CHAPTER 20.
NORTH BEACH SCHOOL DISTRICT 2024 ANNEX TO GRAYS HARBOR COUNTY HAZARD MITIGATION PLAN

20.1 INTRODUCTION

This Hazard Mitigation Plan Annex details the hazard mitigation planning elements specific to the North Beach School district, a participating special purpose district to the Grays Harbor County Multi-Jurisdiction Hazard Mitigation Plan. This Annex represents the District's first edition of a Hazard Mitigation Plan. This Annex is not intended to be a standalone document, but rather appends to and supplements the information contained in the Grays Harbor County Hazard Mitigation Plan document. As such, all sections of the base plan, including the goals and objectives, definition of critical facilities, planning process, prioritization of mitigation action items, plan maintenance section, and other procedural requirements apply to and were met by the North Beach School District. For planning purposes, this Annex provides additional information specific to the District, with a focus on providing greater details on the risk assessment and mitigation strategy for this entity. The annex also provides additional information with respect to public outreach efforts conducted to comply with FEMA requirements as the District joined the planning process when the County's plan was nearing completion. With the timely completion of this Annex, the District will also now be in a position to better conduct regular updates in accordance with the County's Plan Maintenance Section, which is on a five-year cycle. Doing so will reduce the cost and level of effort on the part of the District as they will be able to join the update cycle at the onset.

20.2 HAZARD MITIGATION PLANNING PROCESS, MEETINGS, AND POINTS OF CONTACT

The North Beach School District followed the planning process detailed in Section 2 of the Base Plan. The District applied for and received a separate FEMA grant to develop its Hazard Mitigation Plan. Due to the timeline associated with contracting and receipt of the funds, the District could not complete its annex in time for the first submission of the Grays Harbor County Multi-Jurisdiction Hazard Mitigation Plan. As such, additional planning meetings were held by the District to continue to move the process forward.

In addition to providing information to the County's Planning Team, the District also formulated their own internal planning team to support the broader planning process. Meetings were held during the process as needed to capture relevant information and data. Those individuals assisting in this Annex development are identified in Table 20-1 below, along with a brief description of how each party participated.

TABLE 20-1
PLANNING TEAM MEMBERS

Name	Position/Title	Planning Tasks
Shelese McConnell	Business Manager, Primary Point of Contact	Served as primary POC for effort; developed grant document to obtain funding to develop plan; attended meetings; developed information for plan; assist in coordination for date capture; distributed information concerning plan development, outreach and granting information; conducted plan reviewed.
Jim Shank, PhD	North Beach School District Superintendent	Assisted in identifying hazards of concern for District; provided general information on various sections of the plan; assisted with hazard ranking and presentation of risk; completed draft plan review; provided briefings to School Board; presented plan for School Board adoption.
Patrice Timpson	School District Administration	Assisted in identifying hazards of concern for District; provided facilities and insurance data to establish potential values at risk/vulnerability; assisted with hazard ranking and review of hazards as ranked; assisted with distribution of information for public outreach efforts; conducted plan review.
Stan Sturgeon, CBO	Maintenance Supervisor	Assisted in identifying hazards of concern for District; provided historic impact information; conducted outreach during various meetings and identified strategies. Conducted review of the risk assessment data and draft plan.
Hannah Cleverly	Grays Harbor County Deputy	Assisted with public outreach

TABLE 20-1
PLANNING TEAM MEMBERS

Name	Position/Title	Planning Tasks
	Emergency Manager	throughout the process; provided information on planning process; and provided grant information. Discussed plan during regularly scheduled radio talk show.
Nick Faley	Grays Harbor County HMP Project Manager	Served on overall planning team for Countywide effort; assisted in capturing relevant risk associated with the various hazards of concern; conducted public outreach efforts throughout the process.
Beverly O'Dea	North Beach School District Consultant	Led the County's overall planning effort for the HMP; worked with all planning partners to develop necessary information; worked with NBSD to complete Jurisdictional Annex for submission to FEMA.

20.3 PUBLIC OUTREACH

The planning process requires two separate times during which the public must be engaged in the planning process. The first is on the completion of the risk assessment to provide the citizens an opportunity to review and comment on the risk findings. The second public outreach requirement is on completion of the draft plan, prior to submission to the State and FEMA for review.

For this Annex development process, public outreach efforts closely mirrored those of Grays Harbor County, and included:

- Various distribution lists which were utilized to announce the onset of the project, including a press release and information that was distributed and posted on the District's website (see Figure 20-1). The website allowed for the citizens to identify and capture relevant planning information, including hazard and impact data;

- Internal planning team meetings allowed the team to complete the various phases of development, including identification of facility data and the hazards of concern; review and completion of the capabilities assessment, and to identify potential strategies for this edition;

- Community meetings were utilized for information exchange, including to illustrate data on the risks and hazards of concern; provide an overview of the planning process, and provide an opportunity for community members to review the draft plan and provide comments to the planning team. Hard copies of the risk data and the draft plan were made available at the School Board meetings. The draft plan was made available for 14 days commencing on April 16, 2024, with its availability announced at the April 16th School Board meeting;

- School Board Meetings were also utilized to present information on the HMP process, hazards of concern and associated risk, announce availability of the draft annex for review, and adoption of the Grays Harbor County Multi-Jurisdictional Hazard Mitigation Plan once the District's annex was completed.

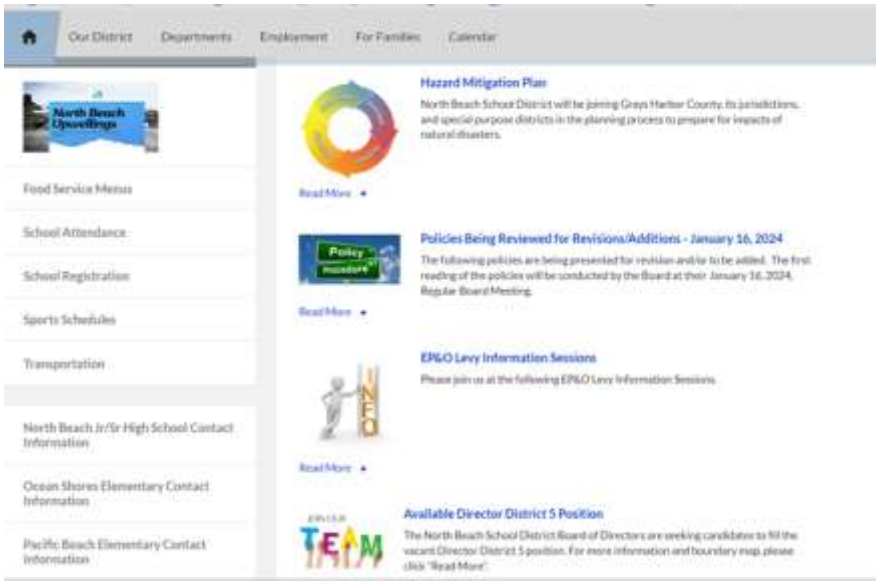


Figure 20-1 North Beach School District Website for Hazard Mitigation Plan Annex Development

20.3.1 Presentation of Risk

Availability of risk data was presented during the School Board Meeting on March 19, 2024, which included handouts of the hazard maps and hazard ranking tables and information. Maps and impact data were also posted on the District's website. Hard copies in the form of map packets which included a synopsis of hazard impact data were made available in the District's Administration Building for review and comments by anyone entering the facility. Contact information for anyone wishing to provide comments on the maps and risk assessment was also identified in conjunction

