



## Chapter 2: Proposed Action



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## **2 PROPOSED ACTION**

Border protection requires a multilayered approach that uses facilities; technologies for communication, detection, inspection, and surveillance; and land-based security infrastructure to support U.S. Customs and Border Protection (CBP) law enforcement personnel in carrying out their duties. To provide the needed flexibility to protect the Northern Border against evolving threats over the next five to seven years, CBP proposes enhancements to the combination of security resources it employs to respond to existing and evolving cross-border threats. CBP would seek to modify its deployment of facility, technology, and land-based security infrastructure as necessary to enable its agents, officers, specialists, and supporting personnel to pursue effective control of air, land, and sea borders between the United States and Canada. Under this proposal, CBP is evaluating alternative programmatic approaches to respond to evolutions in terrorist and criminal activity, as well as public safety concerns, with the potential to enter the United States through its Northern Border. These alternative approaches effectively may change the pace of CBP operations and increase CBP’s inventory of physical assets.

The main activity elements of the proposed action would support the operations of CBP’s law enforcement components: Office of Field Operations (OFO), United States Border Patrol (USBP), and the Office of Air and Marine (OAM).

This Programmatic Environmental Impact Statement (PEIS) does not analyze a specific Department of Homeland Security (DHS) strategic framework for Northern Border security, but it would support CBP’s implementation of relevant portions of any strategic initiatives. The specific combination of elements for Northern Border security that CBP will use in the next several years will be developed over time and in response to the security environment. Therefore, the extent to which CBP might add new facilities, or add more technologies, or intensify various operations, and so on, will be the subject of ongoing planning. When individual projects or program elements with the potential to significantly impact the environment are ripe for proposal and assessment, CBP will continue to conduct appropriate project-specific National Environmental Policy Act (NEPA) analysis. This PEIS will not generally have the specificity of analysis to preclude the need for further analysis to identify site-specific impacts. However, it will address the combined impacts of CBP Northern Border activities, and provide information that may be referenced in NEPA analysis for future specific projects. This PEIS also will present recommended best management practices and mitigations for consideration in future planning for CBP projects along the Northern Border.

### **2.1 PROPOSED ACTION ALTERNATIVES**

NEPA regulations require that government agencies rigorously explore reasonable alternative approaches to meet the purpose of their proposed actions that would have less adverse effect on the environment.

The proposed action alternatives addressed within this PEIS analyze reasonable foreseeable changes to CBP’s Northern Border security program, which, as stated above, will evolve and change based on external threats and security priorities. Given the diversity and changing nature of border security threats, the number of combinations of enhanced border security measures that CBP could potentially undertake is very large. It would not be feasible to identify and analyze

1 all such possible combinations of increased facilities, enhanced technologies, and other factors  
2 within this document. CBP has therefore determined that it should analyze a range of  
3 alternatives which covers the full range of  
4 foreseeable changes to CBP’s program  
5 activities over the next five to seven years.  
6 Each alternative emphasizes an aspect of the  
7 CBP “toolkit” that enables CBP personnel to  
8 effectively secure the border. While CBP  
9 could not rely solely on one set of tools to  
10 secure the border, the alternatives examined  
11 within this PEIS provide a reasonable basis  
12 for comparing allocations of resources and  
13 resulting impacts from those allocations.  
14 CBP has identified the following alternatives  
15 for comparison under the proposed action:

- 16 • increased focus on improving  
17 availability of facilities to support  
18 CBP law enforcement personnel  
19 executing their duties;
- 20 • increased emphasis on deploying  
21 communication, detection, inspection,  
22 and surveillance technologies and  
23 operations;
- 24 • increased deployment of tactical security infrastructure; or
- 25 • a combination of these approaches, with elements from any of the three.

26 These alternative program directions offer a reasonable “envelope” for analyzing the impacts of  
27 the existing, planned, and foreseeable Northern Border Program elements. They would allow  
28 CBP to continue to deploy the existing CBP personnel in the most effective manner while  
29 maintaining officer safety. Under each of the alternatives, CBP would continue to conduct  
30 current activities such as enhancing partnerships with other government agencies and  
31 maintaining current assets. In addition, personnel increases, as a function of normal Agency  
32 growth, would likely occur over the next five to seven years under the proposed action  
33 alternatives. Additional personnel would also likely be deployed in cases where the pace of  
34 operations was increased for extended periods. CBP might accomplish these increases through  
35 redeployment of the existing workforce or by acquisition of new personnel.

