

# **APPENDIX G**

## **NBK–BANGOR PAST, PRESENT, AND REASONABLY FORESEEABLE FUTURE PROJECTS**



**Table G–1. Past, Present, and Reasonably Foreseeable Navy Projects at NBK–Bangor**

	PROJECT NAME	LOCATION	NEPA PUBLICATION	PROJECT COMPLETION	ENVIRONMENTAL DESCRIPTION
1.	TRIDENT Support Site	Entire base	EIS, 1974 with supplements 1976, 1977, 1978	Completed	Construction of TRIDENT Submarine Base including 3 piers and a dry dock, 400 units of family housing, bachelor enlisted quarters to house 660 personnel, the TRIDENT Training Facility (a 300,000 sq ft structure), the Refit Industrial Facility (270,000 sq ft), and the TRIDENT Missile Assembly and Support Facilities; clearing of up to 780 acres; includes dredging of 220,000 cubic yards at the dry dock and operation of a groundwater dewatering system
2.	Keyport/Bangor Dock Dredging	NBK–Bangor waterfront, Dock	CWA Section 10 permit, 1985	Completed	Dredging of approximately 3,000 cubic yards; USACE permit No. 071-0YB-2-010081
3.	TRIDENT D-5 Facilities Upgrade Program Subbase Bangor	Entire base	EA, 1989	Completed	Modification, addition, and new construction program for 9 new buildings, add or modify 10 existing buildings, construct 54 new magazines, modify 32 magazines, and provide utilities and site improvements for facilities upgrade; clearing of 57 acres of forest land, increase of 364 workers
4.	Drydock Caisson Moorage	NBK–Bangor waterfront, Delta Pier	EA, 1992	Completed	Construction and operation of a berthing pier for a second caisson (100 by 65 by 18 feet), including dredging of 12,000 cubic yards of sediment; new pier is 140 by 20 feet long
5.	Waterfront Shops	Near Sealion Road	EA, 1993	Completed	Construction and operation of waterfront shops to house facilities for painting and abrasive blasting operations, a sign shop and a SONAR repair shop, also includes 10,000 sq ft building and parking for 50 vehicles on up to 0.6 acre of shrub habitat
6.	Navy Family Housing	Near Thresher Avenue	EA, 1993	Completed	Addition of up to 615 housing units on 121 acres of land (multi-family dwellings and community center)
7.	NAVRESEDCOM 22 Naval Reserve Center	Near Luoto Road and Trident Blvd.	EA, 1994	Completed	20,000 sq ft facility, 5-acre loss of forested vegetation

**Table G–1. Past, Present, and Reasonably Foreseeable Navy Projects at NBK–Bangor (Continued)**

	PROJECT NAME	LOCATION	NEPA PUBLICATION	PROJECT COMPLETION	DESCRIPTION
8.	Construction of Supporting Shore and Waterfront Facilities for USS PARCHE	NBK–Bangor waterfront, Service Pier	EA, 1994	Completed	Upgrade of Service Pier (extension of 290 feet) to accommodate USS PARCE and 5 barges; removal of 106 piles and reinstallation of 180 piles, clearing of 9 acres of land for new detachment support building (48,272 sq ft), parking area (6,600 sq ft), lay down area (27,990 sq ft), road (64,350 sq ft)
9.	Brig/Correctional Custody Unit and Transit Personnel Unit	Barb Street and Scorpion Avenue	EA, 1994	Completed	Correctional Custody Unit (27,675 sq ft), Transit Personnel Unit (26,130 sq ft) for detained disciplinary status and temporary personnel in need of housing (100 people), loss of up to 6.2 acres of forested habitat
10.	Transshipment Facility Subase Bangor	Keyport Annex	EA, 1995	Completed	New construction primarily in previously disturbed area but some minor clearing along the road, < 2 acres
11.	Trident Lakes Softball Field Upgrade/Expansion	Near Trident Lakes	EA, 1996	Completed	Multi-purpose sports field at Trident Lakes Recreational Area; 7 acres of second-growth coniferous forest and grassland/ shrub habitat converted for softball field upgrade and expansion
12.	Naval Undersea Warfare Center Division	Near Clear Creek Road and Trident Boulevard	EA, 1997	Completed	Test Cell Control Building (8,282 sq ft) and a Test Cell Building (17,135 sq ft) resulting in the clearing of 0.9 acre of second-growth forest
13.	Navy Facility Housing BRAC	Near Nautilus Road and Southern Boundary Road	EIS, 1993	Completed	352 units on 75 acres of mostly forested habitat; also administrative office building (23,000 sq ft), fleet prisoner complex, reserve training center. Project cumulative effects of up to 163 acres of forested habitat
14.	Demolish Buildings 1008 and 1010	Adjacent to Building B1200	CATEX, 1999	Completed	Demolition of two WWII era buildings and planting of approximately 0.25-acre area with grass
15.	D-5 Road and Transfer Facility Upgrades	NBK–Bangor Operations Area	BA, 2000	Completed	Clearing of areas along side roads with native and non-native grasses; less than one acre increase in impermeable surfaces; minimal clearing of previously disturbed areas to add mechanical rooms to missile magazines
16.	Waterfront Fitness Center at Subase Bangor	NBK–Bangor near building 7001	BA, 2000	Completed	Clearing of 4 acres of previously disturbed area that was graded and planted with grasses; increase in impervious surfaces

