

## Wildfire

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## 1 **3.12 WILDFIRE**

### 2 **3.12.1 INTRODUCTION**

3 Naval Weapons Systems Training Facility (NWSTF) Boardman has an extensive history with wildfires,  
4 though most documentation is from the last 10 years. Historically, the area was comprised of fire  
5 adapted habitats with fire return intervals from around 20 to 50 years. With the widespread  
6 introduction of invasive plant species and non-native annual grasses, the fuel loading of understory  
7 vegetation (how much fuel is available to burn) has greatly changed and fires now tend to be more  
8 frequent, more severe, and can be long-term and/or permanent habitat altering events.

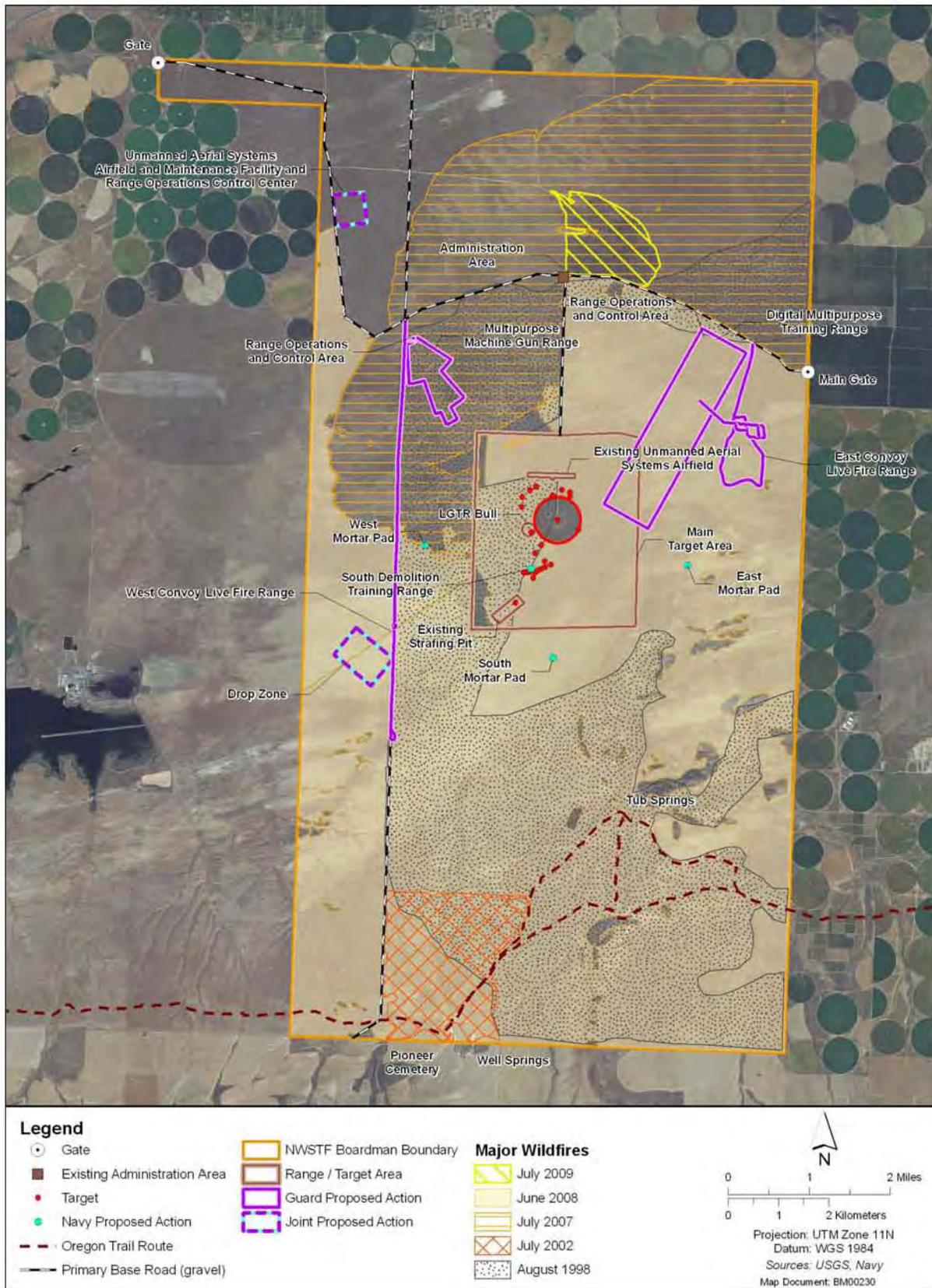
9 There are three possible ways that NWSTF Boardman can experience uncontrolled fires: (1) fires  
10 originating on the installation from operational activities, (2) fires originating from lightning strikes, and  
11 (3) fires originating off installation from any source and migrating into the perimeter of the installation.  
12 Since 1998, more than 85 percent of NWSTF Boardman has been burned by wildfires, which have caused  
13 short- and long-term habitat alterations. Large fires swept portions of the installation in 1998 (17,514  
14 acres [ac.] [7,088 hectares {ha}], 2007 (11,664 ac. [4,720 ha]), and 2008 (30,612 ac. [12,388 ha]), while  
15 smaller areas burned in 2002 (1,639 ac. [663.3 ha]) and 2009 (618 ac. [250.1 ha]). With the exception of  
16 the 2009 fire, all of these fires were started by lightning strikes. The cause of the 2009 fire is unknown  
17 (U.S. Department of the Navy 2010). A training-related fire occurred in 2011, but was quickly  
18 extinguished. The extent of the 1998, 2002, 2007, 2008, and 2009 fires are presented in Figure 3.12-1.  
19 Due to the concerns regarding wildfire, and the frequency of fires in the region, the potential for wildfire  
20 as a result of military activities at NWSTF Boardman is analyzed.