36 The impacts of whatever specific combination of actions CBP would decide to implement over  
37 time will be contained within the “envelope” of impacts discussed in this study. The results of  
38 this study will provide useful input to CBP’s planning process, helping to identify environmental  
39 considerations that are of most concern, given any given combination of actions that CBP could  
40 choose to implement, and help to identify what best practices it should employ and when it needs  
41 to consider mitigating measures.

<b>Alternatives Analysis</b>
The NEPA regulations (40 CFR 1502.14 [a]) require agencies to “... rigorously explore and objectively evaluate all reasonable alternatives” for meeting the agency’s purpose and need for taking action. For alternatives which were eliminated from detailed study, the agencies must briefly discuss the reasons for their having been eliminated.” DHS Directive 023.01 states that the Department will “ensure that appropriate environmental planning, including the analyses and documentation required by NEPA, is completed before the Proponent makes a decision that has adverse environmental effects or limits the choices of alternatives to satisfy an objective, fix a problem, or address a weakness.”
The directive further states that “No action or portion of an action that is the subject of an EA or EIS process will be taken that limits reasonable alternatives, involves a conflict of resource use, or has an adverse environmental effect until the Record of Decision (ROD) or Finding of No Significant Impact (FONSI) has been made public.”

1 This analysis of potential directions allows for comparison of the impacts of new or modified  
2 facilities, new technology, or additional infrastructure in different geographic settings. CBP will  
3 use the results of the PEIS process (including the results of public comments) in conjunction  
4 with intelligence on the changing threat environment and budgetary considerations, to inform  
5 planning for appropriate facilities, technologies, and tactical infrastructure needed for the  
6 Northern Border over the next five to seven years.

### 7 **2.1.1 DESCRIPTIONS OF ALTERNATIVES**

- 8 • **No Action Alternative:** NEPA regulations require analysis of a No Action Alternative  
9 (40 CFR 1502.14(d)). In a situation such as this where an agency has an ongoing  
10 program of actions, the meaning of “No Action” is that the agency would make no  
11 changes in its current program. That is, it would maintain the status quo. Thus, CBP  
12 would continue the current level of operations with approximately the same manpower.  
13 The No Action Alternative would include routine maintenance and repairs of facilities,  
14 equipment, and technology (including commercial upgrades of equipment presently in  
15 use as these become available). An important part of CBP’s overall strategy is to partner  
16 with other law enforcement agencies of the United States, as well as Canada and other  
17 international partners in order to build a shared commitment to border security and  
18 facilitation and to respond to situations more quickly and efficiently. These partnerships  
19 can help reduce the need for increases in staffing, technology, and infrastructure for any  
20 participating agency. The use of partnerships is a direction that is practiced, and will  
21 continue to be practiced, no matter what potential alternative direction CBP chooses to  
22 follow.
- 23 • **Facilities Development and Improvement Alternative:** The Facilities Development  
24 and Improvement Alternative would focus on replacing or providing new permanent  
25 facilities, such as Border Patrol stations, housing, and other facilities and making major  
26 modifications to permanent facilities, such as ports of entry (POEs), to allow CBP agents,  
27 officers, and agricultural specialists to operate more efficiently and respond to situations  
28 more quickly. USBP agents in some locations are currently operating out of leased  
29 space—Federal, state, or county government buildings, other law enforcement agency  
30 buildings—or from space that is exceeding capacity. Many of the POE inspection  
31 facilities along the Northern Border have high traffic volume and operate 24 hours per  
32 day, 365 days per year in extreme climates. As a result, they undergo considerable wear  
33 and tear. These facilities, built for a different era of operations, are poorly configured to  
34 support CBP’s evolving trade facilitation and antiterrorism mission. A number of POEs  
35 need to be replaced or extensively upgraded, which will involve major construction.  
36 Included also in this alternative is the construction of semi-permanent and temporary  
37 facilities, such as forward operating bases, temporary housing (where local housing stock  
38 may not be readily available), checkpoints, and other facilities necessary to support CBP  
39 law enforcement agents and officers as they carry out operational duties. This alternative  
40 is considered reasonable and its impacts are assessed throughout this document. It would  
41 help meet the need for the proposed action in that it would make it more difficult for  
42 cross-border violators to cross the border between POEs. It would also divert traffic from  
43 or increase the capacity of the more heavily used POEs, which would decrease waiting  
44 times.