**Table G–1. Past, Present, and Reasonably Foreseeable Navy Projects at NBK–Bangor (Continued)**

	PROJECT NAME	LOCATION	NEPA PUBLICATION	PROJECT COMPLETION	DESCRIPTION
17.	Marginal Wharf Pier Repairs at Subase Bangor	NBK–Bangor waterfront North pier of Marginal Wharf	BA, 2000	Completed	Replacement of missing dolphin and 10 piles
18.	Operable Unit #8	SE Corner of base	ROD, 2000	Completed	In accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), clean-up actions of former waste sites (steam cleaning pits, shop drainage ditch, public works maintenance garage) for protection of groundwater, installation of a recovery system and management of institutional controls for 150 acres of land
19.	Drydock Operations at Puget Sound Naval Shipyard and Bangor	NBK–Bangor, waterfront area, Delta Pier	BA, 2000	Completed	Continued operations at dry dock on Delta Pier
20.	Routine Operations and Maintenance of Waterfront Structures	NBK–Bangor waterfront area	BA, 2000	Ongoing	Pressure washing of waterfront piers to remove bird fecal material, marine debris (i.e., clam and mussel shells) and foreign materials (i.e., dirt and algae); includes walkways and approaches to the piers
21.	U.S. Navy EOD Training Operations	Hood Canal off the northern portion of NBK–Bangor	BA, 2000 Draft EA 2004	Ongoing	A training program for the Navy’s EOD units in the Puget Sound region; training consists of using explosive charges to destroy or disable inert (dummy) mines underwater up to four times per year
22.	Pile Replacement - Explosives Handling Wharf (EHW) at Subase Bangor	NBK–Bangor, waterfront area, EHW	BA, 2001	Ongoing	Removal of approximately 130 hollow core concrete piles and replacement with combination of concrete and steel piles; expected to be completed over 10-year period
23.	Installation and Operation of Force Protection Barrier	NBK–Bangor waterfront area	EA, 2002	Completed	Above-water fencing that is 14 feet high placed on pontoons along the waterfront restricted area

**Table G-1. Past, Present, and Reasonably Foreseeable Navy Projects at NBK–Bangor (Continued)**

	PROJECT NAME	LOCATION	NEPA PUBLICATION	PROJECT COMPLETION	DESCRIPTION
24.	U.S. Navy Dabob Bay and Hood Canal Military Operating Area	Testing in Dabob Bay and launch and recovery testing in Hood Canal near NBK–Bangor waterfront	EA, 2002	Completed	Launch and recovery testing for research and experiments, proofing and fleet departures with potential for release of gas fumes, propellant spills, turbidity, release of lead and copper in water, and some noise emissions at 180 dB
25.	Special Project C8-03 Delta Parking Lot Addition	Parking lot on Hawkbill Road	CATEX, 2003	Completed	Expand the existing lot; required clearing of 3 acres of second-growth timber
26.	EOD Training/ Detonation Range	Between the NBK–Bangor waterfront and Pintado Road	EA, 2003	Completed	Removal of 3-acre forest stand (primarily western red alder with sword fern and salal understory) by clear cutting
27.	SUBDEVRON 5 Support Facilities (Submarine Development Squadron 5 Detachment)	NBK–Bangor waterfront, Service Pier	EA, 2003	Completed	Facility upgrades to existing Service Pier, size increase of 18,000 sq ft, construction of new waterfront support facility (12,560 sq ft), expansion of existing shore-based support facilities resulting in 9 acres of new construction in second-growth forest near Service Pier
28.	Service Pier Expansion	NBK–Bangor waterfront, Service Pier	EA, 2004	Completed	Expansion of pier by 5,000 sq ft and 20 new piles
29.	Northwest Regional Family Housing Privatization	Residential area of base	EA, 2004	Completed	An upgrade of residential housing for 5,100 residents for 12 housing areas and 1,318 units, including conversion, renovation, demolition
30.	Installation and Operation of Underwater Surveillance System	NBK–Bangor waterfront restricted area	EA, 2004	Completed	12 sonar units placed within the waterfront restricted area operating at a fixed center frequency between 60 and 200 kHz and energy source levels of up to 205 dB
31.	Magnetic Silencing Facility Repair	NBK–Bangor waterfront, Magnetic Silencing Facility	EA, 2004	Completed	Repairs made to facility including replacement of 90 piles
32.	EHW Pile Replacement	NBK–Bangor waterfront, EHW	Abbreviated BA, JARPA in 2004	Completed	Removal of 8 concrete piles at Bent 16 and replacement with 8 concrete filled steel piles using vibratory hammer

**Table G-1. Past, Present, and Reasonably Foreseeable Navy Projects at NBK–Bangor (Continued)**

	PROJECT NAME	LOCATION	NEPA PUBLICATION	PROJECT COMPLETION	DESCRIPTION
33.	Weapons Security Actions	NBK–Bangor Limited Area	EA, 2004	Ongoing	Construction of hardened missile motor magazines and a new Limited Area Processing and Storage Complex; soil disturbance of up to 81 acres; creation of about 15 acres of impervious surfaces; clearing of 16 acres of vegetation; excavation and placement of fill of about 910,000 cubic yards of soil
34.	EHW Pile Replacement	NBK–Bangor waterfront, EHW	JARPA filed in 2005, piles changed in 2006	Completed	Removal of 12 hollow concrete piles at Bents 14 and 20 and replacement with like number of hollow steel piles; permit indicated use of vibratory hammer and silt curtain
35.	Navy Surface Warfare Center Carderock Division (NSWCCD) Detachment Bremerton Command Consolidation	NBK–Bangor waterfront Carlson Spit	EA 2005	Completed	Construction of in-water facilities including a new access pier (8,800 sq ft), pontoon (21,600 sq ft), vessel over-water footprint (12,825 sq ft) and associated mooring components, 102 new steel piles, road improvements to Carlson Spit Access Road, 5 acres of mature forest removed for 23,000 sq ft building, 100 additional workers
36.	Mission Support Facilities	NBK–Bangor waterfront, Service Pier	EA, 2005	Completed	Addition of 2 new power booms and 2 captivated camels, requires 10 steel piles and results in 5,000 sq ft of over-water shading; installation of emergency power generation capability; less than 3 acres of second-growth land clearing
37.	Missile Haul Route Clearing	Near Flier road	EA, 2005	Ongoing	Clear and thin forested areas along fence and missile haul route, conversion of 43 acres of forest to grassland, thinning of trees and understory on 183 acres, clearing and thinning of vegetation on 2.5 acres of non-jurisdictional wetlands
38.	Dredging south side of Delta Pier	NBK–Bangor waterfront, Delta Pier	BA, EA 2005	Completed	Sediment removal of 3,000 cubic yards of sediment