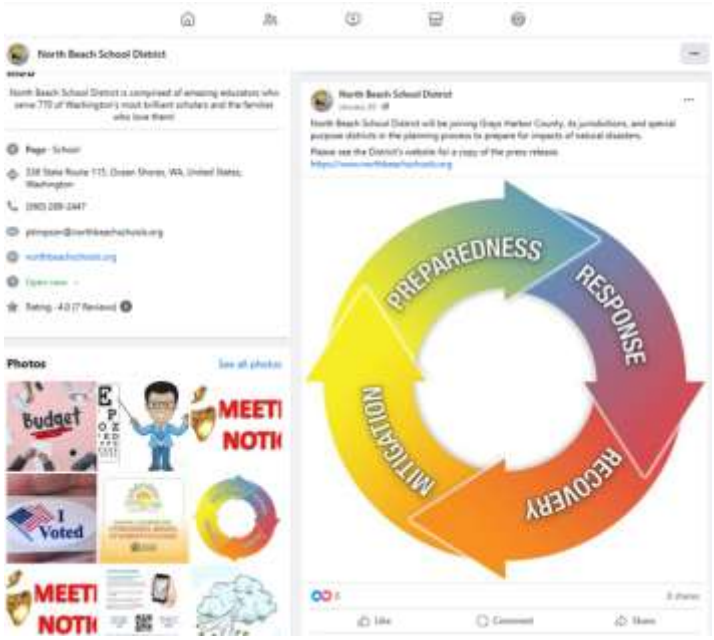


Figure 20-2 Facebook Posting

with the maps, including at the physical location in the Administration Building, as well as via the website and other social media. Notice was received by over 1,500 people.

20.3.2 Draft Plan Review and Adoption

Once the draft Annex was completed and available for review, notice of completion of the plan was posted via the District's website, announced at School Board Meetings, and included email distribution to district employees and faculty, students, parents, and the general public. Social media was also again utilized to distribute information as well (see Figure 20-2 as a sample). A copy of the draft plan was also made available for review in the Administration Building, as well as available on the District's website. The plan was made available for review and comment beginning April 16, 2024 through May 3, 2024. No comments were received.

Grays Harbor Emergency Management also utilized their weekly radio broadcasts to distribute information on the overall planning process throughout the plan development, including the development of the North Shore School District's Annex to the Grays Harbor HMP utilizing the linkage procedure identified in Volume 2 of the County's plan.

The draft plan was distributed to all School Board Members who reviewed the draft plan prior to its submission for review to the State of Washington Emergency Management Division and FEMA. The District adopted the plan once Approval Pending Adoption was issued, with a copy of the Resolution inserted in the County's Volume 2, with all other adoption resolutions.

20.4 DISTRICT PROFILE

Table 20-2 identifies the District's structural assets. Various maps at the end of this document illustrate District boundaries and the location of the structures owned by the District. Primary sources of data to develop the maps are identified within the map legend but include Washington State Departments of Natural Resources and Ecology, Office of Superintendent of Public Instruction, and Washington State Emergency Management Division, among others. FEMA flood map data was also utilized for the flood hazard. In addition, various annual reports and websites were utilized to capture data as needed. Structure data was provided by the Office of Superintendent of Public Instruction, through the ICOS system. That data was enhanced appropriately to support the risk assessment element of the planning process. The District had also previously had studies conducted for site analysis and seismic upgrades for existing structures. That information was utilized by the District in making its determination to seek other sites for development, as indicated.

The following is a summary of key information about the North Beach School District:

- **Governing Authority—** The district is governed by School Board
- **Population Served—**The North Beach School District serves approximately 700 students in grades K-12 annually. The service area includes the North Beach School District located in Grays Harbor County, Washington. Over the course of the last several years, the school attendee population has remained fairly consistent, as the area has not experienced a large growth in population or new construction.
- **Land Area Owned—**45 acres

- **Total Value Vehicles -**The total value of vehicles owned by the district is ~$1.51 million
- **Total Value of Equipment (Miscellaneous) –** The total value of miscellaneous equipment owned and operated by the North Beach School District is $105,646.
- **Current and Anticipated Service Trends—** Service Trends in the area are anticipated to grow as new residential structures (non-rentals) begin to climb within the District's boundaries. Ocean Shores has seen significant development over the last few years since the end of COVID. It is anticipated that as development continues, service trends for the district will also increase. This would increase the number of students within the schools. The District feels it is prepared to handle those increases, but depending on the number, would require additional staffing, and potentially new structures to allow for the increased population.
- **Land Use and Development Trends –** The District is currently in the process of working with OSPI to identify a new location for the Pacific Beach Elementary School. Initially, the District sought to complete an upgrade on the structure, but due to its age (built in 1956), a seismic upgrade was too cost prohibitive. As such, a new school building will be constructed, and the old structure decommissioned. The District is in the initial phases of identifying available land in the area large enough to construct all necessary elements of the Elementary School, with continued growth in mind.

TABLE 20-2
NORTH BEACH SCHOOL DISTRICT STRUCTURAL ASSETS

Name	Structure	Content	Total
North Beach Junior/Senior School	$22,733,850.00	$1,870,000.00	$24,603,850.00
North Beach Admin/ Maintenance/Bus	$3,092,379.00	$175,613.00	$3,267,992.00
Ocean Shores Elementary	$15,395,635.00	$687,500.00	$16,083,135.00
Pacific Beach Elementary	$8,327,045.00	$324,500.00	$8,651,545.00
Total	**$49,548,909.00**	**$3,057,613.00**	**$52,606,522.00**

20.5 HAZARD EVENT HISTORY

Within the Grays Harbor County Base Plan, the Planning Team identified all hazard events which have occurred within the County. The District's internal Planning Team reviewed that list at the onset of the process. In the context of the planning region, it was determined that there are no additional hazards that are unique to the special purpose district. Table 20-3 lists all past occurrences which have been declared countywide, including the District. The District has no dollar-loss data specific to impact from previous disaster incidents.

TABLE 20-3
GRAYS HARBOR COUNTY DISASTER HISTORY 1953-2022

Disaster Number	Declaration Date	Incident Type	Title	Incident Begin Date	Incident End Date
4650	3/29/22	Flood	Severe Winter Storms, Snowstorms, Straight-Line Winds, Flooding (Incident resulted in two deaths in the County.)	12/26/2021	2/15/2022
4593	4/8/2021	Severe Storm	Severe Winter Storm, Straight-Line Winds, Flooding, Landslides, And Mudslides	12/29/2020	1/16/2021
4539	4/23/20	Flood	Severe Storms, Flooding, Landslides, And Mudslides	1/20/2020	2/10/2020
4481	3/22/20	COVID	Biological	1/20/2020	5/11/2023
4418	3/4/2019	Severe Storms	Severe Winter Storms, Straight-Line Winds, Flooding, Landslides, Mudslides, Tornado	12/20/2018	12/24/2018
4253	2/2/2016	Flood	Severe Winter Storm, Straight-Line Winds, Flooding, Landslides, Mudslides	12/1/2015	12/14/2015
4242	10/15/2015	Severe Storm(s)	Severe Windstorm	8/29/2015	8/29/2015
4056	3/5/2012	Severe Storm(s)	Severe Winter Storm, Flooding, Landslides, and Mudslides	1/14/2012	1/23/2012
1825	3/2/2009	Severe Storm(s)	Severe Winter Storm, Record and Near Record Snow	12/12/2008	1/5/2009
1817	1/30/2009	Flood	Severe Winter Storm, Landslides, Mudslides, and Flooding	1/6/2009	1/16/2009
1734	12/8/2007	Severe Storm(s)	Severe Storms, Flooding, Landslides, and Mudslides	12/1/2007	12/17/2007
1682	2/14/2007	Severe Storm(s)	Severe Winter Storm, Landslides, and Mudslides	12/14/2006	12/15/2006
1671	12/12/2006	Severe Storm(s)	Severe Storms, Flooding, Landslides, and Mudslides	11/2/2006	11/11/2006
1641	5/17/2006	Severe Storm(s)	Severe Storms, Flooding, Tidal Surge, Landslides, and Mudslides	1/27/2006	2/4/2006
1499	11/7/2003	Severe Storm(s)	Severe Storms and Flooding	10/15/2003	10/23/2003
1361	3/1/2001	Earthquake	Earthquake	2/28/2001	3/16/2001
1172	4/2/1997	Flood	Heavy Rains, Snow Melt, Flooding, Land and Mudslides	3/18/1997	3/28/1997
1159	1/17/1997	Severe Storm(s)	Severe Winter Storms, Land and Mudslides, Flooding	12/26/1996	2/10/1997
1100	2/9/1996	Flood	High Winds, Severe Storms, Flooding	1/26/1996	2/23/1996