- 1       • **Detection, Inspection, Surveillance, and Communications Technology Expansion**  
2       **Alternative:** The Detection, Inspection, Surveillance, and Communications Technology  
3       Expansion Alternative would focus on increased patrol activity and deploying more and  
4       better technologies to support CBP’s detection, inspection, and surveillance capabilities  
5       and operational communications. It would include either hiring additional USBP and  
6       OAM agents or shifting these agents from the other borders, to conduct surveillance and  
7       respond to situations. It would include improvements to the identification and inspection  
8       technologies used by OFO. It would also include continuing deployment of integrated  
9       remote video surveillance system (RVSS) systems and plans such as fielding upgraded  
10      surveillance and telecommunications systems (e.g., remote sensors, short-range radar,  
11      remote and mobile video surveillance and communications systems, new camera systems,  
12      and upgrades to stationary communications systems) that would improve CBP’s  
13      situational awareness and allow it to more efficiently and effectively direct its resources  
14      for cross-border violator interdiction. It is considered reasonable and its impacts are  
15      assessed throughout this document.
- 16      • **Tactical Security Infrastructure Deployment Alternative:** The Tactical Security  
17      Infrastructure Deployment Alternative would focus on expanding access roads and  
18      related facilities to increase the mobility of Border Patrol agents for surveillance and  
19      response and constructing additional barriers, such as selective fencing or vehicle  
20      barriers, at selected points along the border to deter and delay cross-border violators.  
21      This alternative would hinder cross-border violators and improve CBP’s ability to  
22      respond quickly and effectively. This alternative is considered reasonable and its impacts  
23      are assessed throughout the document.
- 24      • **Flexible Direction Alternative:** The Flexible Direction Alternative would allow CBP to  
25      implement any of the above program changes based on what CBP deems to be the most  
26      effective way to respond to the changing threat environment along the Northern Border.  
27      It is impossible to predict what combination of the above alternatives is likely to be  
28      needed at any time, and the needed mix is likely to change constantly because the threat  
29      environment changes constantly. Therefore, CBP is assessing the maximum scope of  
30      impact that might result from selecting this alternative as the sum of the impacts that  
31      would result from full implementation of all three alternatives.

## 32   **2.2   ACTIVITIES TO BE EVALUATED**

33   Because this is a programmatic EIS, a detailed description, and therefore a complete assessment,  
34   of the specific impacts of individual actions at specific locations is beyond the scope of this  
35   effort. As discussed above, CBP cannot know at this time exactly what or how many specific  
36   activities it will need to undertake in the next five to seven years; threats to the Northern Border  
37   are much more dynamic than that, and can change almost daily. CBP can only foresee the  
38   general types of activities it will need to employ.

39   Table 2.2-1 summarizes the basic construction and operation categories of CBP actions, both  
40   current and proposed.

**Table 2.2-1. CBP Activities**

Basic Activity	Separate Activity
Construction	Modification to ports of entry (POE) <sup>1</sup> Repairs and maintenance of existing POEs <sup>1</sup> Construct or modification to USBP station <sup>1</sup> Repairs and maintenance of existing USBP stations <sup>1</sup> Construct communications towers Small additions to OAM facilities Construct new forward operating bases Construct pedestrian or vehicle fences or other physical barriers Construct access roads, drag roads, bridges, culverts, and low-water crossings
Operations	Trade and travel processing at POEs (includes the various inspection and processing operations.) Ground surveillance and situational response activities (motorized and nonmotorized, use of unattended ground sensors (UGS) and other technology) Traffic checkpoint activities Aircraft surveillance and situational response activities Maritime surveillance and situational response activities Use of NII systems Use of other detection systems Repair and maintenance of NII, surveillance, and support equipment <sup>2</sup>

2 <sup>1</sup>Repairs and maintenance do not include modernization, which often involves demolition of the existing structure  
 3 and construction of a new and often larger structure. Repairs and maintenance include structural and interior repairs  
 4 to buildings, access roads, and parking lots. Modification can include large alterations to structures, but not one-for-  
 5 one replacement.

6 <sup>2</sup>Includes repairs to vehicles, aircraft, vessels, and support infrastructure.

7 For clarity of the impact assessment, this PEIS has also organized activities into smaller subsets  
 8 of “impact categories,” such as large versus small construction projects, ground versus air  
 9 operations, motorized versus nonmotorized ground operations, etc., as shown in Table 2.2-2.

10 For example, construction of or modification to a USBP station is likely to be similar to that of  
 11 other facilities in many respects. They all involve clearing, grading, and (if the facility is  
 12 constructed at a previously undisturbed location) long-term changes in vegetation. What would  
 13 vary in terms of impact would be the size of the facility and the existing environment at the  
 14 location where it is constructed. All construction projects would involve operation of  
 15 construction machinery that would generate air emissions and noise, as well as potentially  
 16 disrupting traffic if in a busy location.