**Table G–1. Past, Present, and Reasonably Foreseeable Navy Projects at NBK–Bangor (Continued)**

	PROJECT NAME	LOCATION	NEPA PUBLICATION	PROJECT COMPLETION	DESCRIPTION
39.	KB Dock Fender Pile Replacement and Concrete/Top Tie Cable Repair	NBK–Bangor waterfront, KB Dock	CATEX, 2005	Completed	Replace fender pile and repair cable top tie at KB Dock
40.	Expand Leatherneck Lounge	Community Area	CATEX, 2005	Completed	Add 556 sq ft to Leatherneck Lounge
41.	Vegetation Clearing for Periscope Target	Near 7001	CATEX, 2005	Completed	Remove 35 to 45 alder and Douglas fir trees
42.	Security Support Facilities	Inland area of base	EA, 2006	Ongoing	Construction of an Auxiliary Reaction Force Facility (14,000 sq ft), Armored Fighting Vehicle Operational Storage Facility (16,146 sq ft), altering two buildings for a new armory (2,500 sq ft), and replace an Alert Force Garage (2,530 sq ft) with new paved access road; actions would result in up to 11 acres land clearing
43.	Greenling Road Upgrade	Near Delta Pier	CATEX, 2006	Completed	Widening, vertical and horizontal realignment of existing road. 7 acres of land cleared, and 0.5 acre of new impervious surface (new road paving)
44.	200-car parking lot	Near OA gate on community area side of fence	CATEX, 2006	Completed	Remove approximately 200 trees and grade/pave
45.	Expansion of Devil's Hole parking lot	NBK–Bangor waterfront, adjacent to Devil's Hole	CATEX, 2007	Completed	Construct 200-car parking lot. Clear 4 acres of cedar, Douglas fir, and grand fir, install subsurface drainage, grade and pave with asphalt
46.	Mission Support Facilities	NBK–Bangor waterfront, Marginal Wharf	CATEX, 2007	Completed	Included installation of some floats and piles at Marginal Wharf
47.	Transit Protection System, Interim Operational Capability	NBK–Bangor waterfront, Keyport/Bangor dock	EA, 2007	Completed	Extension to existing dock with steel floating pier (293 by 12 feet) with 4 smaller finger piers (two at 120 by 10 feet, and two at 80 by 8 feet); 24 piles, all floats 5 feet in depth and held by sixteen 24-inch diameter piles and eight 30-inch diameter piles; over-water shading of 4,820 sq ft; clearing of ¾ acre second and third growth forested upland vegetation

**Table G–1. Past, Present, and Reasonably Foreseeable Navy Projects at NBK–Bangor (Continued)**

	PROJECT NAME	LOCATION	NEPA PUBLICATION	PROJECT COMPLETION	DESCRIPTION
48.	Military Working Dog Kennel Expansion	Adjacent to existing kennel, Building 2850	CATEX, 2007	Completed	Construct stand-alone facility to augment existing dog kennels. New facility to have six kennels and administrative space.
49.	2008 Magnetic Silencing Facility Repairs	NBK–Bangor waterfront, Magnetic Silencing Facility	EA, 2008	Ongoing	Renovation of eroding portions of the facility to include cable trays under water, decking on pier, and structural cross members
50.	Facilities Engineering and Acquisition Division Construction Support and Other Navy Training Trailers	Adjacent to B6403 and SWFPAC Offices. (If implemented the SISS facility would go here also.)	CATEX	Future	1 to 5 acres removal of Scot’s broom and placing gravel routing utilities for temporary construction trailers.
51.	Transit Protection Systems Operation Final Operating Conditions	Navigable waters from Port Angeles to Bangor, Dabob Bay, and NBK–Bangor waterfront	NEPA in process	Ongoing	Includes removal of 50,000 sq ft over-water structures and approximately 400 piles, addition of 53,500 sq ft over-water structures and approximately 800 piles; 11.4 acres land clearing; fueling of vessels may require installation of tank system, the method of providing fuel is under analysis. Remove an existing creosote timber/pile pier and replace with concrete pier; demolish existing upland facility and construct larger facility at the same site; operate approximately 10 escort vessels; install and operate maintenance and fueling capability for vessels
52.	Explosives Handling Facility Repair	NBK–Bangor, EHW	CATEX, 2009	Future	Repairs of bents and remediation of concrete erosion, requires replacement of 20 to 30 piles
53.	Waterfront Security Enclave and Security Barriers	NBK–Bangor waterfront/shoreline area	EA, 2006	Future	Creation of enclave fencing in either single or double arrangement enclosing the entire Bangor waterfront, 50 acres land clearing and some wetland disturbance
54.	Equipment Maintenance Building Addition	Controlled Area	Future NEPA document	Future	Existing 20,376 sq ft equipment maintenance building to be expanded by 6,243 sq ft to accommodate 3 maintenance bays for missile facility transporters; 2 acres land clearing