TABLE 20-3
GRAYS HARBOR COUNTY DISASTER HISTORY 1953-2022

Disaster Number	Declaration Date	Incident Type	Title	Incident Begin Date	Incident End Date
1079	1/3/1996	Severe Storm(s)	Severe Storms, High Wind, and Flooding	11/7/1995	12/18/1995
1037	8/2/1994	Fishing Losses	The El Nino (Salmon Industry)	5/1/1994	10/31/1994
883	11/26/1990	Flood	Severe Storms, Flooding	11/9/1990	12/20/1990
852	1/18/1990	Flood	Severe Storms, Flooding	1/6/1990	1/14/1990
623	5/21/1980	Volcano	Volcanic Eruption, Mt. St. Helens	5/21/1980	5/21/1980
612	12/31/1979	Flood	Storms, High Tides, Mudslides, Flooding	12/31/1979	12/31/1979
545	12/10/1977	Flood	Severe Storms, Mudslides, Flooding	12/10/1977	12/10/1977
492	12/13/1975	Flood	Severe Storms and Flooding	12/13/1975	12/13/1975
322	2/1/1972	Flood	Severe Storms and Flooding	2/1/1972	2/1/1972
300	2/9/1971	Flood	Heavy Rains, Melting Snow, Flooding	2/9/1971	2/9/1971
185	12/29/1964	Flood	Heavy Rains and Flooding	12/29/1964	12/29/1964
EMERGENCY DECLARATIONS					
3227	9/7/2005	Coastal Storm	Hurricane Katrina Evacuation	8/29/2005	10/1/2005
SIGNIFICANT LOCAL INCIDENTS					
NA	NA	Landslides/Floods	Heavy Rains and Landslides (Countywide)	1/4/2015	1/5/2017

20.6 CAPABILITY ASSESSMENT

Coordination with other community planning efforts is paramount to the successful implementation of this plan. This section provides information on how planning mechanisms, policies, and programs are integrated into other on-going efforts. It also identifies the District's capabilities with respect to preparing and planning for, responding to, recovering from, and mitigating the impacts of hazard events and incidents.

Capabilities include the programs, policies and plans currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. This capabilities assessment is divided into the following sections: regulatory capabilities which influence mitigation; administrative and technical capabilities, including education and outreach, which will include data from this risk assessment and other on-going mitigation efforts; fiscal capabilities which support mitigation efforts, and classifications under various community programs. Information from this plan will also be used to support future grant funding opportunities, such as, for example, the relocation of the Pacific Beach Elementary School, which is identified in the District's Capital Facilities and Improvement Plan.

20.6.1 Regulatory Capability

The District has adopted/enacted codes, resolutions, policies, and plans that complement and support hazard mitigation planning and activities. The following existing District codes, resolutions, policies, and plans are applicable to this hazard mitigation plan:

School District Capabilities:

- North Beach School District Safety Plans
- North Beach School District Emergency Response Plans (various for hazards) (2024)
- North Beach School District Capital Facilities and Improvement Plan – Identifies capital improvements projects and funding mechanism.
- All Federal, State, and local regulations and ordinances that apply to North Beach School District
- North Beach Asset Management Plan – Indicates the useful life schedule of the District's infrastructure and equipment (part of ICOS study and in various bond measures in recent years).
- Washington State Building Codes applied for all construction/remodel.
- Preparedness Response Participation– The District participates in warning, alert and response organizations that collaborate with local and regional governments to share information that protects critical infrastructure.
- Earthquake, Tsunami, Evacuation Drills – all buildings are tested monthly
- Strategic Plan (in progress)

20.6.2 Administrative and Technical Capabilities

The assessment of the district's administrative and technical capabilities, including educational and outreach efforts, and on-going programmatic efforts are presented in Table 20-4. These are elements which support not only mitigation, but all phases of emergency management already in place that are used to implement mitigation activities and communicate hazard-related information.

TABLE 20-4
ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Professionals trained in building or infrastructure construction practices.	Yes	Maintenance Supervisor
Planners or engineers with an understanding of natural hazards.	Yes	Contracted Services as needed
Emergency Manager.	Yes	The District relies, in part, on the County DEM to provide this service for us, although we do have facilities personnel trained in response activities, as are many of the teachers and administrators.
Warning Systems/Services	Yes	The District utilizes various tools to disseminate information to students, including text messages, public broadcast announcements, social media, and a PA system.

TABLE 20-4 ADMINISTRATIVE AND TECHNICAL CAPABILITY		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Hazard data and information available to public.	Yes	Through Hazard Mitigation Plan
Specific equipment response plans.	Yes	Hazmat Fueling Station
Specific operational plans.	Yes	Various types related to equipment, as well as operational plans for hazard events.
Education and Outreach		
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness).	Yes	The District provides information as it becomes available throughout the school year. The District also works with the County Emergency Management Department to assist in providing this service.
Natural disaster or safety related school programs.	Yes	The District has regular drills for the various hazards which impact the schools. The District is also actively engaged with OSPI, and others seeking grants and funding opportunities to upgrade or rebuild schools that are aged or in hazard areas.
Multi-seasonal public awareness program.	Yes	During inclement weather, the District provides materials to its students and parents, as well as posting information on its website.
On-Going Mitigation Efforts		
Hazardous Vegetation Abatement Program	Yes	The District maintains its grounds to ensure defensible space exists, and that noxious weeds are controlled.
Defensible space inspections program	Yes	Whenever the Fire District offers this service, we participate.
Address signage for property addresses or hazardous areas	Yes	All structures are marked to ensure ease of access. The District also maintains a fuel and diesel tank. All areas which contain hazardous materials are identified appropriately, and are secured through locks, fencing, and shut-off valves.

20.6.3 Fiscal Capability

The assessment of the district's fiscal capabilities is presented in Table 20-5. These are the financial tools or resources that could potentially be used to help fund mitigation activities.

TABLE 20-5 FISCAL CAPABILITY	
Financial Resources	Accessible or Eligible to Use?
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Through public vote
Incur Debt through General Obligation Bonds	Yes
State Sponsored Grant Programs (OSPI)	Yes
FEMA BRIC and HMGP Grants	Yes
WA EMD Grants through various programs as available	Yes
Other	

20.7 HAZARD RISK AND VULNERABILITY RANKING

The district's Planning Team reviewed the hazard list identified within the Base Plan and has identified the hazards that affect the North Beach School district. During discussions by the internal planning team members in identifying the potential impact of those hazards, additional factors were also discussed and considered when estimating the potential financial losses caused by hazard-related damages. Such factors include the number of facilities potentially damaged, the extent of damage to each facility, and the length of time required for repairs, etc. The District also reviewed the risk ranking for the City of Ocean Shores, as that is the area in which the District is located. The District noted the additional hazards which were addressed by Ocean Shores, including Erosion and Invasive Species. Neither of those hazards have a direct impact on the District, and as such, the District elected to address the remaining hazards of concern as identified in the Grays Harbor County Base Plan, including secondary impacts from Erosion. Invasive Species was not addressed.

Of paramount importance for the School District is the potential lost time of providing education to the students due to structure damage which prohibits students and faculty from returning to the structures. With the District strictly governed with respect to the number of days/hours it must provide teaching, alternatives were also discussed, such as those utilized during COVID, and a distance learning-type environment in other areas if structures are uninhabitable.