**Table 2.2-2. Categories of Activities for Impact Assessment**

<b>Category</b>	<b>Includes</b>
Small construction projects (Footprint < 1 acre; length < 1/4 mile)	Repairs and maintenance or minor modification to existing POEs, USBP stations Small building or parking expansions, upgrades in septic or storm water systems, sheds, etc. Access road extensions, upgrades, repairs Technology support infrastructure such as RVSS and radio communications towers Security infrastructure such as fencing
Large construction projects (Footprint > 1 acre; length > 1/4 mile)	New facilities and major modifications (including major modifications to existing Border Patrol stations or POEs, modernization to existing standards, and may also include demolition of existing structures and construction of new structures). Helipads are rolled into considerations for new USBP stations Access road extensions, upgrades, repairs Security infrastructure such as fencing
Small POE trade and travel processing operations	All operations at POEs or fixed checkpoints < 10,000 – crossings/day
Large POE trade and travel processing operations	All operations at POEs or fixed checkpoints > 10,000 crossings/day
Off-site trade and travel processing operations	Temporary checkpoints Off-site inspections
Ground operations	Motorized: all-terrain vehicles, snowmobiles, sport-utility vehicles, and other vehicles
	Nonmotorized: foot patrols and horses
Aircraft operations	All aircraft, including unmanned aerial systems (UAS).
Vessel operations	All vessels
Operation of NII systems	All non-intrusive scanning and detection systems
Operation of sensor and other technologies	UAS, RVSS/mobile surveillance systems, short-range radar, passive acoustic detection systems

### **Roughly Measured**

Throughout this PEIS, many numbers and measurements are expressed in rough terms, often with a “plus or minus” notation to emphasize that the number shown is meant as an estimate, not as an exact minimum or maximum. Many numbers are rounded to further emphasize that they are not exact specifications. A quantity expressed as “221” implies an exact number, while “200” implies only that the quantity is closer to 200 than it is to 100 or to 300. Although having exact numbers in some cases is desirable, the reality for CBP, as in everyday life, is that most quantities are known only roughly).

Using approximations and estimates like this is in keeping with the programmatic nature of this planning and analysis effort.

1 Operations of the facilities, due to their different  
2 natures, would vary. Operation of a POE (trade  
3 and travel processing) involves the public in a very  
4 different way than does a USBP station. Visitors  
5 and cargo must be processed through a POE, while  
6 operation of a USBP station essentially does not  
7 directly involve the public—the station is merely a  
8 base of operations for the agents. USBP  
9 operations are conducted along the border,  
10 generally away from the station. On the other  
11 hand, operation of either type of facility is likely to  
12 generate secondary beneficial impacts, such as  
13 employment and spinoff benefits to  
14 local economies, as well as adverse impacts on the  
15 local public, as in increasing vehicle traffic on  
16 local roads.

17 Impacts from surveillance operations are  
18 dependent on the type of operation (motorized  
19 versus nonmotorized, air versus ground, among others).

20 Inherent in the two basic categories of construction and operations are basic repair and  
21 maintenance activities associated with any kind of infrastructure or equipment. These include  
22 minor repairs and maintenance of buildings, parking lots, and roadways; landscaping; oil  
23 changes for ground vehicles, aircraft, and vessels; and others. Relevant activities are evaluated  
24 by alternative.

25 This PEIS does not evaluate the closure of any existing POEs or Border Patrol stations because  
26 closing facilities is not considered to be a reasonably foreseeable means of meeting the purpose  
27 and need of the proposed action. Unlike the choices about allocations of resources discussed in  
28 this study, closures do not inherently improve border security or facilitate trade and travel. If  
29 closure of POE or a Border Patrol station becomes ripe for consideration because of a need  
30 outside the scope of this PEIS, it would be analyzed individually through a site-specific NEPA  
31 document and an independent NEPA process.

### **2.3 NO ACTION ALTERNATIVE**

33 Under the No Action Alternative, CBP would anticipate annual allocations of resources over the  
34 next five to seven years sufficient to (1) continue the current level of operations and (2) continue  
35 maintaining and repairing existing facilities, technology, and infrastructure in support of the  
36 three law enforcement components. CBP would continue to implement the measures described  
37 in section 1.2 at approximately their current levels.