**Table G–1. Past, Present, and Reasonably Foreseeable Navy Projects at NBK–Bangor (Continued)**

	PROJECT NAME	LOCATION	NEPA PUBLICATION	PROJECT COMPLETION	DESCRIPTION
55.	Missile Assembly Building	Controlled Area	Future NEPA document	Future	Construction of a new Missile Assembly Building (28,700 sq ft) on previously disturbed and developed land, no clearing required
56.	Waterfront Restricted Area Land Water Security Interface	NBK–Bangor waterfront, restricted periphery	NEPA in process	Future	Construction of a connection between security fencing on water and security fencing on land; less than 1 acre land vegetation clearing
57.	Alder tree logging	Between Runner and Escobar Roads	NEPA in process	2008	Cutting alder trees and replanting with western red cedar; up to 5 acres converted to conifer forest
58.	EHW #2	NBK–Bangor waterfront/shoreline area, adjacent to existing EHW	Future NEPA document	Future	235,000 sq ft over-water structures with installation of 1,200 piles; over-water shading of about 4,630 square feet of eelgrass; 5 acres land clearing, 3 acres of parking, up to 5 acres of impervious surface depending on alternative chosen
59.	Missile Motor Inspection Building	SWFPAC industrial area	Future NEPA document	Future	Construct 18,800 sq ft building for assembly, disassembly, and inspection of missile motors; <1 acre land clearing
60.	ESS Sustainment Facility	Site Not Yet Selected	Future NEPA document	Future	Construct Security Systems Sustainment facility, paving and site improvements including roadway access; do not yet know disturbance area because site has not been selected
61.	Security Force Training Facility	Adjacent to the current P980 Armored Vehicle Garage	Future NEPA document	Future	Construct Security Force Training Facility, sidewalks, roadway access, approximately 2 acres disturbed
62.	Armored Fighting Vehicle Support Facility	Site Not Yet Selected	Future NEPA document	Future	Construction of an Armored Vehicle Support Facility (8,170 sq ft); on existing parking lot with parking replaced at a nearby lot; < 1 acre land clearing
63.	EHW Security Force Facility	NBK–Bangor waterfront	In process EA	Future	Construct 10,920 sq ft facility for security force
64.	Limited Area Emergency Generator System	SWFPAC Limited Area	Future NEPA document	Future	Construct 9,225 sq ft building to house two 2.5 megawatt generators; no land clearing required

**Table G–1. Past, Present, and Reasonably Foreseeable Navy Projects at NBK–Bangor (Continued)**

	PROJECT NAME	LOCATION	NEPA PUBLICATION	PROJECT COMPLETION	DESCRIPTION
65.	Reaction Force Facility Communication Addition	SWFPAC Limited Area	Future NEPA document	Future	Addition to SWFPAC Limited Area Reaction Force Facility (4,600 sq ft), and additional garage space, alteration of existing access for facility; 1 to 2 acres land clearing
66.	Waterfront Restricted Area Emergency Power	Waterfront Area adjacent to the existing generator	Future NEPA document	Future	Construct facility (7,353 sq ft) and relocate power lines at the waterfront; area disturbed < 0.5 acre
67.	Harden Waterfront Security Force Facility #1	NBK–Bangor waterfront	Future NEPA document	Future	Construct a high security barrier around the Harden Waterfront Security Force Facility #1
68.	Harden Waterfront Security Force Facility #2	NBK–Bangor waterfront	Future NEPA document	Future	Construct a high security barrier around the Harden Waterfront Security Force Facility #2
69.	SISS Permanent Facility	NBK–Bangor waterfront	Future NEPA document	Future	Construction of a waterfront operations building with an enclosed ashore pool area; 0.5 acre of forested land would be cleared
70.	Harden Auxiliary Reaction Force Facility	Near EHW	Future NEPA document	Future	Construct a high security barrier around the ARFF; 4 acres land clearing
71.	Utility Improvements	Unknown	Future NEPA document	Future	Power and water utility improvements – but no site specified
72.	Replace EHW #1	NBK–Bangor waterfront/shoreline area	Future NEPA document	Future	In-place replacement of the existing EHW
73.	Missile Haul Road Upgrade	Haul routes	Future NEPA document	Future	Upgrade the existing structural cross sections of the 38,000 lineal feet of haul road to sustain higher loads
74.	Enclosed Motor Transfer Facility	Limited Area	Future NEPA document	Future	Construction of an addition to the Motor Transfer Facility (1,830 sq ft) and enclosing the existing facility (9,903 sq ft); less than 0.6 acre land clearing
75.	Northwest Training Range Complex/ Overseas EIS	Hood Canal	Draft EIS, 2008	Future	Increase in underwater military range activities including areas in Hood Canal, noise effects

**Table G–1. Past, Present, and Reasonably Foreseeable Navy Projects at NBK–Bangor (Continued)**

	PROJECT NAME	LOCATION	NEPA PUBLICATION	PROJECT COMPLETION	DESCRIPTION
76.	Port Security Barrier Relocation	Waterfront Restricted Area	NEPA in process	Future	Project will realign existing floating fence to improve operations and security; impacts limited to temporary turbidity increase due to anchor relocation
77.	Mooring Point Installation	North of K/B Dock	Future NEPA document	Future	Temporary turbidity increase due to anchor installation; no impact to eelgrass beds or salmon migration route
78.	Seawall repairs along Sea Lion Road	South of Delta Pier to Devil's Hole	Future NEPA document	Future	Installation of sheet pile or small wedge of one-man armor rock to buttress existing seawall; sheet pile would be placed 1 to 2 feet waterward of existing seawall; armor rock would be placed in a 5-foot wide area immediately waterward of existing seawall; project is 447 feet long and would be constructed in the upper-intertidal zone

**Acronyms:**

BA = Biological Assessment; CATEX = Categorical Exclusion; EHW = Explosives Handling Wharf; EOD = Explosives Ordnance Disposal; ESS = Electronic Security Systems; NSWCCD = Navy Surface Warfare Center Carderock Division; OA = Operational Area; ROD = Record of Decision; SWFPAC = Strategic Weapons Facility, Pacific