Table 20-6 identifies the Calculated Priority Risk Index (CPRI) scoring. Table 20-7 presents the ranking of the hazards of concern based on their CPRI score. A qualitative vulnerability ranking was then assigned based on a summary of potential impact determined by past occurrences, spatial extent, damage, casualties, and continuity of operations. The assessment is categorized into the following classifications:

- □ Extremely Low – No or very limited impact. The occurrence and potential cost of damage to life and property is very minimal-to-nonexistent. No impact to government functions with no disruption to essential services.

- □ Low (Negligible) – Minimal potential impact. The occurrence and potential cost of damage to life and property is minimal. Government functions are at 90% with limited disruption to essential services.
- □ Medium (Limited) – Moderate potential impact. This ranking carries a moderate threat level to the general population and /or built environment. The potential damage is more isolated, and less costly than a more widespread disaster. Government functions are at 80% with limited impact to essential services.
- □ High (Critical) – Widespread potential impact. This ranking carries a high threat to the general population and/or built environment. The potential for damage is widespread. Hazards in this category may have occurred in the past. Government functions are at ~50% operations with limited delivery of essential services.
- □ Extremely High (Catastrophic) – Very widespread with catastrophic impact. Government functions are significantly impacted for in excess of one month.

TABLE 20-6
NORTH BEACH SCHOOL DISTRICT 2024 CPRI SCORE AND HAZARD RANKING

Hazards Of Concern	Probability				Magnitude / Severity				Geographic Extent and Location				Warning Time				Duration				CPRI Score	Rank	Vulnerability Rank (H/M/L)
	Unlikely / Low (1)	Possible / Medium (2)	Likely/ High (3)	Highly Likely / Very High (4)	Negligible (1)	Limited (2)	Critical (3)	Catastrophic (4)	Negligible (1)	Limited (2)	Significant (3)	Extensive (4)	< 6 hours (4)	6 - 12 hours (3)	12 - 24 hours (2)	> 24 hours (1)	< 6 hours (1)	< 24 hours (2)	< 1 week (3)	> 1 week (4)			
Climate Change				4		2				2						1				4	2.75	4	Medium
Drought		2				2				2						1				4	1.95	8	Low
Earthquake				4				4				4	4				1				3.85	1	High
Erosion				4		2			1							1				4	2.55	5	Medium
Flood			3			2				2						1		2			2.25	6	Medium
Landslides			3		1				1							1	1				1.80	9	Medium
Severe Weather				4			3					4				1		2			3.25	3	High
Tsunami			3					4				4	4				1				3.45	2	High
Volcano	1				1				1							1				4	1.15	10	Low
Wildfire		2				2				2			4						3		2.35	7	Medium

TABLE 20-7
HAZARD RISK AND VULNERABILITY RANKING

Hazard Rank	Hazard Type	CPRI Score	Vulnerability Rank	Description of Impact
1	Earthquake	3.85	High	Earthquakes for the District are the number one hazard of concern due to the age of the existing structures, the issue of liquefiable soils, and the population exposed within each building. There are currently 700 students registered within the District. The District's properties would have significant shaking associated with a Cascadia (M9.0)-type event (see Figure 20-3). All but one structure is in the moderate to high liquefication zone (see Figure 20-4). One structure is in the C-D soil type (see Figure 20-5). One facility was built in 1956, when limited building codes were in place. That structure was recently assessed for potential seismic retrofitting, but it was determined not feasible due to structural integrity, associated costs, and the fact that it is also exposed to other hazards of concern. The District is currently seeking a new location to replace the structure. Three of the remaining structures were built in 1990-1991 (fuel storage tanks), with the two remaining structures built in 2005 and 2011.
2	Tsunami	3.45	High	The entire coastline of Grays Harbor County is subject to tsunami impact, either from a near or far tsunami. Wave arrival time (based on a Cascadia M9.0 event modeled by WA DNR) is expected to reach the coastline in 20 minutes or less, with wave velocity at greater than 9 knots (see Figure 20-7 and Figure 20-8). Access routes for evacuation will be impacted, increasing the risk and potential for injury or death to students, faculty and parents.
3	Severe Weather	3.25	High	Severe weather could impact all structures and students in the district. Severe winds, storm surge, snow load (although rare), and ice all have the potential to not only directly impact each structure, but also student/faculty safety. The District is equipped to deal with excessive heat/cold and does have plans in place to address the elements commonly associated with severe weather events. The district does not own any permanent generators within its structures but does have two small gas-powered generators which could be used if needed. Flooding, commonly associated with a severe weather event could secondarily impact District structures, particularly if a King-Tide or severe storm surge was associated with the event. All of those severe weather elements could be further impacted/exacerbated by climate change as well. Secondary impacts would include student safety and student transportation. Severe weather is the number two hazard of concern as identified by FEMA.

TABLE 20-7
HAZARD RISK AND VULNERABILITY RANKING

Hazard Rank	Hazard Type	CPRI Score	Vulnerability Rank	Description of Impact
4	Climate Change	2.75	Medium	Climate change will increase temperatures, causing health concerns as well as increase the concern for drought situations, which would increase wildfire danger. Climate change is also causing sea-level rise, as well as increasing the recurrence intervals for severe weather events. In many climates, this would also impact the amount of snowfall, with the area projected to have lower snowfall amounts, again potentially causing a drought situation, etc. in its continued cycle. While climate change does not directly impact structures, the secondary hazards many times associated with climate change do have the potential to further exacerbate other hazards of concern.
5	Erosion	2.55	Medium	While the District's facilities have never been impacted by the continued erosion occurring within Ocean Shores and along the coastline of Grays Harbor County, the issue would be transportation of students, and potentially roadways impacting the ability for commodities coming into the school. While the school does have some surplus of supplies for feeding the students, similar to landslides, depending on roadways impacted, it could take a significant amount of time to get roadways operational again if a significant erosion even occurred.
6	Flood	2.25	Medium	None of the District's facilities are within FEMA's updated flood study for either the 100- or 500-year flood zones. That does not mean that an urban-type flooding cannot occur which would impact the structures, but the planning team members cannot remember District facilities being impacted from previous rain events. In considering this hazard, the planning team members did identify the potential impact to students who do live within the flood zone with respect to transportation along roadways that are flooded. As such, the planning team determined this hazard to be of medium concern.
7	Wildfire	2.35	Medium	Wildfire is a hazard of concern for the District, although more limited in nature. Review of the LandFIRE fire regimes indicates the return interval for most of the District's assets is over 500+ years (see Figure 20-8 and Figure 20-9)). Most of the District's structures do have defensible space surrounding them. The area in general is customarily wetter in nature due to its proximity to the coastline than areas more inland and which are surrounded more directly by densely wooded areas, or areas with higher fuels from logging. Three structures are within an intermix area, being more rural in nature (see Figure 20-9). Consideration by the planning team included potential requirements for evacuation from other areas of the County which are in higher wildfire danger and due to smoke-related issues as the young (and elderly) are more vulnerable to the impacts from smoke.

TABLE 20-7
HAZARD RISK AND VULNERABILITY RANKING

Hazard Rank	Hazard Type	CPRI Score	Vulnerability Rank	Description of Impact
8	Drought	1.95	Low	A drought does not directly impact structures; however, secondary impacts would increase wildfire danger, which is of concern to the district with respect to both facilities potentially impacted, and also the hazard associated with wildfire smoke and its impact on the young and elderly as vulnerable populations.
9	Landslide	1.8	Medium	None of the District's structures are in Washington State Department of Natural Resource's identified landslide hazard zone, nor within 500- or 1,000- feet of a landslide area; however, transportation being impacted would be of concern with respect to staff and students as the landslide can occur in other areas of the District. Impact to roadways from a landslide could also limit commodity flows of supplies needed by the District, both for student feeding, and also fueling of vehicles.
10	Volcano	1.15	Low	Ash could potentially impact the district facilities through intake valves, both for HVAC systems, as well as buses for transporting the children. Ash is also very heavy, so the potential for impact on the roof, if a large amount accumulates, would also be of concern. No specific data exists with respect to impact from the eruption of Mount Saint Helens and the accumulation of ash, but review of Ocean Shores' data also limits its potential risk factor.

