

Final

Programmatic Environmental Impact Statement For Northern Border Activities

Section 2: Proposed Action and Alternatives



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2 PROPOSED ACTION AND ALTERNATIVES

U.S. Customs and Border Protection (CBP) proposes the use of a multilayered law enforcement approach to deploy border security program elements in the most effective combination to respond to any evolution of cross-border terrorist, criminal, and public safety threats along the northern border over the next five to seven years. Border security program elements consist of facilities; technologies for communication, detection, inspection, and surveillance; and land-based security infrastructure. These assets are used by agents, officers, specialists, and other 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 that focus on augmenting particular elements for future responses to evolving threats and changes in security or trade and travel facilitation priorities. These alternative approaches may effectively change the pace of CBP operations and increase CBP's inventory of physical assets.

Within the national border security context, it is reasonably foreseeable that CBP might need to augment its northern border security program to respond to external threats that are not yet apparent. However, in the absence definitive national security priority drivers for change, CBP anticipates that the majority of its northern border activities in the next five to seven years would be covered under the No Action Alternative.

The main program elements of the proposed action would support the operations of CBP's law enforcement components: Office of Field Operations (OFO), U.S. Border Patrol (USBP), and the Office of Air and Marine (OAM).

This Final Programmatic Environmental Impact Statement (PEIS) was not prepared to analyze any specific strategic framework for northern border security proposed or prepared under the direction of the Office of the President of the United States or the Department of Homeland Security (DHS). The analysis in this PEIS however will broadly inform CBP's implementation of relevant portions of any strategic initiatives. The exact 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, add more technologies, or intensify various operations, 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. CBP will make determination of the appropriate level of review in accordance with 40 CFR 1501.2 thru 1501.4, as well as DHS Directive 032-01 sections V (Responsibilities), VI (Procedures), and Appendix A (Timely and Effective Environmental Planning in the Department of Homeland Security). This PEIS does not have the specificity of analysis to preclude the need for further analysis to identify site-specific impacts for actions with the potential to adversely impact the environment. However, this PEIS does address the combined impacts of CBP northern border activities. It also provides a baseline of information that may be referenced in NEPA analysis for future specific projects. This PEIS will also 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 requires that Federal agencies rigorously explore and objectively evaluate reasonable alternatives for a proposed action with the potential to significantly impact the human environment.

The proposed action alternatives considered within this PEIS address reasonably foreseeable changes to CBP’s northern border security program that could be implemented based on evolutions in threats and security priorities. The length and diversity of the border and the wide range security considerations that could emerge over the next few years presents a challenge for using a scenario-based approach to determine the range of alternatives for the proposed action. Using location-based or threat specific scenarios to develop different alternatives would lead to the creation of a large range of potential programmatic responses. It would not be feasible to identify and analyze all possible proposals for combinations of facilities, enhanced technologies, infrastructure, and other factors within this document appropriate to respond to each scenario. And attempting to narrow the range of alternatives in either case would reduce the likelihood of analyzing for and then selecting a proposal that was representative of the appropriate response approach to an actual emergent threat.

CBP therefore determined that it should analyze alternatives flexible enough to address the full range of foreseeable changes that might be needed for CBP’s program activities over the next five to seven years, regardless of particular threat or location along the northern border. Each alternative in this PEIS emphasizes an aspect of the CBP “toolkit” of assets that enables CBP personnel to effectively secure the border. The alternatives examined within this PEIS provide a reasonable basis for comparing allocations of resources and resulting impacts from those allocations. CBP has identified the following alternatives for comparison under the proposed action:

- Increased focus on improving availability of facilities to support CBP law enforcement personnel executing their duties;
- Increased emphasis on deploying communication, detection, inspection, and surveillance technologies and operations;
- Increased deployment of tactical security infrastructure; or,
- A combination of these approaches, with elements from any of the three.

Alternatives Analysis

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 [Environmental Assessment] 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.”

These alternative program directions represent CBP's estimation of upper limits of activity or inventory encompassed within existing, planned, and foreseeable northern border program elements. They would each allow CBP to continue to deploy the existing CBP personnel in an effective manner while maintaining officer safety. The impacts of whatever specific combination of actions CBP could decide to implement over time will be contained within the "range" of impacts discussed in this study.