### 21 **3.12.2 AFFECTED ENVIRONMENT**

22 NWSTF Boardman is situated in the lower Columbia Basin, within the Columbia Plateau Ecoregion. The  
23 Columbia Plateau, which occupies about two-thirds of eastern Washington and extends into north  
24 central Oregon, is an arid sagebrush steppe (shrub-steppe) and grassland, surrounded on all sides by  
25 moister, predominantly forested, mountainous ecological regions (Thorson et al. 2003). The region  
26 experiences cool winters and hot summers, and the annual average precipitation is about 12 inches  
27 (30.5 centimeters). The period of vegetation green-up, from late winter into early summer, generally  
28 represents the period of lowest wildland fire risk. The period of highest wildland fire risk occurs during  
29 the months of July, August, and September of each year.

30 Shrub-steppe habitats are open grass-dominated communities and are usually found on loamy, wind-  
31 deposited (loess) soils. In the Columbia Plateau Ecoregion, shrub-steppe communities can be broadly  
32 divided into two elevational types. Within 10 miles (mi.) (16.1 kilometers [km]) of the Columbia River,  
33 sandy shrub-steppe communities occur on unstable, well-drained soils. These include grasslands  
34 dominated by needle-and-thread; shrub-steppe habitats dominated by bitterbrush and needle-and-  
35 thread grass or Indian rice grass; and sand dune communities characterized by sagebrush, bitterbrush,  
36 and western juniper. There is usually a component of bare ground or open sand present. Farther from  
37 the Columbia River, big sagebrush steppe communities include basin big sagebrush/needle-and-thread  
38 grass; basin wildrye and bluebunch wheatgrass steppe; and Wyoming sagebrush/bluebunch wheatgrass,  
39 which formerly occupied the low-elevation, loess uplands in the Columbia Plateau (Oregon Department  
40 of Fish and Wildlife [ODFW] 2006).

41 Fire intervals in juniper-steppe range from 32 to 70 years and sagebrush-steppe range from 10 to 40  
42 years (Leenhouts 1998). At the Hanford National Monument located 60 mi. (96.6 km) north of NWSTF  
43 Boardman, the fire return interval for the shrub-steppe environment before human disturbances was 32



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Figure 3.12-1: Extent of Major Wildfires at NWSTF Boardman

1 to 70 years (U.S. Fish and Wildlife Service 2008). A specific fire return interval for NWSTF Boardman  
2 before or after manmade disturbance is not known, although due to changes in vegetation over time  
3 from perennial to annual vegetation, it is inferred that the interval has decreased dramatically. In a  
4 pristine landscape, native bunchgrass vegetation maintains a patchy distribution across the landscape,  
5 allowing most fires to naturally extinguish themselves due to a lack of closely spaced fuel. Cheatgrass, a  
6 non-native annual, grows in the interstices of the bunchgrass, providing closely spaced fuel needed to  
7 maintain and spread fire. The result is that when fires occur, they spread more readily through  
8 cheatgrass and the fires can burn the same areas more frequently. Native bunchgrasses do not  
9 recolonize burned areas as quickly as cheatgrass and are outcompeted for space and soil moisture  
10 resources following a fire. Cheatgrass-dominated landscapes become susceptible to fires about two  
11 weeks earlier and remain susceptible about two months longer than native bunchgrass communities,  
12 and fires tend to occur more frequently and burn with greater intensity (Billings 1992, Knick 1999). In  
13 addition, sagebrush and antelope bitterbrush are highly susceptible to fire kill and rabbitbrush is  
14 susceptible to top kill. With the introduction of cheat grass to these shrub environments and a  
15 decreased fire return interval (less time in between fires), a shift from shrubland to grassland occurs.  
16 Changes to native vegetation on the facility are often a result of burn patterns by wildfires (U.S.  
17 Department of the Navy 2010), which in turn result in wildlife habitat changes on NWSTF Boardman.

18 A wildland-urban interface is a zone where man-made improvements intermix with wildland fuels.  
19 Morrow County, in its *Community Wildfire Protection Plan*, identified all of NWSTF Boardman as being  
20 within the County's wildland-urban interface zone. The rationale for this decision is due to the value  
21 placed on the rural-urban development of the city of Boardman and on the agricultural developments,  
22 including structures, irrigation systems, and crops in the vicinity of NWSTF Boardman. The city of  
23 Boardman is located approximately 2 mi. (3.2 km) north of the NWSTF Boardman boundary. Between  
24 the city and the north boundary of NWSTF Boardman are agricultural lands. Agricultural lands also  
25 extend along the east and south borders of NWSTF Boardman. On the east boundary, for a distance of  
26 approximately 3 mi. (4.8 km), there is a hybrid tree plantation. To the west, there is a coal fired power  
27 generation station, an aviation research and development facility, a conservation area, agricultural and  
28 undeveloped land. Further west beyond the power generation station and aviation facility, there are  
29 extensive agricultural lands.

### 30 **3.12.2.1 Wildfire Seasonality**

31 Wildland fire on NWSTF Boardman can occur much of the year, depending on the proper mix of dead  
32 and live fuel, moisture, and weather conditions that may support fire ignition and subsequent wildland  
33 fire spread. Fire season in the area of the range can start as early as May and extend through  
34 September. In May through July, west winds with mid-level wind speeds of 5 to 9 miles per hour (mph)  
35 are common with temperatures in May around 75 to 80 degrees Fahrenheit (°F)(23.9 to 26.7 degrees  
36 Celsius [°C]) and climbing to around 90°F (32.2 °C) in July. Relative humidity in these months ranges from  
37 30 to 40 percent. In August and September, the winds shift to the south with higher mid-level wind  
38 speeds than occur in the earlier months along with higher temperatures and lower relative humidity.  
39 The routine summer thunder storms which build over the mountains to the south of NWSTF Boardman  
40 indicate the instability of the summer atmosphere due to the solar radiation and high ground  
41 temperatures in the arid and semi-arid regions east of the Cascades. These thunder cells drift out from  
42 the mountains bringing strong gusty winds and lightning. In the past 10 years, lightning has been the  
43 ignition source for the largest wildland fires on NWSTF Boardman. Most lightning occurs in the months  
44 of August and September.