20.8 MITIGATION GOALS AND OBJECTIVES

The District adopts the hazard mitigation goals and objectives developed by the Planning Team described in Volume 1.

20.9 HAZARD MITIGATION ACTION PLAN

The Planning Team for the district identified and prioritized a wide range of actions based on the risk assessment, and their knowledge of the district assets and hazards of concern. Table 20-8 lists the action items/strategies that make up the district's hazard mitigation plan. Background information and information on how each action item will be administered, responsible agency/office (including outside the district), potential funding sources, the timeframe, who will benefit from the activity, and the type of initiative associated with each item are also identified.

TABLE 20-8
HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/ Medium/ Low) or $ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
INITIATIVE #1 Seek out grant and other funding opportunities to erect new structures in areas outside of the hazard zones. This effort will entail working with the Office of Superintendent of Public Instruction, FEMA, various state agencies and local government in an effort to determine site suitability, design requirements, and construction standards which will help reduce the impact of the hazards of concern by integrating various programs in support of this effort.									
New and Existing	All	All	Super-intendent's Office	High	General, BRIC, HMGP	Long-Term	No	Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery,	Regional (shelter facilities)
INITIATIVE #2 Continue to work with local communities to conduct various studies to determine direct impact and develop mitigation strategies that help reduce impact. One example is the construction of a vertical evacuation tower in proximity to the school.									
New and Existing	All	All	Facilities, School Board	High	General, BRIC, HMGP, Levy	Long-Term	No	Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery,	Facility, Local and County
INITIATIVE #3 Utilizing information contained in the risk assessment portion of the mitigation plan, work with school administrators, teachers, students, and parents to continue providing information concerning the risk in the area, developing drills for the hazards of concern, as well as developing mitigation efforts which can be taken to help reduce those risks.									
New	All	All	School Board, Teachers, Administrators	Low	General Operating Budget	Short-Term	No	Public Information	Regional
INITIATIVE #4 Seek grant funding to purchase permanent generators for the various school facilities. Doing so will enable some of the facilities to be used as shelter locations for the community if needed.									
New	All	All	Facilities	Medium	BRIC, HMGP, HLS	Short-Term	No	Protection, Recovery	Facility

20.10 PRIORITIZATION OF MITIGATION INITIATIVES

Once the mitigation initiatives were identified, the Planning Team followed the same process outlined within Volume 1 to prioritize their initiatives. An analysis of the six different initiative types for each identified action item was conducted. Table 20-9 identifies the prioritization for each initiative.

TABLE 20-9
MITIGATION STRATEGY PRIORITY SCHEDULE

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Priority[a]
1	9	H	H	Y	Y	N	H
2	9	H	H	Y	Y	N	H
3	9	H	L	Y	Y	Y	H
4	9	H	M	Y	Y	N	M

a. See Chapter 1 for explanation of priorities.

20.11 HAZARD MAPS

The following maps reflect the potential hazard impact to which the North Beach School District's structures and land mass are susceptible. These maps are informational only and are not adequate to determine life-safety decisions.