It is also likely that increases or fluctuations in the number of personnel securing the northern border would occur over the next five to seven years as a function of normal CBP-wide growth. Also, if the pace of operations were to increase due to changes in legal or illegitimate movement across the border for extended periods, additional personnel might be required in specific areas or facilities along the border. CBP might accomplish these increases through redeployment of the existing workforce or by acquisition of new personnel.

Under all of the alternatives, CBP would continue to conduct current activities such as enhancing partnerships with other Government agencies and maintaining current assets. CBP is continuing to pursue and expand its cooperation with Federal and state land management agencies through several mechanisms including the regional Borderland Management Task Forces (BMTFs) and the Public Lands Liaison Agent (PLLA) program. CBP would expand its cooperation to cover more planning for specific construction, repair, and maintenance projects and generally for law enforcement activity operations.

This PEIS provides useful input to CBP's planning process, helping to identify environmental considerations that are of most concern given any combination of actions that CBP could choose to implement. It also provides information on what best practices CBP should consider employing for recurring activities and when it needs to consider mitigating measures.

2.1.1 DESCRIPTIONS OF ALTERNATIVES

The following descriptions of alternatives and subsequent analysis of potential impacts provide bases for understanding the scope of CBP activities within the northern border environment and comparing the approaches.

- **No Action Alternative:** NEPA regulations require analysis of a No Action Alternative (40 CFR 1502.14(d)). In a situation such as this where an agency has an ongoing program of actions, the meaning of "No Action" is that the agency would make no changes in its current program. That is, it would maintain the status quo. Thus, CBP would continue the current level of operations with approximately the same manpower. The No Action Alternative would include routine maintenance and repairs of facilities, equipment, and technology (including commercial upgrades of equipment presently in use as these become available). An important part of CBP's overall strategy is to partner with other law enforcement agencies of the United States, as well as Canada and other international partners in order to build a shared commitment to border security and facilitation and to respond to situations more quickly and efficiently. These partnerships can help reduce the need for increases in staffing, technology, and infrastructure for any participating agency. The use of partnerships is a direction that is practiced, and will continue to be practiced, no matter what potential alternative direction CBP chooses to follow.

- **Facilities Development and Improvement Alternative:** The Facilities Development and Improvement Alternative would focus on replacing or providing new permanent facilities, such as Border Patrol stations (BPSs), housing, and other facilities and making major modifications to permanent facilities, such as ports of entry (POEs), to allow CBP agents, officers, and agricultural specialists to operate more efficiently and respond to situations more quickly. In some cases, USBP agents are currently operating out of space not optimized for their operational responsibilities. This includes space leased in buildings primarily occupied by other Federal, state, or local governments/law enforcement agencies that may not meet space, location, or accommodation requirements for BPSs and the area of operations. Many of the POE inspection facilities along the northern border have high traffic volume and operate 24 hours per day, 365 days per year in extreme climates. As a result, they undergo considerable wear and tear. These facilities, built for a different era of operations, are poorly configured to support CBP's evolving trade facilitation and antiterrorism mission. A number of POEs need to be replaced or extensively upgraded, which would involve major construction. Included also in this alternative is the construction of semi-permanent and temporary facilities, such as forward operating bases (FOBs), temporary housing (where local housing stock may not be readily available), checkpoints, and other facilities necessary to support CBP law enforcement agents and officers as they carry out operational duties. This alternative is considered reasonable and its impacts are assessed throughout this document. It would help meet the need for the proposed action in that it would make it more difficult for cross-border violators to cross the border between POEs. It would also divert traffic from or increase the capacity of the more heavily used POEs, which would decrease waiting times for vehicles engaged in legal trade and travel.
- **Detection, Inspection, Surveillance, and Communications Technology Expansion Alternative:** The Detection, Inspection, Surveillance, and Communications Technology Expansion Alternative would focus on increased patrol activity and deploying more and better technologies to support CBP's detection, inspection, and surveillance capabilities and operational communications. It would include either hiring additional USBP and OAM agents or shifting these agents from the other borders to conduct surveillance and respond to situations. It would include improvements to the identification and inspection technologies used by OFO. It would also include continuing deployment of integrated remote video surveillance systems (RVSS) and plans such as fielding upgraded surveillance and telecommunications systems (e.g., remote sensors, short-range radar, remote and mobile video surveillance and communications systems, new camera systems, and upgrades to stationary communications systems) that would improve CBP's situational awareness and allow it to more efficiently and effectively direct its resources for cross-border violator interdiction. CBP considers this alternative to be the **Preferred Alternative** because it supports operational flexibility required to meet the purpose and need.
- **Tactical Security Infrastructure Deployment Alternative:** The Tactical Security Infrastructure Deployment Alternative would focus on expanding access roads and related facilities to increase the mobility of Border Patrol agents for surveillance and response and constructing additional barriers, such as selective fencing or vehicle barriers, at selected points along the border to deter and delay cross-border violators. This alternative would hinder cross-border violators and improve CBP's ability to

respond quickly and effectively. This alternative is considered reasonable and its impacts are assessed throughout the document.