### 1 **3.12.2.2 Response to Wildfires**

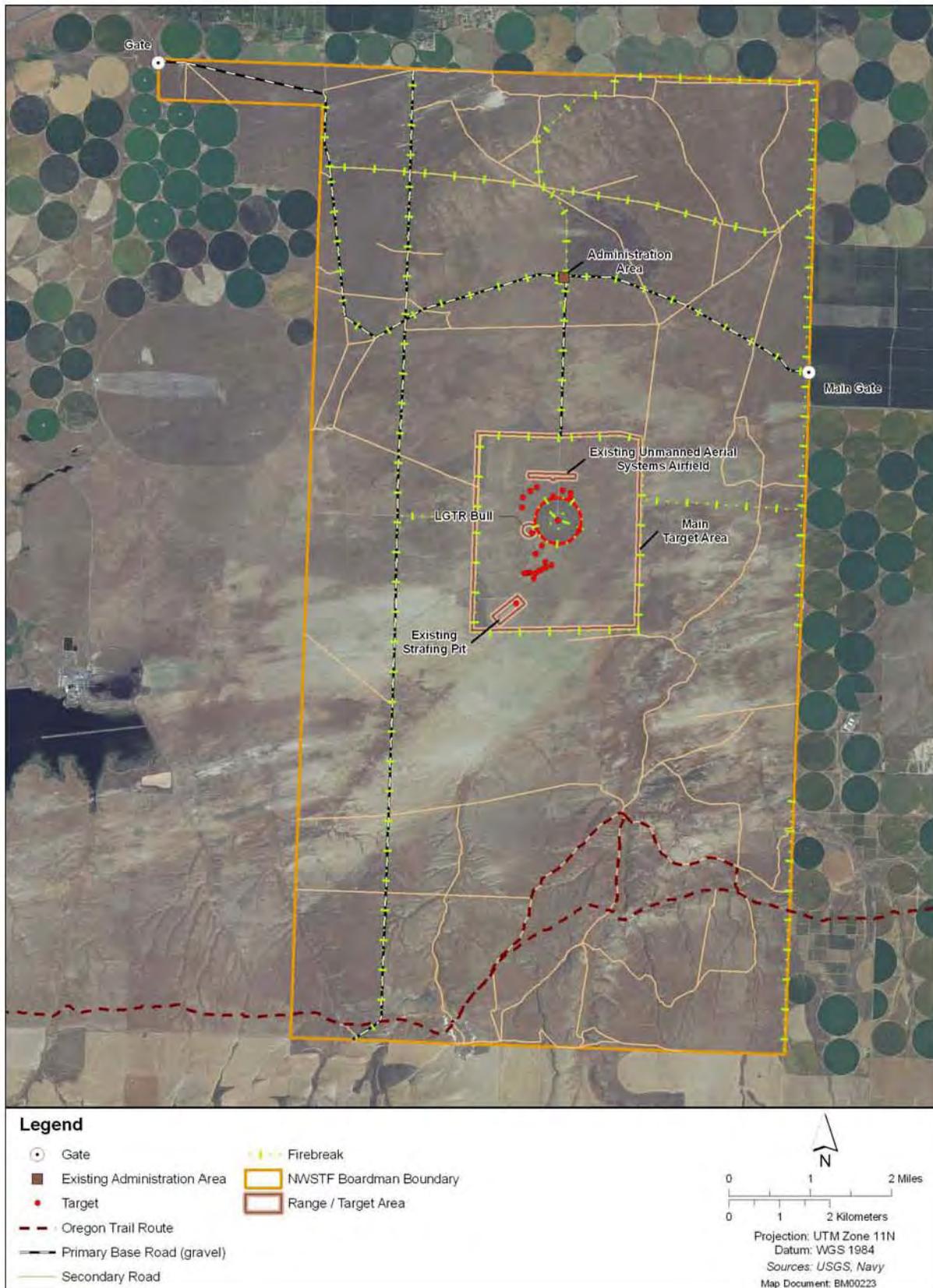
2 Until 1996, NWSTF Boardman was staffed by 30 or more U.S. Department of the Navy (Navy) personnel  
3 who were wildland fire qualified and available to respond to wildfires of either natural or human causes.  
4 However, since the Navy has reduced their bombing activity, NWSTF Boardman staff has been reduced  
5 to six people. When the larger wildfires occurred in 1998 and 2002, Navy firefighting personnel available  
6 at the facility had no ability to control the fires beyond protecting existing Navy facilities and structures.  
7 Because of the staffing size (typically less than six personnel) firefighting becomes a matter of  
8 containment to smaller areas where either the installation personnel have a chance of extinguishing the  
9 fire, or where outside agencies may be able to help. This initial response force is critical as a first line of  
10 defense to contain a small fire and in providing initial efforts to prevent a wildland fire from spreading  
11 beyond the installation boundaries. The Naval Air Station (NAS) Whidbey Island Air Operations is  
12 responsible to maintain appropriate personnel and needed support equipment for initial wildland  
13 firefighting capability and maintaining existing fire breaks (Figure 3.12-2). NAS Whidbey Island funds the  
14 rental of a tractor during the peak fire season, used by assigned personnel to maintain existing fire/fuel  
15 breaks. The tractor is also used for the initial stages of wildland fire suppression efforts.