Figure 20-3 North Beach School District Boundaries and Critical Facilities

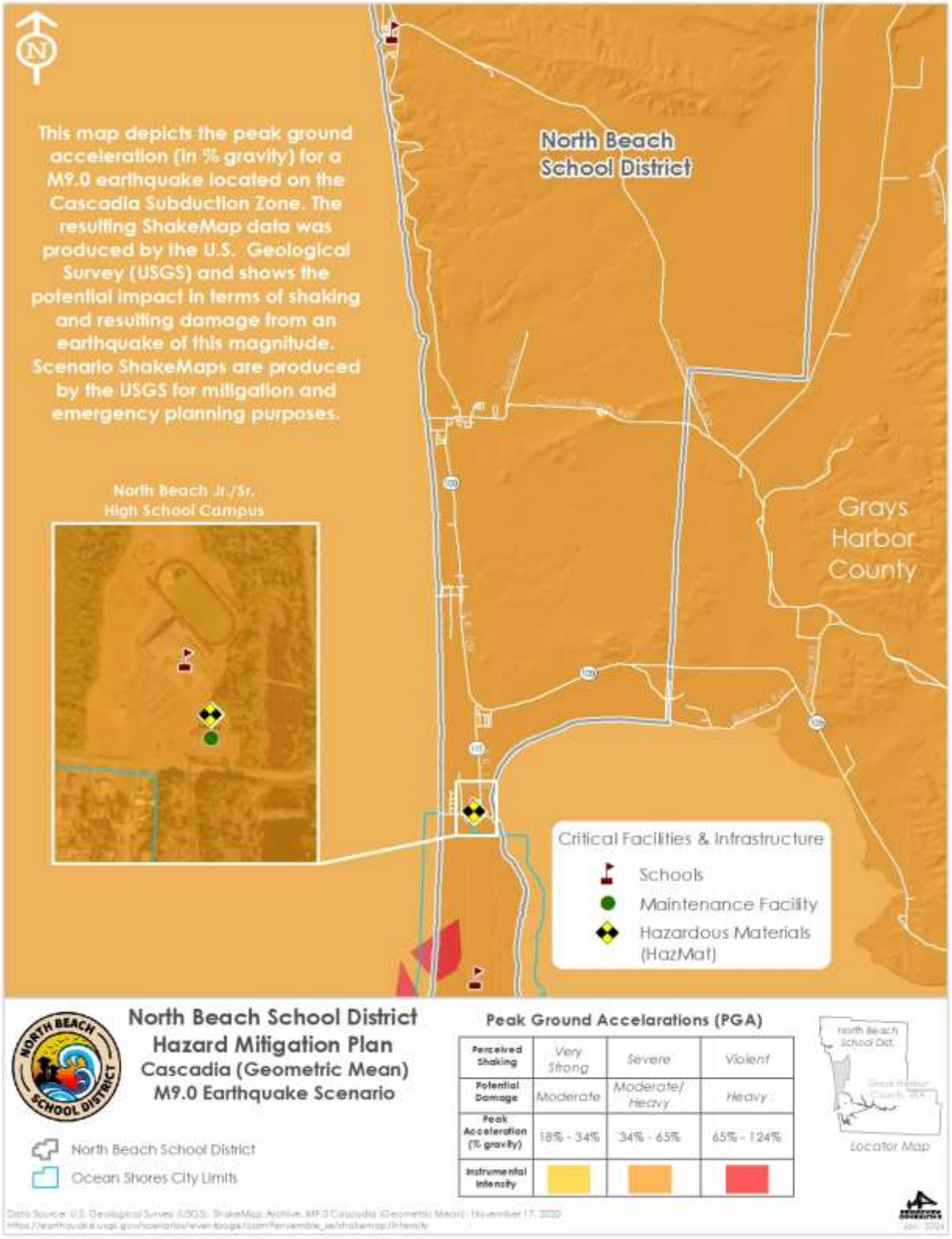


Figure 20-4 Earthquake (Shaking) Impact - Cascadia M9.0 Scenario

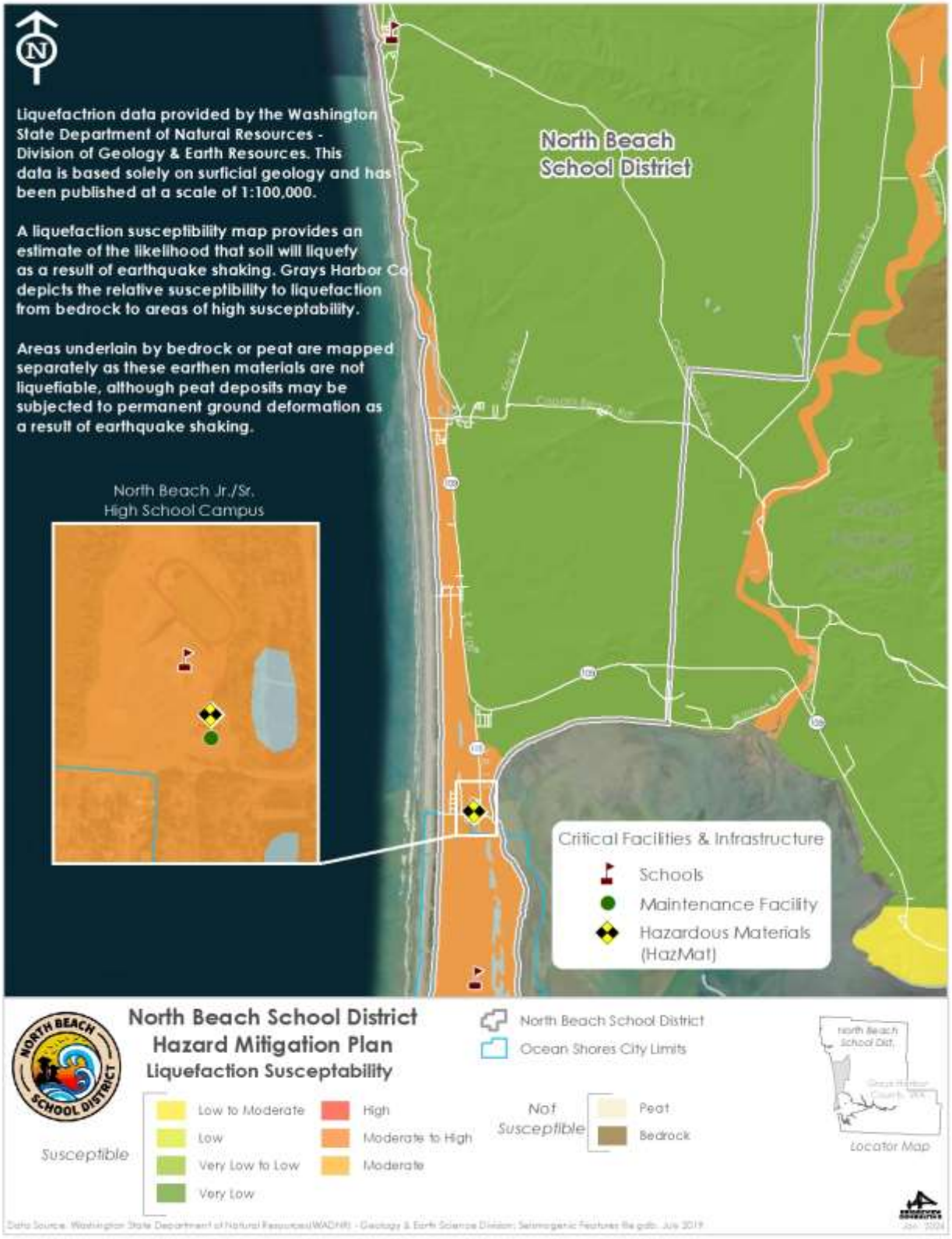


Figure 20-5 Liquefaction Susceptibility

