p>	<p>Facility Address: Multiple tower site locations in Tillamook County</p>	<p>Facility Coordinator: Susan Calderon (800) 386-9639 Susan.Calderon@VerizonWireless.com</p>	<p>Responding Fire Dept: Various departments (location dependent)</p>	<p>Vulnerable/At-Risk Facilities</p> <ul style="list-style-type: none"> View MARPLOT GIS layer for vulnerable facilities near cell phone towers
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Verizon Operated Cell Phone Towers</p> <ul style="list-style-type: none"> ● Cell Phone Tower Location ● Vulnerable/At-Risk Facility </div> <div style="width: 50%;"> </div> </div> <div style="margin-top: 10px;"> <ul style="list-style-type: none"> Unmanned tower locations reported up to 4,400 pounds of lead/acid batteries onsite depending on the tower Sulfuric acid is not listed in the ALOHA library; this acid has a low volatility Sulfuric acid is highly corrosive to the skin and eyes if released </div>				
<p>Plans *Facility did not complete the 2025 online gap analysis questionnaire</p>	<p>Organization</p>	<p>Equipment</p>	<p>Training</p>	<p>Exercises</p>



Figure A5-16: Werner Gourmet Meat Snacks Inc. Facility Profile Sheet

<p>Facility Name: Werner Gourmet Meat Snacks, Inc.</p>	<p>Facility Address: 2807 3rd Street Tillamook, OR 97141</p>	<p>Facility Coordinator: Daniel Werner (503) 812-6070 danielw@wernerjerky.com</p>	<p>Responding Fire Dept: Tillamook Fire District</p>	<p>Vulnerable/At-Risk Facilities</p> <ul style="list-style-type: none"> • Residential neighborhoods (E, W) • Tillamook High School (S) • Tillamook Early Learning Center (SSW) • Pacific Christian School (W) • Tillamook Fire District Station 71 (W) • Tillamook Emergency Communications District 9-1-1 dispatch (W) • Wilson School (WNW) • Tillamook Police Department (WNW) • Tillamook School District (NW)
<div data-bbox="1018 516 1480 776" style="border: 1px solid black; padding: 5px;"> <p>○ Half-mile radius</p> <p>● Vulnerable/At-Risk Facility</p> <p>● EHS Facility</p> </div> <div data-bbox="640 1209 1669 1388" style="border: 1px solid black; padding: 5px;"> <ul style="list-style-type: none"> • This facility stores many small quantity chemicals (<100 gallons) to include sodium hydroxide, hydrogen peroxide, and isopropyl alcohol (list not all inclusive) • 10,000 pounds of lead/acid batteries stored onsite • Sulfuric acid is not listed in the ALOHA library; this acid has a low volatility • Sulfuric acid is highly corrosive to the skin and eyes if released </div>				



Plans/procedures summary: This organization has an Emergency Action Plan although specific details were not provided. The evacuation plan directs employees to assemble at the front gate. This organization does not have a Shelter-in-Place plan which addresses sheltering in the event of a HAZMAT incident.

Organization summary: This facility operates two shifts per day, 20 hours a day, six days a week. This organization does not have an onsite HAZMAT response team. Chemicals stored onsite consists of small quantities of various chemicals, cleaning disinfectants and 10,000 pounds of lead/acid batteries. Employees conduct lead/acid battery charging operations in a ventilated area; acid neutralizing kits are not available onsite. Sadie Rider, sadier@wernerjerky.com, (503) 812-0050 is listed as alternate Emergency Coordinator for this organization. First responders cannot access the facility after hours and will need to contact the Emergency Coordinator.

Equipment/resources summary: This facility does not have any automated leak detection systems or portable HAZMAT detection equipment. There is not a fire suppression system in place.

Training/exercise summary: Employees do not receive any HAZMAT training or conduct HAZMAT exercises.