### 16 **3.12.2.3 Current Requirements and Management Practices**

17 Commander, Navy Region Northwest (CNRNW) has implemented a regional Fire Management Plan. The  
18 Navy is currently revising, updating and expanding the specific portion of that plan applicable to NWSTF  
19 Boardman. The current fire strategy is to use the existing road system as the staging lines at which fires  
20 will be fought. The Navy currently maintains a system of 60-ft-wide fire breaks throughout NWSTF  
21 Boardman. A detachment of six Navy personnel are stationed at NWSTF Boardman. Their responsibilities  
22 are to maintain the buildings, roads, wells, fences, and other infrastructure and provide security in  
23 accordance with NASWHIDBEY INSTRUCTION 3120.6 (NWSTF Boardman Standard Operating  
24 Procedures). Navy personnel stationed at NWSTF Boardman are required to hold Wildland Firefighting  
25 Red Cards. Additionally, the Navy personnel stationed at NWSTF Boardman are equipped with  
26 appropriate wildland protective clothing. NWSTF Boardman firefighters have nine vehicles assigned to  
27 them; however, only two are used for actual firefighting operations, a dedicated firefighting vehicle  
28 (Type VI Brush truck) and a GSA truck that has a 250-gallon firefighting skid unit mounted (a "skid" is a  
29 water pump with a large water capacity that sits in the rear of a flatbed truck). In addition, the Navy  
30 leases a tractor and disc during the four month fire season to maintain fire/fuel breaks. In extreme  
31 situations, the tractor could also be used for incipient wildland fire suppression efforts when the  
32 application of foam lines are unavailable, exhausted, or ineffective.

33 The Navy is currently has a mutual aid agreement for wildland fire response with Umatilla Chemical  
34 Depot fire (UCD) department. However, the Depot completed its mission in late 2011 and is in the  
35 process of closing down through the Base Realignment and Closure process. Current plans include  
36 transferring the UCD fire department responsibilities to the Oregon Military Department, in which case  
37 the existing Mutual Aid Agreement will be revised or a new agreement drafted.

38 According to the *CNRNW Fire Management Plan*, a risk management decision process should be  
39 established that will determine the need for special orders and closures for work/training during  
40 extreme fire conditions. The goal of risk management is to safely sustain long-term military use and  
41 training activities over short term work or training tasks. Planning and scheduling of appropriate training  
42 activities and matching supporting fire protection resources to the level of training activity during the  
43 fire season are possible tools to reduce and mitigate wildfire risk. The risk management decision process  
44 will consider: military work/training priorities and minimum requirements; fire weather and fuel



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Figure 3.12-2: NWSTF Boardman Existing Fire Breaks

1 conditions; appropriate management responses; availability of wildland firefighting resources; military,  
2 public and community safety; and fire management zone priorities.

3 Oregon Revised Statutes (ORS) requires owners and operators of forestland to take appropriate action  
4 to control, extinguish, and report wildland fires regardless of origin (ORS §477.066). In addition, state  
5 law also indicates that the Oregon National Guard (ORNG) shall be subject to the duties, requirements  
6 or penalties of ORS §477.068 (Liability for cost of abatement), ORS §477.085 (Liability for cost of  
7 protecting land within a forest protection district) and ORS §477.090 (Civil liability), where the origin or  
8 subsequent spread of a fire was the direct result of training activity by the ORNG. (ORS §477.095). For  
9 regulatory purposes, any undeveloped wildland is considered forestland, whether or not trees are  
10 present. In summary, the ORNG is liable for wildland fire control when the origin or subsequent spread  
11 of a fire was the direct result of training activity by the ORNG.

#### 12 **3.12.2.4 Determination of Significance**

13 The impact analysis for wildfire considered effects of the Proposed Action on individual habitats,  
14 organisms, people, as well as populations. The analysis first looked at how individuals would respond to  
15 a stressor or combination of stressors and whether the response would affect the fitness of an  
16 individual. Fitness refers to changes in an individual's growth, survival, annual reproductive success, or  
17 lifetime reproductive success. When the fitness of individuals is adversely affected, the potential for  
18 adverse consequences to populations also exists. If individual fitness is not affected, then no impacts to  
19 populations would be expected. Impacts of wildfire would be determined significant if the fitness of  
20 individuals were affected directly or indirectly to the extent that local populations would decline or  
21 become unstable. For an outcome to be biologically significant to a population, it must have a  
22 measurable impact on the population and/or its habitat which could reasonably be expected to affect its  
23 stability, and as a result influence a population's viability.

#### 24 **3.12.3 ENVIRONMENTAL CONSEQUENCES**

##### 25 **3.12.3.1 No Action Alternative**

26 Under the No Action Alternative, the primary causes of ignition related to training activities would be  
27 target maintenance and non-explosive practice munitions impacting the ground surface within the Main  
28 Target Area. Spotting charge detonations used with practice munitions may ignite accidental fires.  
29 Ground vehicle traffic is very limited and occurs on the existing road network, thus reducing the  
30 potential for ignition from ground vehicles. The risk of wildland fires from ordnance is proportional to  
31 the number of spotting charges detonated on NWSTF Boardman. However, spotters monitoring practice  
32 munitions impacts readily identify ignitions from spotting charges, which decreases the response times  
33 and increase suppression efforts of the small staff stationed at NWSTF Boardman. Range safety  
34 monitoring by participating military units allows for early detection of training-related fires and rapid  
35 response. Therefore, fires that start during training activities are typically contained to relatively small  
36 areas compared to lightning-caused fires, which might go undetected for a period of time after ignition.  
37 Additionally, NWSTF Boardman has a mutual aid agreement with wildland fire response with both the  
38 UCD fire department and Boardman Rural Fire Protection District.

39 The potential for naturally caused fire continues to exist and the present limited ability to respond  
40 would persist in the foreseeable future. Large wildfires would continue to occur at NWSTF Boardman  
41 under the No Action Alternative. The effects would be widespread on NWSTF Boardman and could  
42 extend to surrounding properties in the case of a large wildfire. However, these effects are not expected  
43 to be related to or caused by training activities.