38 Table 2.3-1 shows the approximate current infrastructure and levels of activities by region.

1

**Table 2.3-1. Current Activity Levels by Region—No Action Alternative**

Category	West of the Rockies	East of the Rockies	Great Lakes	New England
Number of small construction projects currently underway or in planning (e.g., parking lot repairs, access road repairs)	20 ±	20 ±	20 ±	20 ±
Number of large construction projects currently underway or in planning (e.g., access road repairs)	15 ±	15 ±	15 ±	15 ±
Number of small on-site trade and travel processing operations (no. POEs with < 10,000 crossings/day) <sup>1</sup>	20 ±	30 ±	10 ±	20 ±
Number large on-site trade and travel processing operations (no. POES > 10,000 crossings/day)	1	0	3	0
Checkpoints operations (per day)	100 ±	100 ±	100 ±	100 ±
Ground operations/day (motorized) <sup>2</sup>	800 ±	800 ±	800 ±	800 ±
Ground operations/day (nonmotorized)	150 ±	150 ±	150 ±	150 ±
Aircraft operations (number/day)	15 ±	20 ±	20 ±	15 ±
Vessel operations (number/day)	14 ±	5 ±	42 ±	16 ±
Operation of NII systems (hours/day)	1,000 ±	1,000 ±	1,000 ±	1,000 ±
Operation of sensor and other technologies	1,500 ±	1,500 ±	1,500 ±	1,500 ±

2 <sup>1</sup>Includes only those POEs within 100 miles of the Northern Border.

3 <sup>2</sup>Motorized operations range from about 2 to about 200 miles and average 50 miles; of these, approximately 65  
4 percent occur on established roads and about 35 percent occur off-road.

5 In Table 2.3-1, the construction projects represent those projects that CBP has already  
6 programmed and that have been addressed (or are in the process of being addressed) by separate  
7 NEPA documents. CBP currently has approximately 40 POE projects programmed, ranging  
8 from renovations and alterations to complete facility replacements.<sup>1</sup> It currently has more than  
9 65 USBP projects programmed, ranging from landscaping and expansion of parking, housing for  
10 radio repeater sites, and other minor construction, to complete new stations in a new location.  
11 NEPA documents for these projects are or will be available through libraries local to the project  
12 locations. Many of these projects were funded under the American Recovery and Reinvestment  
13 Act of 2009 (ARRA). These projects are considered part of the No Action Alternative because  
14 they are already under way or are advanced in the planning process. Determinations regarding

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<sup>1</sup> For the purposes of this analysis, POEs referenced in the No Action Alternative of this PEIS include those already being undertaken by CBP and those undertaken by the U.S. General Services Administration in response to requirements defined by CBP.

1 the need for these projects have already been made and site-specific NEPA analysis will inform  
2 site-specific planning decisions.

3 The trade and travel processing operations in Table 2.3-1 represent the full range of typical  
4 activities at a POE on a daily basis. These include processing of visitors and inspection of cargo  
5 for anomalies (smuggled drugs or other contraband or human trafficking). These inspections  
6 employ nonintrusive/nondestructive inspection and detection technologies and other means (e.g.,  
7 canine teams).

8 Ground operations are defined as one agent on one “patrol,” that is, a trip out and back via  
9 motorized or nonmotorized means. Aircraft and vessel operations are defined differently: a take-  
10 off and a landing represent two operations, while a landing for rescue operations or an  
11 interdiction would constitute a third operation.

12 As discussed previously, the levels of operations within CBP are not constant. They can vary  
13 considerably over periods of days, weeks, and months. This and subsequent tables and  
14 discussions therefore focus on the foreseeable peak levels for some period of time. This means  
15 that for much of the time, the activity levels are lower, perhaps much lower, than the numbers  
16 shown in the tables. The impacts to be discussed in subsequent chapters are based on these  
17 conservatively high estimates of activities. Therefore, the analyses represent the greatest  
18 reasonably foreseeable level of effects, and intentionally somewhat overstate the typical levels of  
19 effects that would be experienced at any particular time or place.

## 20 **2.4 FACILITIES DEVELOPMENT AND IMPROVEMENT** 21 **ALTERNATIVE**

22 Under the Facilities Development and Improvement Alternative, CBP would leverage its funding  
23 and resources to securely and efficiently process trade and cargo at POEs. Additionally, CBP  
24 would leverage funding and resources to ensure adequate space for current and projected force  
25 and checkpoint capacity for USBP agents.

26 CBP does not foresee the development of new land POEs, referred to henceforth as “border  
27 piercings,” at locations without existing crossings. CBP would make or initiate major  
28 modifications equivalent to large construction to existing POEs if needed to meet operational  
29 needs. The overall staffing levels of officers would change as needed to meet the purpose of the  
30 expansion or new facility within existing financial resources.