**Table G–2. Summary of Past, Present, and Future Environmental Effects of NBK–Bangor Projects**

	PROJECT NAME	DESCRIPTION	LAND CLEARING	SOIL LOSS	IMPERVIOUS SURFACE	OVER-WATER SHADING	MARINE HABITAT LOSS/ CONVERSION	LONG-TERM WATER QUALITY IMPACTS	LONG-TERM NOISE IMPACTS	LONG-TERM AIR QUALITY IMPACTS
1.	TRIDENT Support Site	Construction of TRIDENT Submarine Base including 3 piers and a dry dock, 400 units of family housing, bachelor enlisted quarters to house 660 personnel, the TRIDENT Training Facility (a 300,000 sq ft structure), the Refit Industrial Facility (270,000 sq ft), and the TRIDENT Missile Assembly and Support Facilities; clearing of up to 780 acres; includes dredging of 220,000 cubic yards at the dry dock and operation of a groundwater dewatering system	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2.	Keyport/Bangor Dock Dredging	Dredging of approximately 3,000 cubic yards; USACE permit No. 071-0YB-2-010081	No	No	No	No	Yes	No	No	No
3.	TRIDENT D-5 Facilities Upgrade Program Subase Bangor	Modification, addition, and new construction program for 9 new buildings, add or modify 10 existing buildings, construct 54 new magazines, modify 32 magazines, and provide utilities and site improvements for facilities upgrade; clearing of 57 acres of forest land, increase of 364 workers	Yes	Yes	Yes	No	No	No	Yes	Yes
4.	Drydock Caisson Moorage	Construction and operation of a berthing pier for a second caisson (100 by 65 by 18 feet), including dredging of 12,000 cubic yards of sediment; new pier is 140 by 20 feet long	No	No	No	Yes	Yes	No	No	No
5.	Waterfront Shops	Construction and operation of waterfront shops to house facilities for painting and abrasive blasting operations, a sign shop and a SONAR repair shop, also includes 10,000 sq ft building and parking for 50 vehicles on up to 0.6 acre of shrub habitat	Yes	Yes	Yes	No	No	No	No	No
6.	Navy Family Housing	Addition of up to 615 housing units on 121 acres of land (multi-family dwellings and community center)	Yes	Yes	Yes	No	No	No	Yes	Yes
7.	NAVRESEDCOM 22 Naval Reserve Center	20,000 sq ft facility, 5-acre loss of forested vegetation	Yes	Yes	Yes	No	No	No	No	No

Table G–2. Impacts of Past, Present, and Reasonably Foreseeable Navy Projects at NBK–Bangor (Continued)

	PROJECT NAME	DESCRIPTION	LAND CLEARING	SOIL LOSS	IMPERVIOUS SURFACE	OVER-WATER SHADING	MARINE HABITAT LOSS/ CONVERSION	LONG-TERM WATER QUALITY IMPACTS	LONG-TERM NOISE IMPACTS	LONG-TERM AIR QUALITY IMPACTS
8.	Construction of Supporting Shore and Waterfront Facilities for USS PARCHE	Upgrade of Service Pier (extension of 290 feet) to accommodate USS PARCE and 5 barges; removal of 106 piles and reinstallation of 180 piles, clearing of 9 acres of land for new detachment support building (48,272 sq ft), parking area (6,600 sq ft), lay down area (27,990 sq ft), road (64,350 sq ft)	Yes	Yes	Yes	Yes	Yes	No	No	No
9.	Brig/Correctional Custody Unit and Transit Personnel Unit	Correctional Custody Unit (27,675 sq ft), Transit Personnel Unit (26,130 sq ft) for detained disciplinary status and temporary personnel in need of housing (100 people), loss of up to 6.2 acres of forested habitat	Yes	Yes	Yes	No	No	No	No	No
10.	Transshipment Facility Subase Bangor	New construction primarily in previously disturbed area but some minor clearing along the road, < 2 acres	Yes	Yes	Yes	No	No	No	No	No
11.	Trident Lakes Softball Field Upgrade/ Expansion	Multi-purpose sports field at Trident Lakes Recreational Area; 7 acres of second-growth coniferous forest and grassland/ shrub habitat converted for softball field upgrade and expansion	Yes	Yes	No	No	No	No	No	No
12.	Naval Undersea Warfare Center Division	Test Cell Control Building (8,282 sq ft) and a Test Cell Building (17,135 sq ft) resulting in the clearing of 0.9 acre of second-growth forest	Yes	Yes	Yes	No	No	No	No	No
13.	Navy Facility Housing BRAC	352 units on 75 acres of mostly forested habitat; also administrative office building (23,000 sq ft), fleet prisoner complex, reserve training center. Project cumulative effects of up to 163 acres of forested habitat	Yes	Yes	Yes	No	No	No	Yes	Yes
14.	Demolish Buildings 1008 and 1010	Demolition of two WWII era buildings and planting of approximately 0.25-acre area with grass,	No	Yes	No, decrease	No	No	No	No	No

**Table G–2. Impacts of Past, Present, and Reasonably Foreseeable Navy Projects at NBK–Bangor (Continued)**

	PROJECT NAME	DESCRIPTION	LAND CLEARING	SOIL LOSS	IMPERVIOUS SURFACE	OVER-WATER SHADING	MARINE HABITAT LOSS/ CONVERSION	LONG-TERM WATER QUALITY IMPACTS	LONG-TERM NOISE IMPACTS	LONG-TERM AIR QUALITY IMPACTS
15.	D-5 Road and Transfer Facility Upgrades	Clearing of areas along side roads with native and non-native grasses; less than one acre increase in impermeable surfaces; minimal clearing of previously disturbed areas to add mechanical rooms to missile magazines	Yes	Yes	Yes	No	No	No	No	No
16.	Waterfront Fitness Center at Subase Bangor	Clearing of 4 acres of previously disturbed area that was graded and planted with grasses; increase in impervious surfaces	Yes	Yes	Yes	No	No	No	No	No
17.	Marginal Wharf Pier Repairs at Subase Bangor	Replacement of missing dolphin and 10 piles	No	No	No	No	No	No	No	No
18.	Operable Unit #8	In accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), clean-up actions of former waste sites (steam cleaning pits, shop drainage ditch, public works maintenance garage) for protection of groundwater, installation of a recovery system and management of institutional controls for 150 acres of land	No	No	No	No	No	Yes, beneficial	No	No
19.	Drydock Operations at Puget Sound Naval Shipyard and Bangor	Continued operations at dry dock on Delta Pier	No	No	No	No	No	No	No	No
20.	Routine Operations and Maintenance of Waterfront Structures	Pressure washing of waterfront piers to remove bird fecal material, marine debris (i.e., clam and mussel shells) and foreign materials (i.e., dirt and algae); includes walkways and approaches to the piers	No	No	No	No	No	Yes	Yes	No