1 A fire may alter valuable plant communities and wildlife habitats, and result in mortalities of individual  
2 animals. Fires also may encourage the establishment of non-native species that compete with native  
3 plants. The general pattern observed is a decrease in native sagebrush and other shrub cover  
4 accompanied by an increase in non-native cheatgrass cover. In turn, increased cheatgrass cover can  
5 decrease the fire return interval and increase fire intensity (U.S. Department of the Navy 2010).

6 Wildfires, either naturally occurring or caused by military training activities at NWSTF Boardman would  
7 result in short- and long-term moderate effects to vegetation, wildlife, and air quality under the No  
8 Action Alternative. Depending on the area affected, the impacts from a wildland fire caused by training  
9 activities could have a significant impact on vegetation, wildlife, and air quality. However, with current  
10 training practices and the implementation of the *NWSTF Boardman Integrated Wildland Fire*  
11 *Management Plan*, the impacts from training activities would be reduced and localized.

### 12 **3.12.3.2 Alternative 1**

13 Under Alternative 1, fire originating on NWSTF Boardman could occur as a result of construction or  
14 training activities, such as the use of incendiary devices, tracer rounds, smoke grenades, a projectile  
15 striking a metal object and causing a spark, or from heat generated by mechanical equipment, vehicles,  
16 or weapons. Fires resulting from training activities would be expected to occur on the Digital Multi-  
17 Purpose Training Range (DMPTR), Multi-Purpose Machine Gun Range (MPMGR), Convoy Live Fire Route  
18 (CLFR), and the Demolition Training Range (DTR) under Alternative 1. Fires caused by lightning strikes  
19 would also continue to occur.

20 Though the construction or training activities at the DMPTR, MPMGR, CLFR, and DTR are expected to  
21 increase the potential for initiating a fire, these activities coincide with a marked increase in personnel  
22 involved in the training activities. The military personnel involved in training activities would monitor for  
23 fire at all times during range operations from observation towers and while on patrols. Post-operation  
24 fire monitoring training would be conducted by range operators while conducting range clearance  
25 duties. This increase in personnel would decrease response times and increases suppression efforts and  
26 assets to training-related ignitions. Additionally, the ORNG would have a trained, dedicated fire crew  
27 and a wildland fire truck on-site during weapons training during times of high fire risk. The ORNG also  
28 would have CH-47 or CH-60 helicopter aerial firefighting capability available during high fire risk seasons.  
29 During live fire operations, the ORNG would typically have one Type VI Brush Truck, up to two Type VII  
30 and three Type VI Bush Trucks with water and WFFF (Foam) capability, two to six personnel with Red  
31 Card training, and one Lead Forest Officer/Fire Captain.

32 Further, the Navy has a CNRNW *Fire Management Plan*. The Navy is currently revising, updating and  
33 expanding the specific portion of that plan applicable to NWSTF Boardman. A summary of the measures  
34 contained therein are presented in Section 3.12.3.4 and detailed in Appendix H (*NWSTF Boardman*  
35 *Integrated Wildland Fire Management Plan*). Key elements focus on reducing and preventing fires by: (a)  
36 prohibiting the use of tracer ammunition during high fire risk periods; (b) requiring pyrotechnic devices,  
37 such as smoke grenades, to be used in metal containers during high fire risk periods; (c) keeping vehicles  
38 away from vegetation; (d) educating Soldiers regarding smoking, fire danger, procedures for fire  
39 reporting, and vehicle use; (e) quick identification, reporting, and response to new fires; (f) enforcing  
40 bans on smoking, off-highway vehicle use, and other high-fire risks; (g) conducting post-operation fire  
41 monitoring training by range operators while conducting range clearance duties; and (h) increasing  
42 firefighting personnel and equipment. Further, the Draft Wildland Fire Management Plan recommends  
43 that past agricultural-related fences that are no longer needed (internal to NWSTF Boardman's  
44 perimeter fence) be removed, which will reduce fuel loading and increase fire response. The plan also

1 recommends the establishment, repair and maintenance of water storage capabilities. Finally, the plan  
2 recommends a modification to the fire break system. The NWSTF Boardman road system will continue  
3 to act as fire breaks, however, approximately 219.6 acres of existing fire breaks will be no longer be  
4 maintained by disking, and will be re-vegetated to bunchgrass low-stature, low-fuel source plant  
5 community. The fire break system will also be modified with the addition of 19.2 acres of new  
6 firebreaks. Figure 3.12-3 presents the recommended modifications to the NWSTF Boardman fire break  
7 system.