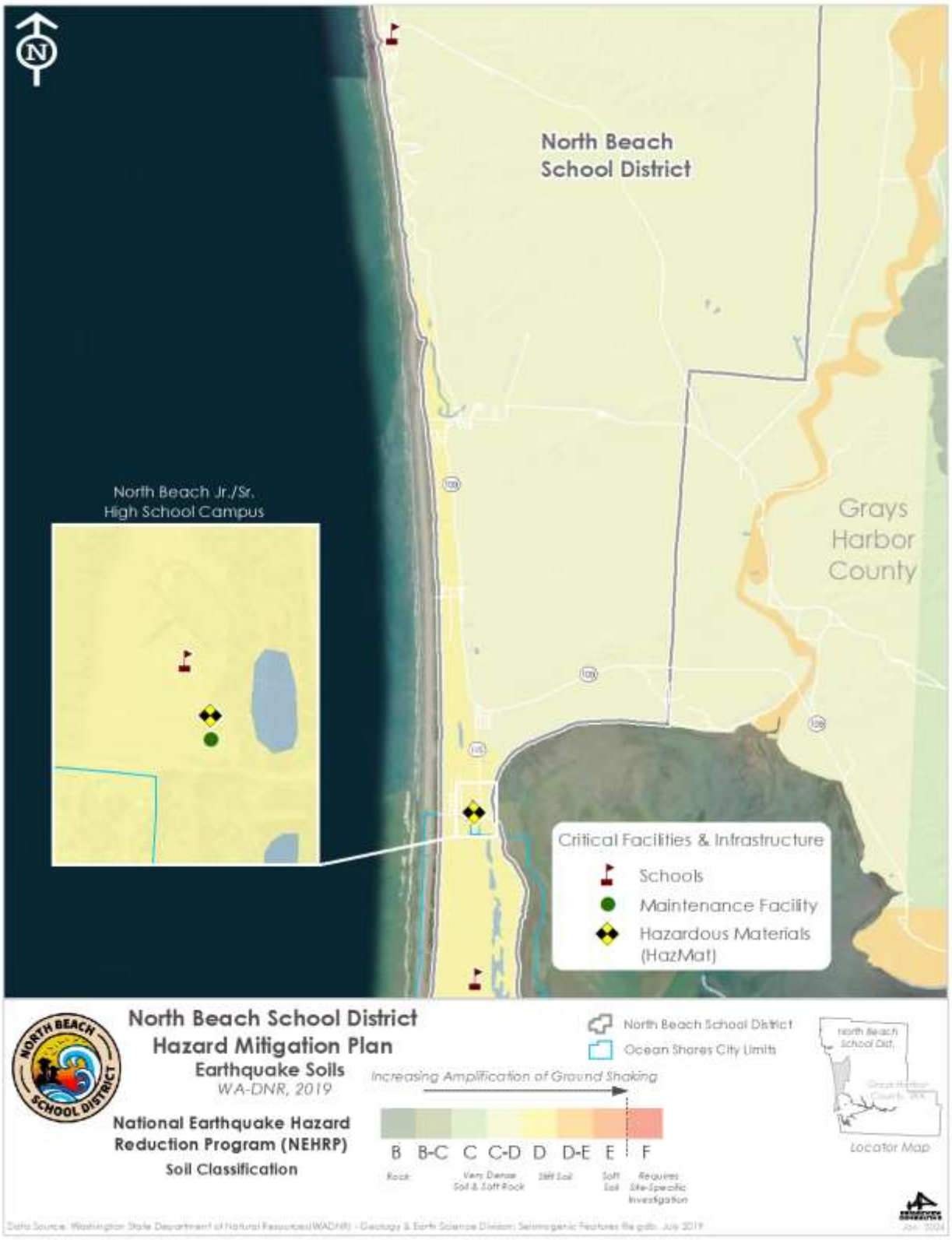


Figure 20-6 Earthquake Soil Classification

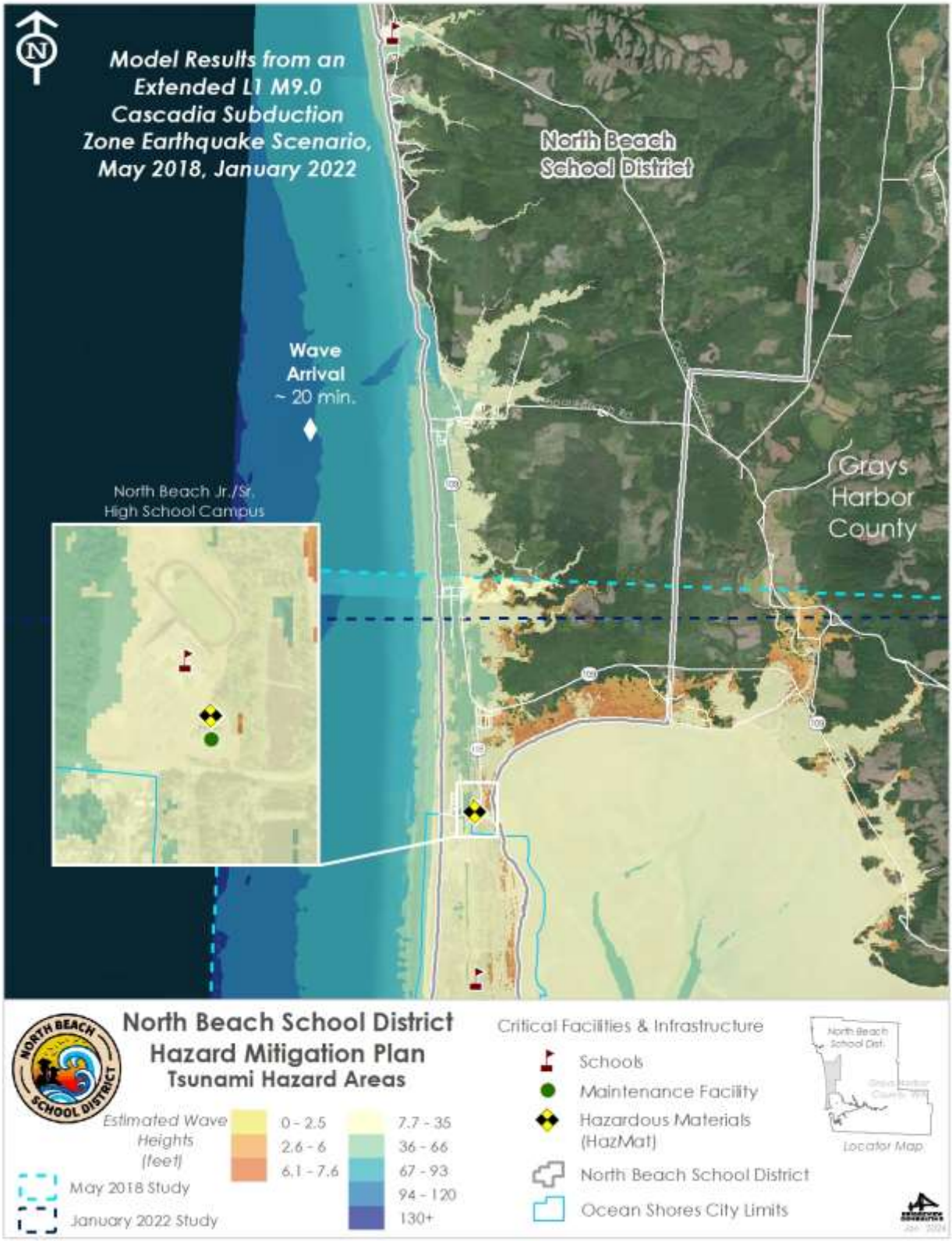


Figure 20-7 Tsunami Hazard Areas - Estimated Wave Heights

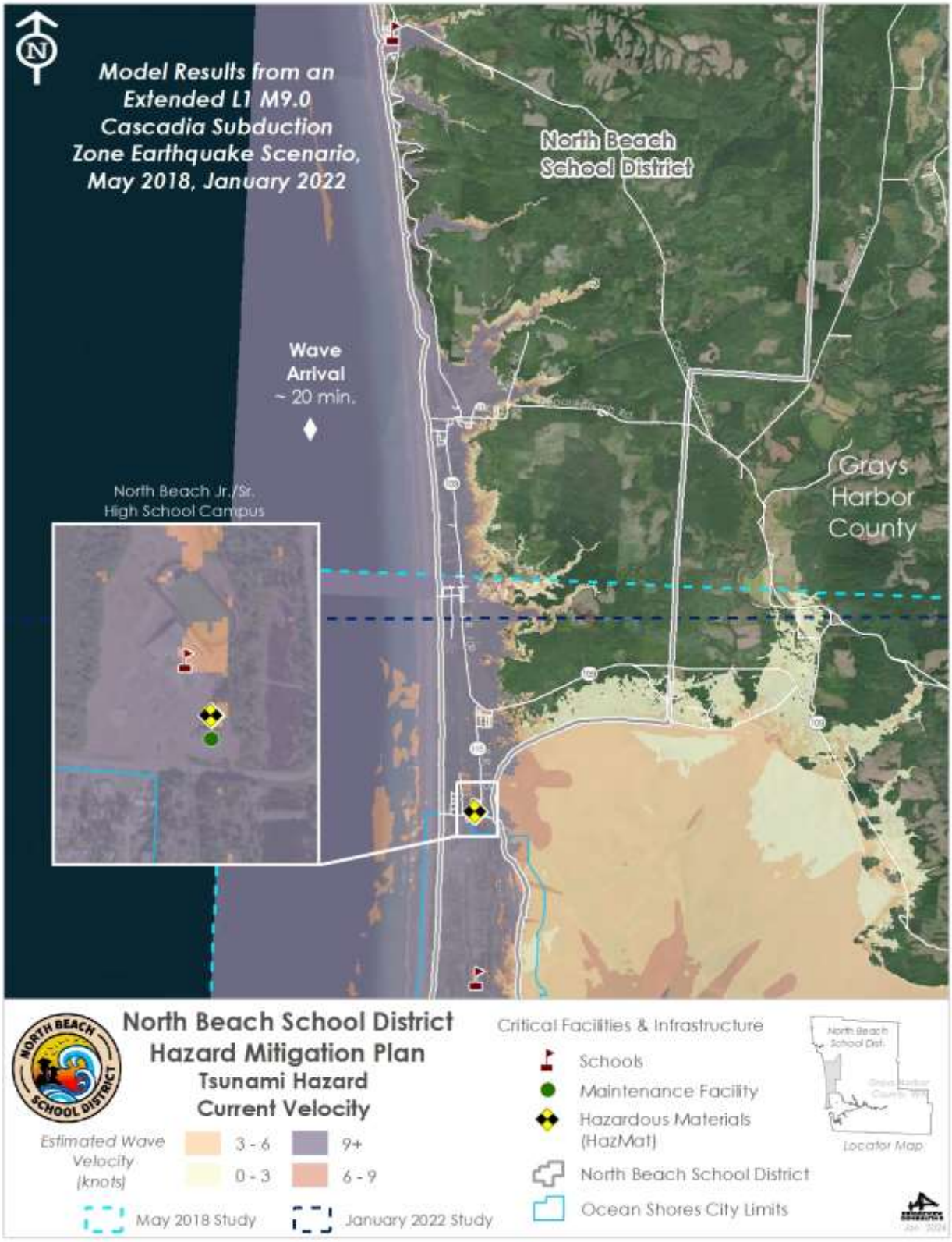
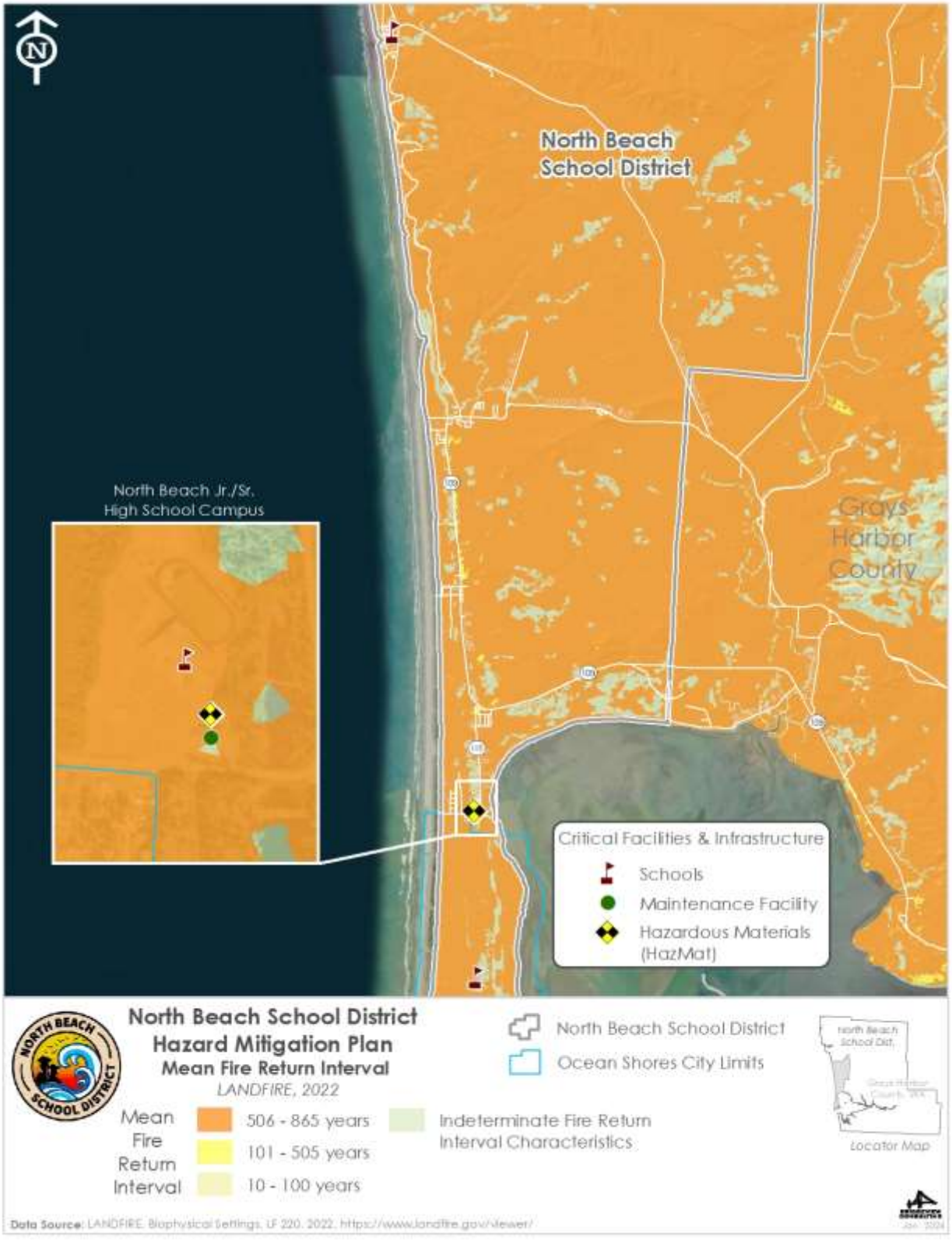