31 CBP would anticipate construction of new Border Patrol stations or modernization or  
32 replacement of existing stations under this alternative. Many USBP sector personnel are  
33 currently operating from leased space that is shared with other law enforcement agencies, or in  
34 space that the Agency has outgrown. The construction of new stations or improvements to  
35 existing stations would enhance USBP’s ability to respond to cross-border violators and other  
36 law enforcement situations. CBP would also construct new permanent and temporary FOBs and  
37 other temporary facilities under this alternative.

38 Because OAM leases its space from both military and commercial airfields or airports, or marina  
39 berths and commercial space from government (e.g., U.S. Coast Guard) or commercial marinas,  
40 it does not foresee a construction program in the near future. While it maintains a base of

1 operations in the various cities, towns, or regions shown, it will shift its specific location in  
2 response to better rental prices.

3 Many of the future CBP construction projects considered under this alternative would be  
4 considered small, and many would likely be covered under CBP categorical exclusions  
5 (CATEXs). Potentially applicable CBP categorical exclusions include those CATEXs listed in  
6 the D and E categories of Appendix D.

7 Table 2.4-1 shows by geographic region the approximate activity levels that the Facilities  
8 Development and Improvement Alternative would address. These represent totally new projects  
9 that are not yet being programmed or are very early in the programming process.

10 **Table 2.4-1. Anticipated Activity Levels by Region<sup>1</sup>—Facilities Development and**  
11 **Improvement Alternative**

Category	West of the Rockies	East of the Rockies	Great Lakes	New England
Number small construction projects (various) <sup>1,2</sup>	30 ±	30 ±	30 ±	30 ±
Number large construction projects (USBP stations, other facility construction or major modification) <sup>1,2</sup>	20 ±	20 ±	20 ±	20 ±

12 <sup>1</sup>Next 5–7 years.

13 <sup>2</sup>These numbers represent new projects, beyond those already planned (shown in Table 2.2-1).

## 14 **2.5 DETECTION, INSPECTION, SURVEILLANCE, AND** 15 **COMMUNICATIONS TECHNOLOGY EXPANSION** 16 **ALTERNATIVE**

17 Under the Detection, Inspection, Surveillance, and Communications Technology Expansion  
18 Alternative (Detection/Inspection Alternative), CBP would leverage its funding and resources on  
19 more USBP and OAM surveillance operations and greater use of technological security tools,  
20 such as RVSS, short-range radars, ground sensors, unmanned aerial systems, and the various  
21 types of scanning technologies for vehicle and cargo inspections (see box). CBP would continue  
22 to evaluate commercial off-the-shelf (COTS) applications for their utility for the following  
23 purposes:

- 24 • Processing visitors and cargo more rapidly while maintaining strict security using more  
25 and improved PRDs, RIDs, and NII tools, such as high-energy container scanners and  
26 full-body scanners (see box). (CBP completed a programmatic Environmental  
27 Assessment (EA) on the deployment of various types of NII technology in 2009 and  
28 recently published EAs for the use of high-energy scanners for both cargo and people.)

## **Detection, Inspection, Surveillance, and Communications Technology Systems and Tools**

### **Vehicle and Cargo Inspection System**

This is a gamma-ray backscatter imaging system used for inspecting cargoes. It can be delivered as a portal for POEs or mounted on a truck to be used at multiple, temporary, and/or remote locations. The truck-mounted system can be especially useful for those situations where the container itself is fixed, such as a railroad car.

### **High-Energy X-Ray Imaging Scanners**

High-energy imaging scanners scan a passenger by rastering or moving a single high-energy X-ray beam rapidly over the body. The signal strength of detected backscattered X-rays from a known position then allows a highly realistic image to be reconstructed (EPIC, 2010).

### **Innovative Wireless Technologies**

This unattended sensor system includes integrated acoustic sensors for detection of low flying aircraft and other targets. It reliably scales from a small, focused target to a nationwide network. The components fit into small plastic containers (approximately 3 feet on side) and a small antenna (several feet), which can be set on the ground surface.

### **Acoustic Air Surveillance System**

The Acoustic Air Surveillance System consists of a set of sensor nodes and a central processing server. The components consist of COTS hardware such as microphones, antennas, solar panels, battery, and a pelican (weatherproof) or similar case. The microphones and antennas are generally mounted on camera tripods.

### **OmniSense Sensor System**

This is an integrated sensor package that includes unattended ground sensors, surveillance cameras, rugged hand-held programmer/ monitor, repeaters, and a display unit. OmniSense CORE activity detection units can signal imaging sensor units to take pictures when activity is detected.