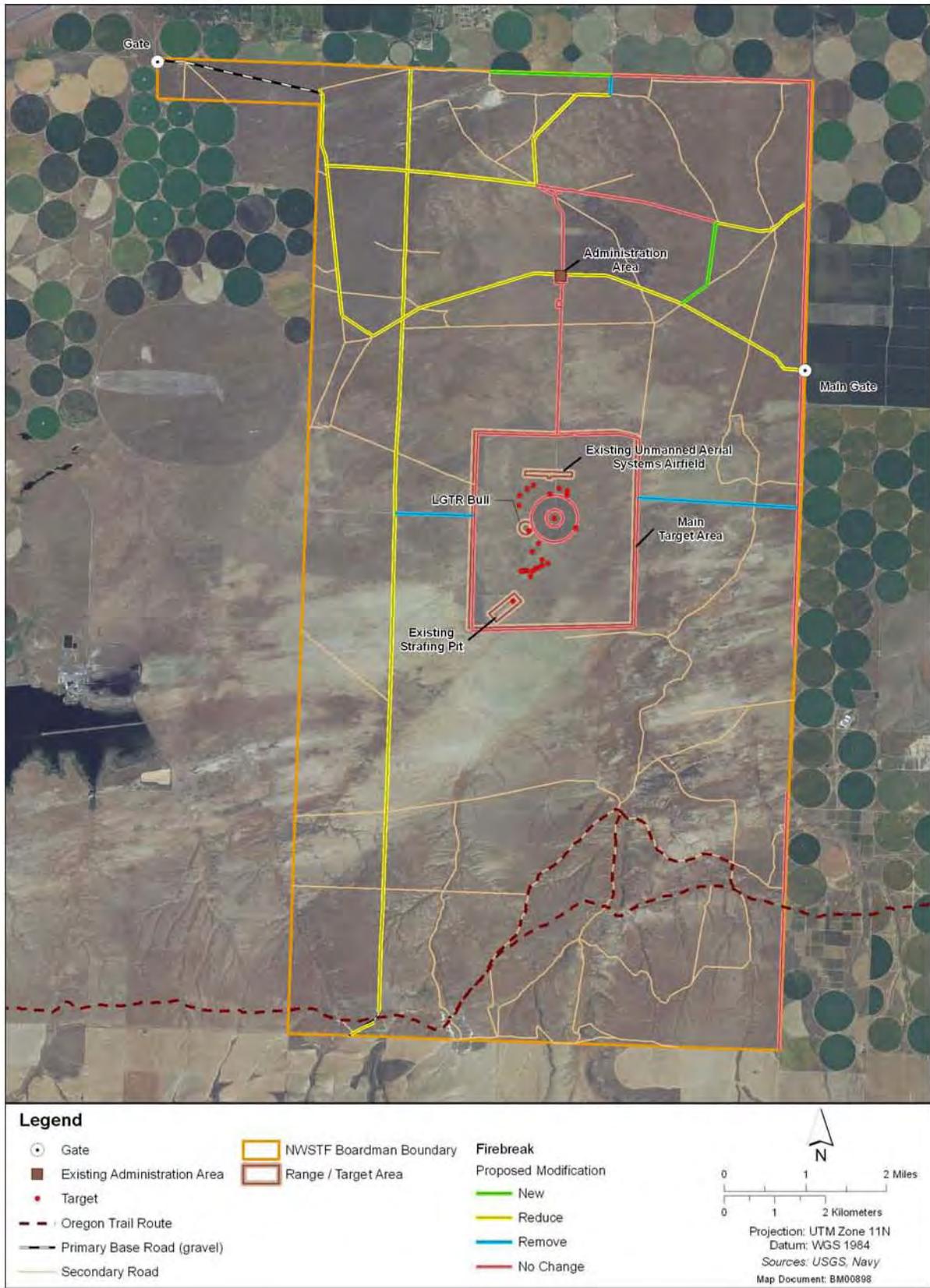
8 The proposed increases in training under Alternative 1 at NWSTF Boardman could increase the risk of  
9 wildfire. Any potential for short- or long-term negative effects to vegetation or wildlife from fires caused  
10 by constructing and operating the proposed training ranges on NWSTF Boardman would increase under  
11 Alternative 1. However, the area potentially burned by accidental fires is expected to be relatively small  
12 based on implementation of the *NWSTF Boardman Integrated Wildland Fire Management Plan*  
13 (Appendix H). Wildfires caused by military training activities at NWSTF Boardman could result in  
14 significant short- and long-term effects to vegetation, wildlife, and air quality under Alternative 1.  
15 However, with current training practices and the implementation of the *NWSTF Boardman Integrated*  
16 *Wildland Fire Management Plan*, which identifies assets and outlines prevention, detection, dispatch,  
17 suppression, communications, and reporting measures (Appendix H) these effects would be reduced  
18 and localized.

19 The potential for naturally caused fire continues to exist. Large wildfires would continue to occur at  
20 NWSTF Boardman under Alternative 1. The effects would be widespread on NWSTF Boardman and  
21 could extend to surrounding properties in the case of a large wildfire. However, these effects are not  
22 expected to be related to or caused by training activities. Additionally, the implementation of the  
23 *NWSTF Boardman Integrated Wildland Fire Management Plan* serves to reduce the risk of and prevent  
24 large wildfires.

### 25 **3.12.3.3 Alternative 2**

26 Under Alternative 2, fire originating on NWSTF Boardman could occur as a result of construction or  
27 training activities, such as the use of incendiary devices, tracer rounds, smoke grenades, a projectile  
28 striking a metal object and causing a spark, or from heat generated by mechanical equipment, vehicles,  
29 or weapons. Fires resulting from training activities would be expected to occur on the same ranges as  
30 described under Alternative 1, as well as at the proposed second CLFR, and from training activities  
31 utilizing the proposed mortar firing points. Fires caused by lightning strikes would also continue to  
32 occur.

33 The proposed increases in training under Alternative 2 at NWSTF Boardman could increase the risk of  
34 wildfire. Any potential for short- or long-term negative effects to vegetation or wildlife from fires caused  
35 by military training activities on NWSTF Boardman from constructing and operating the proposed  
36 training ranges would increase under Alternative 2. However, the area potentially burned by accidental  
37 fires is expected to be relatively small based on implementation of the *NWSTF Boardman Integrated*  
38 *Wildland Fire Management Plan*. Wildfires caused by military training activities at NWSTF Boardman  
39 could result in significant short- and long-term effects to vegetation, wildlife, and air quality under  
40 Alternative 2. However, with current training practices and the implementation of the *NWSTF Boardman*  
41 *Integrated Wildland Fire Management Plan*, which identifies assets and outlines prevention, detection,  
42 dispatch, suppression, communications, and reporting measures (Appendix H) these effects would be  
43 reduced and localized.