- **Flexible Direction Alternative:** The Flexible Direction Alternative would allow CBP to implement any of the above program changes based on what CBP deems to be the most effective way to respond to the changing threat environment along the northern border. It is impossible to predict what combination of the above alternatives is likely to be needed at any time, and the needed mix is likely to change constantly because the threat environment changes constantly. Therefore, CBP is assessing the maximum scope of impact that might result from selecting this alternative as the sum of the impacts that would result from full implementation of all three alternatives. (See Table 2.9-1 for comparison of alternatives with respect to the need for the proposed action.) This alternative also is consistent with current national policy directions and is feasible on economic, environmental, technical grounds over the time period covered by this PEIS.

2.2 ACTIVITIES TO BE EVALUATED

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

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

Table 2.2-1 CBP Activities

Basic Activity	Separate Activity
Construction	Modification to ports of entry (POE) ¹ Repairs and maintenance of existing POEs ¹ Construct or modification to BPSs ¹ Repairs and maintenance of existing BPSs ¹ Construct communications towers Small additions to OAM facilities Construct new FOBs 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 non-motorized, 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 Non-Intrusive Inspection (NII) systems Use of other detection systems Repair and maintenance of NII, surveillance, and support equipment ²

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

²Includes repairs to vehicles, aircraft, vessels, and support infrastructure.

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

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

Table 2.2-2 Categories of Activities for Impact Assessment

Category	Includes
Small construction projects (Footprint < 1 acre; length < 1/4 mile)	Repairs and maintenance or minor modification to existing POEs, BPS 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 BPSs 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 BPSs 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
	Non-motorized: 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

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

Impacts from surveillance operations are dependent on the type of operation (motorized versus non-motorized, air versus ground, among others).

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

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

2.3 NO ACTION ALTERNATIVE

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

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

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.

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 onsite trade and travel processing operations (no. POEs with < 10,000 crossings/day) ¹	20 ±	30 ±	10 ±	20 ±
Number of large onsite 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) ²	800 ±	800 ±	800 ±	800 ±
Ground operations/day (non-motorized)	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 ±

¹Includes only those POEs within 100 miles of the northern border.

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

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

¹For 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 (GSA) in response to requirements defined by CBP.

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

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

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

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

2.4 FACILITIES DEVELOPMENT AND IMPROVEMENT ALTERNATIVE

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

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

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

Because OAM leases its space from both military and commercial airfields or airports, or marina berths and commercial space from Government (e.g., U.S. Coast Guard) or commercial marinas, it does not foresee a construction program in the near future. While it maintains a base of operations in the various cities, towns, or regions shown, it will shift its specific location in response to better rental prices.

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

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

Table 2.4-1 Anticipated Activity Levels by Region¹—Facilities Development and Improvement Alternative

Category	West of the Rockies	East of the Rockies	Great Lakes	New England
Number small construction projects (various) ^{1,2}	30 ±	30 ±	30 ±	30 ±
Number large construction projects (BPSs, other facility construction or major modification) ^{1,2}	20 ±	20 ±	20 ±	20 ±

¹ Next five to seven years.

² These numbers represent new projects, beyond those already planned (shown in Table 2.3-1).

2.5 DETECTION, INSPECTION, SURVEILLANCE, AND COMMUNICATIONS TECHNOLOGY EXPANSION ALTERNATIVE (PREFERRED ALTERNATIVE / ENVIRONMENTAL PREFERABLE ALTERNATIVE)

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

- Processing visitors and cargo more rapidly while maintaining strict security by using more and improved personal radiation detectors (PRD), RIDs, and NII tools, such as high-energy container scanners and full-body scanners (see box). (CBP completed a programmatic Environmental Assessment (EA) on the deployment of various types of NII technology in 2009 and 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).