Table G-2. Impacts of Past, Present, and Reasonably Foreseeable Navy Projects at NBK-Bangor (Continued)

	PROJECT NAME	DESCRIPTION	LAND CLEARING	SOIL LOSS	IMPERVIOUS SURFACE	OVER-WATER SHADING	MARINE HABITAT LOSS/ CONVERSION	LONG-TERM WATER QUALITY IMPACTS	LONG-TERM NOISE IMPACTS	LONG-TERM AIR QUALITY IMPACTS
21.	U.S. Navy EOD Training Operations	A training program for the Navy's EOD units in the Puget Sound region; training consists of using explosive charges to destroy or disable inert (dummy) mines underwater up to four times per year	No	No	No	No	No	No	Yes	No
22.	Pile Replacement - Explosives Handling Wharf (EHW) at Subase Bangor	Removal of approximately 130 hollow core concrete piles and replacement with combination of concrete and steel piles; expected to be completed over 10-year period	No	No	No	No	Yes	Yes	Yes	No
23.	Installation and Operation of Force Protection Barrier	Above-water fencing that is 14 feet high placed on pontoons along the waterfront restricted area	No	No	No	Yes	Yes	No	No	No
24.	U.S. Navy Dabob Bay and Hood Canal Military Operating Area	Launch and recovery testing for research and experiments, proofing and fleet departures with potential for release of gas fumes, propellant spills, turbidity, release of lead and copper in water, and some noise emissions at 180 dB	No	No	No	No	No	Yes	Yes	Yes
25.	Special Project C8-03 Delta Parking Lot Addition	Expand the existing lot; required clearing of 3 acres of second-growth timber	Yes	Yes	Yes	No	No	No	No	No
26.	EOD Training/ Detonation Range	Removal of 3-acre forest stand (primarily western red alder with sword fern and salal understory) by clear cutting	Yes	Yes	Yes	No	No	No	Yes	Yes
27.	SUBDEVRON 5 Support Facilities (Submarine Development Squadron 5 Detachment)	Facility upgrades to existing Service Pier, size increase of 18,000 sq ft, construction of new waterfront support facility (12,560 sq ft), expansion of existing shore-based support facilities resulting in 9 acres of new construction in second-growth forest near Service Pier	Yes	Yes	Yes	Yes	Yes	No	No	No

**Table G–2. Impacts of Past, Present, and Reasonably Foreseeable Navy Projects at NBK–Bangor (Continued)**

	PROJECT NAME	DESCRIPTION	LAND CLEARING	SOIL LOSS	IMPERVIOUS SURFACE	OVER-WATER SHADING	MARINE HABITAT LOSS/ CONVERSION	LONG-TERM WATER QUALITY IMPACTS	LONG-TERM NOISE IMPACTS	LONG-TERM AIR QUALITY IMPACTS
28.	Service Pier Expansion	Expansion of pier by 5,000 sq ft and 20 new piles	No	No	No	Yes	Yes	No	No	No
29.	Northwest Regional Family Housing Privatization	An upgrade of residential housing for 5,100 residents for 12 housing areas and 1,318 units, including conversion, renovation, demolition	Yes	Yes	Yes	No	No	No	No	No
30.	Installation and Operation of Underwater Surveillance System	12 sonar units placed within the waterfront restricted area operating at a fixed center frequency between 60 and 200 kHz and energy source levels of up to 205 dB	No	No	No	No	No	No	Yes, under-water	No
31.	Magnetic Silencing Facility Repair	Repairs made to facility including replacement of 90 piles	No	No	No	No	No	No	No	No
32.	EHW Pile Replacement	Removal of 8 concrete piles at Bent 16 and replacement with 8 concrete filled steel piles using vibratory hammer	No	No	No	No	No	No	No	No
33.	Weapons Security Actions	Construction of hardened missile motor magazines and a new Limited Area Processing and Storage Complex; soil disturbance of up to 81 acres; creation of about 15 acres of impervious surfaces; clearing of 16 acres of vegetation; excavation and placement of fill of about 910,000 cubic yards of soil	Yes	Yes	Yes	No	No	No	No	No
34.	EHW Pile Replacement	Removal of 12 hollow concrete piles at Bents 14 and 20 and replacement with like number of hollow steel piles; permit indicated use of vibratory hammer and silt curtain	No	No	No	No	No	No	No	No

Table G–2. Impacts of Past, Present, and Reasonably Foreseeable Navy Projects at NBK–Bangor (Continued)

	PROJECT NAME	DESCRIPTION	LAND CLEARING	SOIL LOSS	IMPERVIOUS SURFACE	OVER-WATER SHADING	MARINE HABITAT LOSS/ CONVERSION	LONG-TERM WATER QUALITY IMPACTS	LONG-TERM NOISE IMPACTS	LONG-TERM AIR QUALITY IMPACTS
35.	Navy Surface Warfare Center Carderock Division (NSWCCD) Detachment Bremerton Command Consolidation	Construction of in-water facilities including a new access pier (8,800 sq ft), pontoon (21,600 sq ft), vessel over-water footprint (12,825 sq ft) and associated mooring components, 102 new steel piles, road improvements to Carlson Spit Access Road, 5 acres of mature forest removed for 23,000 sq ft building, 100 additional workers	Yes	Yes	Yes	Yes	Yes	No	Yes	No
36.	Mission Support Facilities	Addition of 2 new power booms and 2 captivated camels, requires 10 steel piles and results in 5,000 sq ft of over-water shading; installation of emergency power generation capability; less than 3 acres of second-growth land clearing	Yes	Yes	Yes	Yes	Yes	No	No	No
37.	Missile Haul Route Clearing	Clear and thin forested areas along fence and missile haul route, conversion of 43 acres of forest to grassland, thinning of trees and understory on 183 acres, clearing and thinning of vegetation on 2.5 acres of non-jurisdictional wetlands	Yes	Yes	No	No	No	No	No	No
38.	Dredging south side of Delta Pier	Sediment removal of 3,000 cubic yards of sediment	No	No	No	No	Yes	No	No	No
39.	KB Dock Fender Pile Replacement and Concrete/Top Tie Cable Repair	Replace fender pile and repair cable top tie at KB Dock	No	No	No	No	No	No	No	No
40.	Expand Leatherneck Lounge	Add 556 sq ft to Leatherneck Lounge	No	No	No	No	No	No	No	No
41.	Vegetation Clearing for Periscope Target	Remove 35 to 45 alder and Douglas fir trees	Yes	Yes	No	No	No	No	No	No