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Figure 3.12-3: NSWTF Boardman Fire Break Modifications

1 The potential for naturally caused fire continues to exist. Large wildfires would continue to occur at  
2 NWSTF Boardman under Alternative 2. The effects would be widespread on NWSTF Boardman and  
3 could extend to surrounding properties in the case of a large wildfire. However, these effects are not  
4 expected to be related to or caused by training activities. Additionally, the implementation of the  
5 *NWSTF Boardman Integrated Wildland Fire Management Plan* serves to reduce the risk of and prevent  
6 large wildfires.

### 7 **3.12.3.4 Proposed Management Practices, Monitoring and Mitigation Measures**

#### 8 **3.12.3.4.1 Best Management Practices**

9 After an internal study, the Department of Defense (DoD) in 2001 signed and adopted standards  
10 contained within the Review and Update of the 1995 Federal Wildland Fire Management Policy. The  
11 Department of the Army subsequently issued its Army Wildland Fire Policy Guidance in 2002. The Army  
12 Wildland Fire Policy Guidance adopted the following policies and standards:

- 13 • Review and Update of the 1995 Federal Wildland Fire Management Policy (2001)
- 14 • National Wildfire Coordinating Group: PMS 310-1, Wildland Fire Qualification System Guide,  
15 June 2011 (or current version).
- 16 • National Fire Protection Association (NFPA): Standard 1051 – Standard for Wildland Fire Fighter  
17 Professional Qualifications, 2007 (or current version).
- 18 • NFPA: Standard 1143 – Standard for Wildland Fire Management, 2009 (or current version).
- 19 • NFPA: Standard 1144 – Standard for Reducing Structure Ignition Hazards from Wildland Fire,  
20 2008 (or current version).
- 21 • NFPA: Standard 1561 – Standard on Emergency Services Incident Management System, 2008 (or  
22 current version).
- 23 • DoD Instruction 6055.06: DoD Fire and Emergency Services (F&ES) Program, 21 December 2006  
24 (or current version).

25 In addition to the above policies and standards, the U.S. Army Wildland Fire Policy requires the  
26 development and implementation of an Integrated Wildfire Management Plan for all facilities and  
27 training lands subject to potential wildland fires. The Navy has a CNRNW *Wildfire Fire Management*  
28 *Plan*. The Navy and ORNG are currently revising, updating and expanding the specific portion of that  
29 plan applicable to NWSTF Boardman. The Navy, ORNG, and other range users would implement the plan  
30 as part of the Proposed Action. The following management practices would be applied.

- 31 • The use of tracer rounds and other incendiary devices would be limited to periods when the risk  
32 of wildfire is at acceptable levels. Tracer rounds would be restricted during the fire season from  
33 May to October and use would require appropriate approval from NAS Whidbey Island. Tracer  
34 ammunition (tracer rounds) are bullets that are built with a small pyrotechnic charge in their  
35 base. Ignited by the burning powder, the pyrotechnic composition burns very brightly, making  
36 the projectile visible to the naked eye. This enables the shooter to follow the bullet trajectory in  
37 order to make aiming corrections.
- 38 • To determine if the wildfire risk is at an acceptable level for the use of aerial flares and smoke-  
39 grenades, and tracer rounds outside of the fire season, an internal *Fire Danger Rating and*  
40 *Wildland Fire Risk Management Matrix* would be utilized. This protocol utilizes weather data  
41 (temperature, relative humidity, and precipitation), fire danger rating (low through extreme),  
42 military activity, firefighting assets available on site, and other special considerations to identify  
43 the appropriate use of aerial flares and smoke-grenades.

- 1       • Use of aerial flares and smoke-grenades would be addressed on a case-by-case basis based on  
2       the risk assessment, application of ammunition, and timing during the fire season. Pyrotechnic  
3       devices, such as smoke grenades, are to be used in metal containments during high fire risk  
4       periods.
- 5       • Restrict mechanical equipment and weapons used during training to graveled surfaces. No off  
6       road driving would be allowed except for rare circumstances (e.g., firefighting or emergencies)  
7       and with authorization.
- 8       • Parking would be allowed only in graveled pullouts or parking lots.
- 9       • Past agricultural-related fences that are no longer needed (internal to NWSTF Boardman's  
10      perimeter fence) would be removed, which would reduce fuel loading and increase fire  
11      response
- 12      • Establish or repair and maintain water storage capabilities.
- 13      • The Navy currently maintains a system of 60-foot-wide fire breaks throughout NWSTF  
14      Boardman. In addition to these fire breaks, roads and trails that are already part of NWSTF  
15      Boardman would act as minor fire breaks in the event of low intensity fires. However,  
16      approximately 219.6 acres of existing fire breaks will be no longer be maintained by disking, and  
17      will be re-vegetated to native short grasses. The fire break system will also be modified with the  
18      addition of 19.2 acres of new firebreaks. Figure 3.12-3 presents the recommended modifications  
19      to the NWSTF Boardman fire break system.
- 20      • Smoking during operation or use of the proposed training ranges would be banned except in  
21      authorized smoking areas.
- 22      • Fire prevention protocols developed in the *NWSTF Boardman Integrated Wildland Fire*  
23      *Management Plan* (Appendix H) would be included in the Standard Operating Procedures and  
24      emphasized during the facility orientation and safety briefing.
- 25          ○ All units training at NWSTF Boardman are to be briefed on wildfire hazards. Briefings  
26          include instructions on reporting fires to Range Control, and procedures for fires  
27          occurring down range.
- 28          ○ All maintained roads within NWSTF Boardman are considered firebreaks. A number of  
29          roads also have additional firebreaks disked alongside to a width of 32-48 feet. Range  
30          Operations personnel also clear vegetation from roads and reduce tumble weed  
31          accumulations along fence lines annually.
- 32          ○ On high, very high and extreme fire danger days, the ORARNG Fire Captain will  
33          recommend modifying, limiting, or prohibiting the use of pyrotechnics.
- 34      • The possibility of yearly fires exists within the heaviest use areas (i.e. weapons training ranges).  
35      Proper implementation of the *NWSTF Boardman Integrated Wildland Fire Management Plan*  
36      would reduce the risk of and prevent large fires. The *NWSTF Boardman Integrated Wildland Fire*  
37      *Management Plan* would be reviewed, and appropriate changes considered, on an annual basis.