Communications Systems

Communications systems consist of equipment (e.g. land mobile radio (LMR) antennae, microwave dishes, repeaters, and receivers) mounted on communications towers or other structures. Additional associated equipment may be used, including: shelters, generators (used for back-up power), fuel storage tanks, and tower-related equipment. Solar power may be used as a power source and would be supplied by photovoltaic panels installed in the vicinity of the communications equipment.

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 three 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 (LPADS)

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.

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

The possible consequences of this alternative would be (1) a reduction in wait times at POEs; (2) an increase in the rate and amount of materials confiscated that would have to be transported, analyzed, and properly disposed of; (3) an increase in the interdiction of cross-border violators

and therefore the need for detention; (4) the need for additional support infrastructure in the form of poles, towers, and access roads (for maintenance) in many locations; and (5) more focused, more effective CBP operations.

To the extent practicable, CBP would use existing structures—buildings and towers with appropriate heights, or share towers with other law enforcement agencies—for mounting antennas and RVSS, to reduce the overall impacts of tower, pole, and access road construction. (An example of this is the plan by Houlton Sector to colocate upgrades to its radio communications system with the Maine State Police and to use existing towers where practicable.) The Detection/Inspection Alternative could also lead to an increase in the deployment of military engineering units or private contractors to construct towers, poles, and access roads for maintaining surveillance systems and whatever other infrastructure would be required for new equipment (e.g., fixed mounts for the vehicle high-energy scanning systems). The deployments would also be needed to install and maintain more underground sensors.

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

Table 2.5-1 shows approximate activity levels by the geographic regions that the Detection, Inspection, Surveillance, and Communications Technology Expansion Alternative would address.

Table 2.5-1 Anticipated Activity Levels by Region— Detection, Inspection, Surveillance, 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.) ¹	100 ±	100 ±	100 ±	100 ±
Number of ground operations/day (motorized) ²	1,300±	1,300±	1,300±	1,300±
Number of ground operations/day (non-motorized)	200 ±	200 ±	200 ±	200 ±
Aircraft operations (number/day) ²	23 ±	30 ±	30 ±	23 ±
Vessel operations (per day) ²	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 ±

¹These are new projects, beyond those already planned (Table 2.2-1).

²These numbers represent the total level of operations.

2.6 TACTICAL SECURITY INFRASTRUCTURE DEPLOYMENT ALTERNATIVE

Under the Tactical Security Infrastructure Deployment Alternative, CBP would leverage its funding and resources to construct more fences and other barriers to prevent illegal border crossings. While fencing has played a prominent role in CBP’s enforcement strategy on the southern border to deter illegal border crossings, it is unlikely that fencing will play as prominent a role on the northern border, given the length of the border and the variability of the terrain. However, CBP would use fencing and other barriers to manage movement (e.g., trenching across roads) in trouble spots where passage of cross-border violators (CBV) is difficult to control; the resulting delay for CBVs would increase the rate of interdiction.

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

Table 2.6-1 shows approximate activity levels by the geographic regions that the Tactical Security Infrastructure Deployment Alternative would address. Once again, these represent new projects that have not already been programmed or addressed by specific NEPA documents.

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

Table 2.6-1 Anticipated Activity Levels by Region—Tactical Security Infrastructure 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) ¹	30 ±	30 ±	30 ±	30 ±
Large construction projects (access roads and fences > 1/4 mile) ¹	5 ±	5 ±	5 ±	5 ±

¹These are new projects, beyond those already planned (Table 2.2-1).

2.7 THE FLEXIBLE DIRECTION ALTERNATIVE

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

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 ¹	160 ±	160 ±	160 ±	160 ±
Large construction projects ¹	25 ±	25 ±	25 ±	25 ±
Checkpoints operations ²	100 ±	100 ±	100 ±	100 ±
Number of ground operations (motorized) ^{3,4}	1,300 ±	1,300 ±	1,300 ±	1,300 ±
Number of ground operations (non-motorized) ^{3,4}	200 ±	200 ±	200 ±	200 ±
Aircraft operations ²	23 ±	30 ±	30 ±	23 ±
Vessel operations ²	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 ±

¹These are new projects, beyond those already planned (Table 2.2-1).

²These numbers represent the total level of operations.

³Motorized operations range from about 2 to about 200 miles, and average 50 miles.

⁴Of these, approximately 65 percent occur on established roads and 35 percent occur off-road.