**Table G–2. Impacts of Past, Present, and Reasonably Foreseeable Navy Projects at NBK–Bangor (Continued)**

	PROJECT NAME	DESCRIPTION	LAND CLEARING	SOIL LOSS	IMPERVIOUS SURFACE	OVER-WATER SHADING	MARINE HABITAT LOSS/ CONVERSION	LONG-TERM WATER QUALITY IMPACTS	LONG-TERM NOISE IMPACTS	LONG-TERM AIR QUALITY IMPACTS
42.	Security Support Facilities	Construction of an Auxiliary Reaction Force Facility (14,000 sq ft), Armored Fighting Vehicle Operational Storage Facility (16,146 sq ft), altering two buildings for a new armory (2,500 sq ft), and replace an Alert Force Garage (2,530 sq ft) with new paved access road; actions would result in up to 11 acres land clearing	Yes	Yes	Yes	No	No	No	No	No
43.	Greenling Road Upgrade	Widening, vertical and horizontal realignment of existing road. 7 acres of land cleared, and 0.5 acre of new impervious surface (new road paving)	Yes	Yes	Yes	No	No	No	No	No
44.	200-car parking lot	Remove approximately 200 trees and grade/pave	Yes	Yes	Yes	No	No	No	No	No
45.	Expansion of Devil's Hole parking lot	Construct 200-car parking lot. Clear 4 acres of cedar, Douglas fir, and grand fir, install subsurface drainage, grade and pave with asphalt	Yes	Yes	Yes	No	No	No	No	No
46.	Mission Support Facilities	Included installation of some floats and piles at Marginal Wharf	No	No	No	Yes	Yes	No	No	No
47.	Transit Protection System, Interim Operational Capability	Extension to existing dock with steel floating pier (293 by 12 feet) with 4 smaller finger piers (two at 120 by 10 feet, and two at 80 by 8 feet); 24 piles, all floats 5 feet in depth and held by sixteen 24-inch diameter piles and eight 30-inch diameter piles; over-water shading of 4,820 sq ft; clearing of ¾ acre second and third growth forested upland vegetation	Yes	Yes	No	Yes	Yes	No	No	No
48.	Military Working Dog Kennel Expansion	Construct stand-alone facility to augment existing dog kennels. New facility to have six kennels and administrative space.	Yes	Yes	Yes	No	No	No	No	No

Table G–2. Impacts of Past, Present, and Reasonably Foreseeable Navy Projects at NBK–Bangor (Continued)

	PROJECT NAME	DESCRIPTION	LAND CLEARING	SOIL LOSS	IMPERVIOUS SURFACE	OVER-WATER SHADING	MARINE HABITAT LOSS/ CONVERSION	LONG-TERM WATER QUALITY IMPACTS	LONG-TERM NOISE IMPACTS	LONG-TERM AIR QUALITY IMPACTS
49.	2008 Magnetic Silencing Facility Repairs	Renovation of eroding portions of the facility to include cable trays under water, decking on pier, and structural cross members	No	No	No	No	Yes	No	No	No
50.	Facilities Engineering and Acquisition Division Construction Support and Other Navy Training Trailers	1 to 5 acres removal of Scot's broom and placing gravel routing utilities for temporary construction trailers.	No	Yes	Yes	No	No	No	No	No
51.	Transit Protection Systems Operation Final Operating Conditions	Remove an existing creosote timber/pile pier and replace with concrete pier; demolish existing upland facility and construct larger facility at the same site; operate approximately 10 escort vessels; install and operate maintenance and fueling capability for vessels	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
52.	Explosives Handling Facility Repair	Repairs of bents and remediation of concrete erosion, requires replacement of 20 to 30 piles	No	No	No	No	Yes	No	No	No
53.	Waterfront Security Enclave and Security Barriers	Creation of enclave fencing in either single or double arrangement enclosing the entire Bangor waterfront, 50 acres land clearing and some wetland disturbance	Yes	Yes	Yes	No	No	No	No	No
54.	Equipment Maintenance Building Addition	Existing 20,376 sq ft equipment maintenance building to be expanded by 6,243 sq ft to accommodate 3 maintenance bays for missile facility transporters; 2 acres land clearing	Yes	Yes	Yes	No	No	No	No	No
55.	Missile Assembly Building	Construction of a new Missile Assembly Building (28,700 sq ft) on previously disturbed and developed land, no clearing required	No	No	No	No	No	No	No	No