38      Additionally, NAS Whidbey Island is currently working on a Wildfire Response Plan for Boardman to  
39      request response from NAS Whidbey Island for large scale fires. This response plan would include seven  
40      additional qualified personnel, equipment and vehicles. Because of the distance between NWSTF  
41      Boardman and NAS Whidbey Island, it would be expected to have a 6 to 8 hour response time.

42      Oregon National Guard would have a trained, dedicated fire crew and a wildland fire truck on-site during  
43      weapons training during times of high fire risk. The ORNG also would have CH-47 or CH-60 helicopter  
44      aerial firefighting capability available during high fire risk seasons. During live fire operations, the ORNG  
45      would typically have one Type VI Brush Truck, up to two Type VII and three Type VI Bush Trucks with

1 water and WFFF (Foam) capability, two to six personnel with Red Card training, and one Lead Forest  
2 Officer/Fire Captain.

3 **3.12.3.4.2 Monitoring**

4 Military personnel would monitor for fire at all times during range operations from observation towers  
5 and while on patrols. Post-operation fire monitoring training would be conducted by range operators  
6 while conducting range clearance duties.

7 **3.12.3.4.3 Mitigation Measures**

8 No mitigation measures are warranted for wildfire based on the analysis presented in Section 3.12.3 and  
9 implementation of proposed BMPs and monitoring.

10 **3.12.3.5 Summary of Effects and Conclusions**

11 Table 3.12-1 summarizes the effects of and mitigation measures for the No Action Alternative,  
12 Alternative 1, and Alternative 2 for wildfire.

**Table 3.12-1: Summary of Wildfire Effects**

Stressor	Summary of Effects and National Environmental Policy Act Impact Determination
<b>No Action Alternative</b>	
<b>Construction Activities</b>	<ul style="list-style-type: none"> <li>• Not applicable. No construction proposed.</li> </ul>
<b>Training and Testing Activities</b>	<ul style="list-style-type: none"> <li>• Under the No Action Alternative, the primary causes of ignition related to training activities would be target maintenance and non-explosive practice munitions impacting the ground surface within the Main Target Area.</li> <li>• Depending on the area affected, the impacts from a wildland fire caused by training activities could have a significant impact on vegetation, wildlife, and air quality. However, with current training practices and the implementation of the <i>Integrated Wildland Fire Management Plan</i>, the impacts from training activities would be reduced and localized.</li> </ul>
<b>Impact Conclusion</b>	<ul style="list-style-type: none"> <li>• The No Action Alternative would not result in significant increases in the potential for wildfire from training activities. However, the potential for naturally-caused fire continues to exist and the present limited ability to respond would persist in the foreseeable future. Large wildfires would continue to occur at NWSTF Boardman under the No Action Alternative. The effects could be widespread on NWSTF Boardman and could extend to surrounding properties in the case of a large wildfire.</li> </ul>
<b>Alternative 1</b>	
<b>Construction Activities</b>	<ul style="list-style-type: none"> <li>• The proposed increases in construction activities under Alternative 1 at NWSTF Boardman could increase the potential of wildfire.</li> <li>• Any potential for short- or long-term negative effects to vegetation or wildlife from fires caused by construction of the proposed training ranges on NWSTF Boardman would increase under Alternative 1.</li> </ul>
<b>Training and Testing Activities</b>	<ul style="list-style-type: none"> <li>• The proposed increases in training under Alternative 1 at NWSTF Boardman could increase the potential of wildfire.</li> <li>• Any potential for short- or long-term negative effects to vegetation or wildlife from fires caused by operating the proposed training ranges on NWSTF Boardman would increase under Alternative 1.</li> </ul>
<b>Impact Conclusion</b>	<ul style="list-style-type: none"> <li>• Alternative 1 would result in significant increases in the potential for wildfire from training activities. Depending on the area affected, the impacts from a wildland fire caused by training activities could have a significant impact on vegetation, wildlife, and air quality. However, with current training practices and the implementation of the <i>Integrated Wildland Fire Management Plan</i>, the impacts from training activities would be reduced and localized.</li> </ul>
<b>Alternative 2</b>	
<b>Construction Activities</b>	<ul style="list-style-type: none"> <li>• The proposed increases in construction under Alternative 2 at NWSTF Boardman could increase the risk of wildfire.</li> <li>• Any potential for short- or long-term negative effects to vegetation or wildlife from fires caused by construction of the proposed training ranges on NWSTF Boardman would increase under Alternative 2.</li> </ul>

1

**Table 3.12-1: Summary of Wildfire Effects (continued)**

<b>Stressor</b>	<b>Summary of Effects and National Environmental Policy Act Impact Determination</b>
<b>Training and Testing Activities</b>	<ul style="list-style-type: none"> <li>• The proposed increases in training under Alternative 2 at NWSTF Boardman could increase the risk of wildfire.</li> <li>• Any potential for short- or long-term negative effects to vegetation or wildlife from fires caused by operating the proposed training ranges on NWSTF Boardman would increase under Alternative 2.</li> </ul>
<b>Impact Conclusion</b>	<ul style="list-style-type: none"> <li>• Alternative 2 would result in significant increases in the potential for wildfire from training activities. Depending on the area affected, the impacts from a wildland fire caused by training activities could have a significant impact on vegetation, wildlife, and air quality. However, with current training practices and the implementation of the <i>Integrated Wildland Fire Management Plan</i>, the impacts from training activities would be reduced and localized.</li> </ul>

Note: NWSTF = Naval Weapons Systems Training Facility