### **Low-Flying Aircraft Passive Acoustic Detection System**

The LPADS is a network of appropriately-located microphone array units. When two or more units detect the same source, a three-dimension, real-time track of the source is produced. The microphone units are small and lightweight, and can be powered by batteries and solar cells.

- 1       • Providing the Common Operating Picture for increased situational awareness to all CBP  
2       components. The CBP Office of Technology Innovation and Assessment (OTIA) is  
3       evaluating several passive acoustic air surveillance systems, using innovative wireless  
4       technologies to integrate unattended ground sensors (UGS) with surveillance cameras and  
5       repeaters, for detection of low-flying aircraft (including ultra-lights), and using short  
6       range radars. Most of these applications involve combining commercial-off-the-shelf  
7       technology in new ways to address specific needs.

8       The possible consequences of this alternative would be (1) a reduction in wait times at POEs; (2)  
9       an increase in the rate and amounts of materials confiscated that would have to be transported,  
10      analyzed, and properly disposed of; (3) an increase in the interdiction of cross-border violators  
11      and therefore the need for detention; (4) the need for additional support infrastructure in the form  
12      of poles, towers, and access roads (for maintenance) in many locations; and (5) more focused,  
13      more effective CBP operations.

14      To the extent practicable, CBP would use existing structures—buildings and towers with  
15      appropriate heights, or share towers with other law enforcement agencies—for mounting  
16      antennas and RVSS, to reduce the overall impacts of tower, pole, and access road construction.

1 (An example of this is the plan by Houlton Sector to collocate upgrades to their radio  
 2 communications system with the Maine State Police and to use existing towers where  
 3 practicable.) The Detection/Inspection Alternative could also lead to an increase in the  
 4 deployment of military and National Guard engineering units or private contractors to construct  
 5 towers, poles, and access roads for maintaining surveillance systems, and whatever other  
 6 infrastructure would be required for new equipment (e.g., fixed mounts for the vehicle high-  
 7 energy scanning systems). The deployments would also be needed to install and maintain more  
 8 underground sensors.

9 As new technological tools are introduced through the CBP agencies for national use, these tools  
 10 are addressed by specific NEPA documents. In addition, the use of tools currently available  
 11 would increase under this alternative. Potentially applicable CBP categorical exclusions include  
 12 B1, B3, B8, B9, D1, D4, E1, E2, and F series CATEXs as listed in Appendix D.

13 Table 2.5-1 shows approximate activity levels by the geographic regions that the  
 14 Detection/Inspection Alternative would address.

15 **Table 2.5-1. Anticipated Activity Levels by Region— Detection, Inspection, Surveillance,**  
 16 **and Communications Technology Expansion Alternative**

Category	West of the Rockies	East of the Rockies	Great Lakes	New England
Small construction projects (towers and other infrastructure to mount antennas, etc.) <sup>1</sup> .	100 ±	100 ±	100 ±	100 ±
No. of ground operations/day (motorized) <sup>2</sup>	1,300 ±	1,300 ±	1,300 ±	1,300 ±
No. of ground operations/day (nonmotorized)	200 ±	200 ±	200 ±	200 ±
Aircraft operations (number/day) <sup>2</sup>	23 ±	30 ±	30 ±	23 ±
Vessel operations (per day) <sup>2</sup>	21 ±	10 ±	63 ±	24 ±
Operation of NII systems (hours/day)	1,500 ±	1,500 ±	1,500 ±	1,500 ±
Operation of Sensor and Other Technologies (hours/day)	2,500 ±	2,500 ±	2,500 ±	2,500 ±

17 <sup>1</sup>These are new projects, beyond those already planned (Table 2.2-1).

18 <sup>2</sup>These numbers represent the total level of operations.

19 **2.6 TACTICAL SECURITY INFRASTRUCTURE DEPLOYMENT**  
 20 **ALTERNATIVE**

21 Under the Tactical Security Infrastructure Deployment Alternative, CBP would leverage its  
 22 funding and resources to construct more fences and other barriers to prevent illegal border  
 23 crossings. While fencing has played a prominent role in CBP’s enforcement strategy on the  
 24 Southern Border to deter illegal border crossings, it is unlikely that fencing will play as  
 25 prominent a role on the Northern Border, given the length of the border and the variability of the

1 terrain. However, CBP would use fencing and other barriers to manage movement (e.g.,  
2 trenching across roads) in trouble spots where passage of cross-border violators is difficult to  
3 control; the resulting delay for cross-border violators would increase the rate of interdiction.