Figure 20-8 Tsunami Hazard Current Velocity in Knots

Figure 20-9 Wildfire Regime Groups


North Beach
School District
North Beach Jr./Sr.
High School Campus
Grays
Harbor
County
Critical Facilities & Infrastructure
Schools
Maintenance Facility
Hazardous Materials
(HazMat)
North Beach School District
Hazard Mitigation Plan
Mean Fire Return Interval
LANDFIRE, 2022
Mean
Fire
Return
Interval
506 - 865 years
101 - 505 years
10 - 100 years
Indeterminate Fire Return
Interval Characteristics
North Beach School District
Ocean Shores City Limits
Locator Map
Data Source: LANDFIRE. Biophysical Settings, LF 220, 2022, https://www.landfire.gov/viewer/

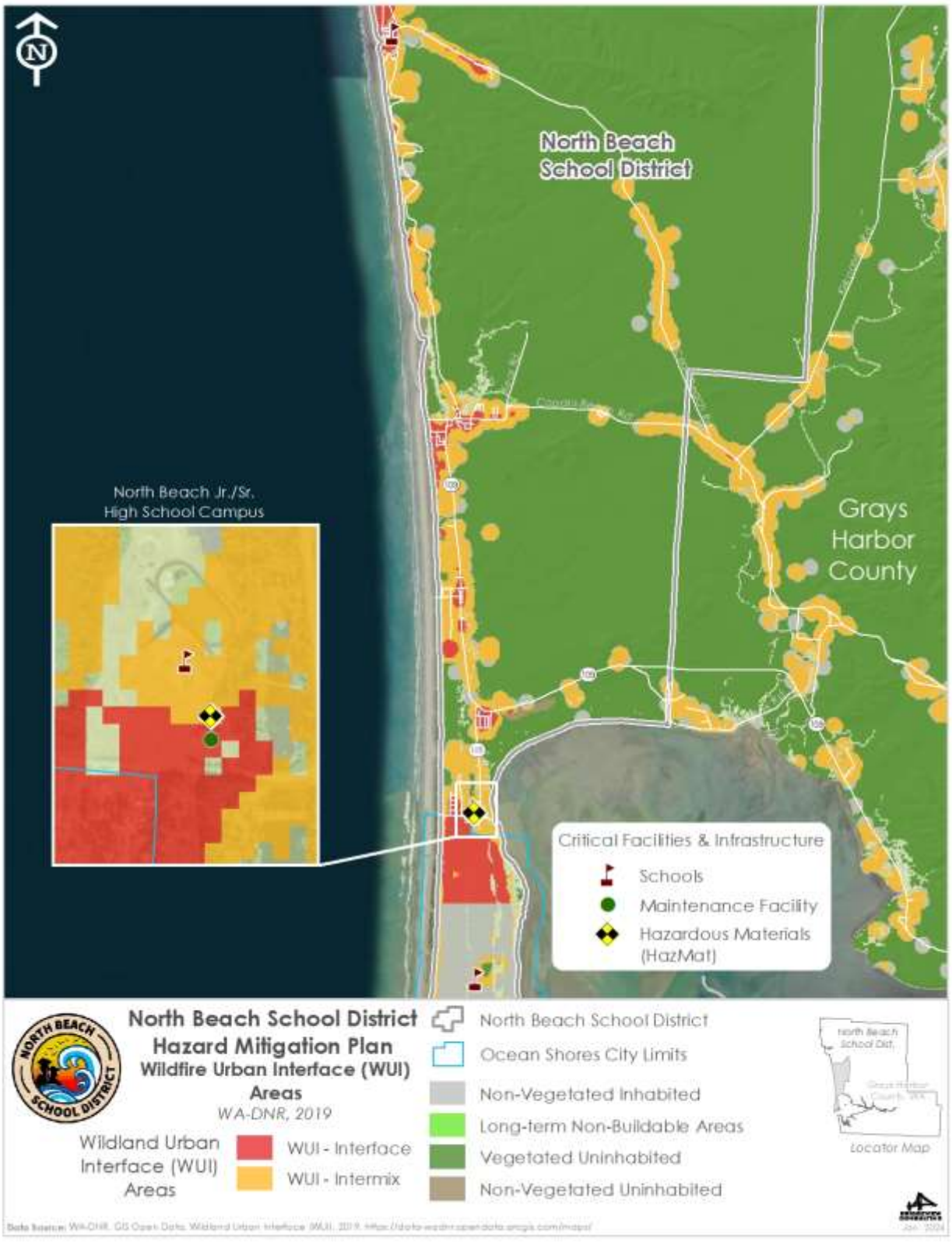


Figure 20-10 Wildfire Urban Interface Zones