2.8 ALTERNATIVE CONSIDERED BUT REMOVED FROM FURTHER CONSIDERATION

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

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

2.9 SUMMARY COMPARISON OF ACTION ALTERNATIVES

Table 2.9-1 provides a comparison of the contribution of each alternative to the four elements of the purpose and need for the proposed action. There are three categories of contribution to the four elements contributing to the ultimate goal of effective control of the border. The first, “Status Quo,” means that the alternative does not contribute to the corresponding element above the current CBP program. The second, “Indirect,” means that the alternative does not by itself increase capability under the element, but it can make a contributing activity somewhat more

effective. The third, "Direct," means that the alternative does contribute to effective control element.

Table 2.9-1 Comparison of Action Alternatives

CRITERIA CONTRIBUTING TO EFFECTIVE CONTROL OF THE BORDER ENVIRONMENT				
ALTERNATIVES	Maintain Situational Awareness	Identify and Classify Threats	Respond Efficiently and Effectively	Resolve Law Enforcement Situations to Satisfaction
No Action Alternative	Status Quo	Status Quo	Status Quo	Status Quo
Facilities Development and Improvement Alternative	Indirect: Provides agents and officers with more modernly equipped facilities distributed closer to CBV threat environment	Indirect: Provides agents and officers and with more modern facilities for inspecting cargo, vehicles, and people	Direct: Reduces agent and officer distance from patrol areas or trade and travel processing areas	Indirect: Provides agents and officers with more modernly equipped facilities to process CBVs
Detection, Inspection, Surveillance, and Communications Technology Expansion Alternative (Preferred Alternative)	Direct: Improves the common operating picture and effective communication regarding CBV threats	Direct: Improves ability to screen potential CBVs and relay intelligence about potential threats	Direct: Increases accuracy of information about the location of threats and increases the operational tempo of agents and officers ready for response	Direct: Potentially increases interdiction rate by accelerating operational tempo and improving situational awareness
Tactical Security Infrastructure Deployment Alternative	Indirect: Provides selective barriers to impede CBV access and movement and provides road upgrades to increase agent and officer access to more points along the border	Status Quo	Direct: Reduces potential average response time and distance by upgrading existing or adding new roads thereby increasing access to more points along the border	Indirect: Provides road upgrades and additions to increase border area accessibility and likely make CBP interdictions more effective
Flexible Direction Alternative	Direct: Improves the common operating picture and effective communication regarding CBV threats	Direct: Improves ability to screen potential CBVs and relay intelligence about potential threats	Direct: Increases information accuracy, border accessibility, and operational tempo	Direct: Potentially increases interdiction rate by accelerating operational tempo and improving situational awareness

As Table 2.9-1 indicates, the Detection, Inspection, Surveillance, and Communications Technology Expansion Alternative and the Flexible Direction Alternative both contribute to all four elements needed to pursue effective control of the border. Both the Facilities Development and Improvement Alternative and the Tactical Security Infrastructure Deployment Alternative would directly support the objective of improving the efficiency and effectiveness of response to cross-border law enforcement situations by decreasing the distance travelled to respond to situations. However, the Tactical Security Infrastructure Deployment Alternative would not have any effect on the identification and classification of threats while the Facilities Development and Improvement Alternative would.

2.9.1 OTHER MISSION CONSIDERATIONS

Strategic Priorities: Although not a subject of this PEIS, “The Beyond the Border Initiative” does set joint priorities between Canada and the United States that have implications for CBP on the northern border. The four key goal areas are detailed for the security partnership are: (1) addressing threats early; (2) promoting trade facilitation, economic growth, and jobs; (3) strengthening cross-border law enforcement; and (4) protecting shared critical infrastructure, including enhancing continental and global cybersecurity. Overall, the “Beyond the Border Initiative” places a greater premium on employing cooperative risk management strategies to facilitate trade and travel between the United States and Canada while securing critical assets and citizens of both nations.

In May 2012, DHS released its first unified “Northern Border Strategy” reflecting the expertise of all of its components and guiding departmental policies and operations along the U.S.-Canada border. It reinforces the close relationship between security and lawful trade and travel, stressing risk-management approaches such as, separating higher-risk traffic from lower-risk traffic, utilizing advance information, and inspecting people and goods bound for our shared borders at the earliest opportunity. The three strategic goals for DHS at the northern border are to: 1) Deter and prevent terrorism and other illegal activity; 2) Safeguard and facilitate the secure flow of lawful trade and travel; and, 3) Ensure community resilience to natural and man-made disasters. Mechanisms for executing the strategy and achieving its goals include leveraging information sharing and analysis resources inside DHS and with key partners and enhancing coordination of U.S.-Canada joint interdictions and investigations. Technology deployment for joint security efforts as well as updating infrastructure to facilitate travel and trade are also key components of a more comprehensive strategy. The DHS strategic approach includes continued fostering of partnerships with Federal, state, local, tribal, private sector, and Canadian agencies to resolve border management issues more efficiently.