4 This alternative would also include upgrades to roadways and trails proximate to the border or  
5 construction of new roadways to access CBP facilities and infrastructure. The lack of roads or  
6 presence of unmaintained roads impedes efficient surveillance operations. Improving or  
7 expanding the roadway and trail networks could improve mobility, allowing agents to patrol  
8 more miles each day and shortening response times. For those areas that have become  
9 impassible, infrastructure improvements would include construction of new or repair of existing,  
10 bridges, culverts, low-water crossings, gabions, and water bars. This alternative would also  
11 include remediation of tunnels as they are discovered.

12 Table 2-6 shows approximate activity levels by the geographic regions that the Tactical Security  
13 Infrastructure Deployment Alternative would address. Once again, these represent new projects  
14 that have not already been programmed or addressed by specific NEPA documents.

15 This alternative would lead to an increase in deployments of military and National Guard  
16 engineering units, as well as private contractors, to construct roadways, trails, fencing, barriers,  
17 and trench cuts. Potentially applicable CBP categorical exclusions include B9, D1, D3, E, E6,  
18 K1, and K2 as listed in Appendix D.

19 **Table 2.6-1. Anticipated Activity Levels by Region—Tactical Security Infrastructure**  
20 **Deployment Alternative**

Category	West of the Rockies	East of the Rockies	Great Lakes	New England
Small construction projects (trench cuts, towers, minor access roads and fences < 1/4 mile) <sup>1</sup>	30 ±	30 ±	30 ±	30 ±
Large construction projects (access roads and fences > 1/4 mile) <sup>1</sup>	5 ±	5 ±	5 ±	5 ±

21 <sup>1</sup>These are new projects, beyond those already planned (Table 2.2-1).

## 22 **2.7 THE FLEXIBLE DIRECTION ALTERNATIVE**

23 The Flexible Direction Alternative would include elements of any or all the above action  
24 alternatives. Because it is impossible to predict the mix of each of the other potential program  
25 directions, CBP is assessing the maximum envelope of impact that might result as shown in  
26 Table 2.7-1, which represents full implementation of all three action alternatives.

1 **Table 2.7-1. Anticipated Activity Levels by Region—Flexible Direction Alternative**

Category	West of the Rockies	East of the Rockies	Great Lakes	New England
Small construction projects <sup>1</sup>	160 ±	160 ±	160 ±	160 ±
Large construction projects <sup>1</sup>	25 ±	25 ±	25 ±	25 ±
Checkpoints operations <sup>2</sup>	100 ±	100 ±	100 ±	100 ±
No. ground operations (motorized) <sup>3,4</sup>	1,300 ±	1,300 ±	1,300 ±	1,300 ±
No. ground operations (nonmotorized) <sup>3,4</sup>	200 ±	200 ±	200 ±	200 ±
Aircraft operations <sup>2</sup>	23 ±	30 ±	30 ±	23 ±
Vessel operations <sup>2</sup>	21 ±	10 ±	63 ±	24 ±
Operation of NII systems	1,500 ±	1,500 ±	1,500 ±	1,500 ±
Operation of Sensor and Other Technologies	2,500 ±	2,500 ±	2,500 ±	2,500 ±

2 <sup>1</sup>These are new projects, beyond those already planned (Table 2.2-1).

3 <sup>2</sup>These numbers represent the total level of operations.

4 <sup>3</sup>Motorized operations range from about 2 to about 200 miles, and average 50 miles.

5 <sup>4</sup>Of these, approximately 65 percent occur on established roads and 35 percent occur off-road.

6 **2.8 ALTERNATIVE CONSIDERED BUT REMOVED FROM FURTHER**  
 7 **CONSIDERATION**

8 CBP also considered another alternative, the Agent and Officer Augmentation Alternative, which  
 9 would focus on hiring and training significantly more USBP agents to conduct more border  
 10 surveillance operations, as well as more CBP officers to increase the rate of inspection of visitors  
 11 and cargo as they pass through the POEs. This alternative has been eliminated from further  
 12 consideration as an independent alternative. CBP recently significantly increased staffing along  
 13 both the Northern and Southern Borders and has a number of projects under way to provide the  
 14 additional workspace needed.

15 CBP personnel are and will remain the key tool in CBP’s approach to border security. That is a  
 16 constant that is unlikely to change. However, in order to maximize the effectiveness of CBP  
 17 personnel, they must be given the tools necessary to do their jobs even better. It is more  
 18 appropriate, therefore, to focus on alternatives that will allow CBP to maximize the effectiveness  
 19 of its personnel, i.e., better facilities, better technology, and better infrastructure.