**Table G–2. Impacts of Past, Present, and Reasonably Foreseeable Navy Projects at NBK–Bangor (Continued)**

	PROJECT NAME	DESCRIPTION	LAND CLEARING	SOIL LOSS	IMPERVIOUS SURFACE	OVER-WATER SHADING	MARINE HABITAT LOSS/ CONVERSION	LONG-TERM WATER QUALITY IMPACTS	LONG-TERM NOISE IMPACTS	LONG-TERM AIR QUALITY IMPACTS
56.	Waterfront Restricted Area Land Water Security Interface	Construction of a connection between security fencing on water and security fencing on land; less than 1 acre land vegetation clearing	No	No	No	Yes	Yes	No	No	No
57.	Alder tree logging	Cutting alder trees and replanting with western red cedar; up to 5 acres converted to conifer forest	Yes	Yes	No	No	No	No	No	No
58.	Explosives Handling Wharf #2	235,000 sq ft over-water structures with installation of 1,200 piles; over-water shading of about 4,630 square feet of eelgrass; 5 acres land clearing, 3 acres of parking, up to 5 acres of impervious surface depending on alternative chosen	Yes	Yes	Yes	Yes	Yes	No	No	No
59.	Transit Protection System/Port Operations Facilities Wharf	Includes removal of 50,000 sq ft over-water structures and approximately 400 piles, addition of 53,500 sq ft over-water structures and approximately 800 piles; 11.4 acres land clearing	Yes	Yes	Yes	Yes	Yes	No	No	No
60.	Missile Motor Inspection Building	Construct 18,800 sq ft building for assembly, disassembly, and inspection of missile motors; <1 acre land clearing	Yes	Yes	Yes	No	No	No	No	No
61.	Waterfront Security Barriers	Construct reinforced concrete barriers within the waterfront restricted area	No	No	No	No	No	No	No	No
62.	ESS Sustainment Facility	Construct Security Systems Sustainment facility, paving and site improvements including roadway access; do not yet know disturbance area because site has not been selected	Unknown, site not selected	Unknown, site not selected	Unknown, site not selected	No	No	No	No	No
63.	Security Force Training Facility	Construct Security Force Training Facility, sidewalks, roadway access, approximately 2 acres disturbed	Yes	Yes	Yes	No	No	No	No	No

Table G–2. Impacts of Past, Present, and Reasonably Foreseeable Navy Projects at NBK–Bangor (Continued)

	PROJECT NAME	DESCRIPTION	LAND CLEARING	SOIL LOSS	IMPERVIOUS SURFACE	OVER-WATER SHADING	MARINE HABITAT LOSS/ CONVERSION	LONG-TERM WATER QUALITY IMPACTS	LONG-TERM NOISE IMPACTS	LONG-TERM AIR QUALITY IMPACTS
64.	Armored Fighting Vehicle Support Facility	Construction of an Armored Vehicle Support Facility (8,170 sq ft); on existing parking lot with parking replaced at a nearby lot; < 1 acre land clearing	Yes	Yes	Yes	No	No	No	No	No
65.	EHW Security Force Facility	Construct 10,920 sq ft facility for security force	Yes	Yes	Yes	No	No	No	No	No
66.	Limited Area Emergency Generator System	Construct 9,225 sq ft building to house two 2.5 megawatt generators; no land clearing required	No	Yes	Yes	No	No	No	Yes	Yes
67.	Reaction Force Facility Communication Addition	Addition to SWFPAC Limited Area Reaction Force Facility (4,600 sq ft), and additional garage space, alteration of existing access for facility; 1 to 2 acres land clearing	Yes	Yes	Yes	No	No	No	No	No
68.	Waterfront Restricted Area Emergency Power	Construct facility (7,353 sq ft) and relocate power lines at the waterfront; area disturbed < 0.5 acre	Yes	Yes	Yes	No	No	No	Yes	Yes
69.	Harden Waterfront Security Force Facility #1	Construct a high security barrier around the Harden Waterfront Security Force Facility #1	Yes	Yes	Yes	No	No	No	No	No
70.	Harden Waterfront Security Force Facility #2	Construct a high security barrier around the Harden Waterfront Security Force Facility #2	Yes	Yes	Yes	No	No	No	No	No
71.	SISS Permanent Facility	Construction of a waterfront operations building with an enclosed ashore pool area; 0.5 acre of forested land would be cleared	Yes	Yes	Yes	No	No	No	No	No
72.	Harden Auxiliary Reaction Force Facility	Construct a high security barrier around the ARFF; 4 acres land clearing	Yes	Yes	Yes	No	No	No	No	No

**Table G–2. Impacts of Past, Present, and Reasonably Foreseeable Navy Projects at NBK–Bangor (Continued)**

	PROJECT NAME	DESCRIPTION	LAND CLEARING	SOIL LOSS	IMPERVIOUS SURFACE	OVER-WATER SHADING	MARINE HABITAT LOSS/ CONVERSION	LONG-TERM WATER QUALITY IMPACTS	LONG-TERM NOISE IMPACTS	LONG-TERM AIR QUALITY IMPACTS
73.	Utility Improvements	Power and water utility improvements – but no site specified	Unknown, site not selected	Unknown, site not selected	Unknown, site not selected	No	No	No	No	No
74.	Replace EHW #1	In-place replacement of the existing EHW	No	No	No	Yes	Yes	No	No	No
75.	Missile Haul Road Upgrade	Upgrade the existing structural cross sections of the 38,000 lineal feet of haul road to sustain higher loads	Yes	Yes	Yes	No	No	No	No	No
76.	Enclosed Motor Transfer Facility	Construction of an addition to the Motor Transfer Facility (1,830 sq ft) and enclosing the existing facility (9,903 sq ft); less than 0.6 acre land clearing	Yes	Yes	Yes	No	No	No	No	No
77.	Northwest Training Range Complex/ Overseas EIS	Increase in underwater military range activities including areas in Hood Canal, noise effects	No	No	No	No	No	No	Yes	No
78.	Port Security Barrier Relocation	Project will realign existing floating fence to improve operations and security; impacts limited to temporary turbidity increase due to anchor relocation	No	No	No	No	Yes	No	No	No
79.	Mooring Point Installation	Temporary turbidity increase due to anchor installation; no impact to eelgrass beds or salmon migration route	No	No	No	No	Yes	No	No	No
80.	Seawall repairs along Sea Lion Road	Installation of sheet pile or small wedge of one-man armor rock to buttress existing seawall; sheet pile would be placed 1 to 2 feet waterward of existing seawall; armor rock would be placed in a 5-foot wide area immediately waterward of existing seawall; project is 447 feet long and would be constructed in the upper-intertidal zone	No	No	No	No	Yes	No	No	No