<u>Plans</u>	<u>Organization</u>	<u>Equipment</u>	<u>Training</u>	<u>Exercises</u>
HAZMAT ERP <input type="checkbox"/> Emergency Action Plan (EAP) <input checked="" type="checkbox"/> SPCC Plan <input type="checkbox"/> Risk Management Plan <input type="checkbox"/> Hazardous Waste Large Quantity Generator Plan <input type="checkbox"/> Stormwater Pollution Prevention Plan <input type="checkbox"/> Evacuation Plan <input type="checkbox"/>	Onsite HAZMAT Team Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Eyewash stations <input checked="" type="checkbox"/> Water showers <input type="checkbox"/> Arrangements in place with third party emergency response or spill cleanup contractors Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Facility leak detection systems: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Secondary containment present where bulk liquid HAZMAT is stored: <input type="checkbox"/> Facility fire suppression system present: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Hazard Communication (HAZCOM) <input type="checkbox"/> HAZMAT Awareness <input type="checkbox"/> HAZWOPER <input type="checkbox"/> HAZMAT Transportation (DOT) <input type="checkbox"/> HAZMAT Operations <input type="checkbox"/> HAZMAT Technician <input type="checkbox"/>	Facility HAZMAT release exercises conducted: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>



Figure A5-17: Werner Gourmet Meat Snacks Inc. Facility Profile Sheet

<p>Facility Name: Werner Gourmet Meat Snacks, Inc.</p>	<p>Facility Address: 7735 Long Prairie Road Tillamook, OR 97141</p>	<p>Facility Coordinator: Daniel Werner (503) 812-6070 danielw@wernerjerky.com</p>	<p>Responding Fire Dept: Tillamook Fire District</p>	<p>Vulnerable/At-Risk Facilities</p> <ul style="list-style-type: none"> • Trask River High School (SW) • Oregon Youth Authority Camp Tillamook (SW) • Tillamook Youth Correctional Facility (SW)
<div data-bbox="115 511 571 766" style="border: 1px solid black; padding: 5px;"> <ul style="list-style-type: none"> ○ Half-mile radius ● Vulnerable/At-Risk Facility ● EHS Facility </div> <div data-bbox="65 1263 1312 1383" style="border: 1px solid black; padding: 5px;"> <ul style="list-style-type: none"> • This facility stores 10,000 pounds of lead/acid batteries onsite • Sulfuric acid contained inside batteries is not listed in the ALOHA library; this acid has a low volatility • Sulfuric acid is highly corrosive to the skin and eyes if released </div>				



Plans/procedures summary*: This organization has an Emergency Action Plan although specific details were not provided. The evacuation plan directs employees to assemble at the front gate. This organization does not have a Shelter-in-Place plan that addresses sheltering in the event of a HAZMAT incident.

Organization summary*: This facility operates two shifts per day, 20 hours a day, six days a week. This organization does not have an onsite HAZMAT response team. Chemicals stored onsite consists of small quantities of various chemicals, cleaning disinfectants and 10,000 pounds of lead/acid batteries. Employees conduct lead/acid battery charging operations in a ventilated area; acid neutralizing kits are not available onsite. Sadie Rider, sadier@wernerjerky.com, (503) 812-0050 is listed as alternate Emergency Coordinator for this organization. First responders cannot access the facility after hours and will need to contact the Emergency Coordinator.

Equipment/resources summary*: This facility does not have any automated leak detection systems or portable HAZMAT detection equipment. There is not a fire suppression system in place.

Training/exercise summary*: Employees do not receive any HAZMAT training or conduct HAZMAT exercises.

*Information obtained from the Werner Gourmet Meat Snacks facility located at 2807 3rd Street; informational details may not accurately reflect procedures at this Werner Meats facility location (organization did not submit a separate questionnaire for this facility).

<u>Plans*</u>	<u>Organization*</u>	<u>Equipment*</u>	<u>Training*</u>	<u>Exercises*</u>
HAZMAT ERP <input type="checkbox"/> Emergency Action Plan (EAP) <input checked="" type="checkbox"/> SPCC Plan <input type="checkbox"/> Risk Management Plan <input type="checkbox"/> Hazardous Waste Large Quantity Generator Plan <input type="checkbox"/> Stormwater Pollution Prevention Plan <input type="checkbox"/> Evacuation Plan <input type="checkbox"/>	Onsite HAZMAT Team Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Eyewash stations <input checked="" type="checkbox"/> Water showers <input type="checkbox"/> Arrangements in place with third party emergency response or spill cleanup contractors Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Facility leak detection systems: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Secondary containment present where bulk liquid HAZMAT is stored: <input type="checkbox"/> Facility fire suppression system present: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Hazard Communication (HAZCOM) <input type="checkbox"/> HAZMAT Awareness <input type="checkbox"/> HAZWOPER <input type="checkbox"/> HAZMAT Transportation (DOT) <input type="checkbox"/> HAZMAT Operations <input type="checkbox"/> HAZMAT Technician <input type="checkbox"/>	Facility HAZMAT release exercises conducted: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>