Budget Considerations: Between 2009 and 2011, CBP executed considerable investments in northern border security improvement. This includes the modernization of over 35 older LPOEs largely funded under the ARRA program to meet security and operational needs. However, in the last two years CBP’s total enacted budget has been below the fiscal year 2010 level and also below the 2009 level, which included the ARRA investment. Particularly, the facilities management and infrastructure budgets have been enacted at 10s of million dollars lower than requested and also lower than prior budget years.

2.9.2 ENVIRONMENTAL STEWARDSHIP AND SOCIAL RESPONSIBILITY

CBP’s social responsibility statement states: “CBP is committed to acting responsibly while performing our core missions of border security and the facilitation of legitimate trade and travel. We fully embrace the concept of incorporating practices into our mission that will create a more sustainable future.” This includes the commitment “to responsible environmental stewardship to include the comprehensive evaluation of potential environmental impacts, thorough consultation with stakeholders, and the identification of opportunities to avoid, minimize, and, where appropriate, mitigate for impacts to sensitive resources.”

Table 2.9-2 provides a snapshot comparison of overall impact determinations for each alternative for each environmental resource category analyzed within this PEIS. These determinations present the highest level of impacts anticipated in particular cases from programmatic perspective. However, a specific individual project could have greater impacts upon an environmental resource than anticipated within this PEIS based on its site-specific conditions.

Table 2.9-2 Summary of Overall Potential Environmental Impacts by Alternative

Resource Area	Alternatives				
	No Action	Facilities Development and Improvement	Detection, Inspection, Surveillance, and Communications Technology Expansion	Tactical Security Infrastructure Deployment	Flexible Direction
Air quality	Minor	Minor	Minor	Minor	Minor
Biological resources	Moderate	Moderate	Moderate	Moderate	Moderate
Geology and soils	Moderate	Moderate	Moderate	Moderate	Moderate
Water resources	Minor	Minor	Minor	Minor	Minor
Noise	Minor	Moderate	Minor	Minor	Moderate
Climate change	Minor (with beneficial)	Minor (with beneficial)	Minor (with beneficial)	Minor (with beneficial)	Minor (with beneficial)
Land use	Moderate	Moderate	Moderate	Moderate	Moderate
Aesthetic and visual resources	Minor	Moderate	Moderate	Moderate	Moderate
Socioeconomic resources	Moderate	Moderate	Moderate	Moderate	Moderate
Cultural and paleontological resources	Major (with beneficial)	Major (with beneficial)	Major (with beneficial)	Major (with beneficial)	Major (with beneficial)

Resource Area	Alternatives				
	No Action	Facilities Development and Improvement	Detection, Inspection, Surveillance, and Communications Technology Expansion	Tactical Security Infrastructure Deployment	Flexible Direction
Environmental justice and protection of children	Minor	Minor	Minor	Minor	Minor
Human health and safety	Moderate (with beneficial)	Moderate (with beneficial)	Moderate (with beneficial)	Moderate (with beneficial)	Moderate (with beneficial)
Hazardous materials	Minor (with beneficial)	Minor	Minor	Minor	Minor
Utilities and infrastructure	Negligible	Negligible	Negligible	Negligible	Negligible
Roadways and traffic	Major	Major	Major	Major	Major
Recreation	Minor	Moderate	Moderate	Moderate	Moderate

The actual potential for impacts from any alternative course of action would be highly dependent on determinations of any future selected site-locations for projects within any of the alternatives, but the Flexible Direction Alternative clearly has the greatest potential and range of adverse impacts to the environment. The No Action Alternative represents the least environmental harm approach purely on the basis of no net increase in impact causing activities beyond the status quo. Among the action alternatives, it is CBP’s determination that the Detection, Inspection, Surveillance, and Communications Technology Expansion Alternative would have the least potential for major adverse environmental impacts among the action alternatives. This alternative has the least potential for fragmenting habitats, recreational resources, or community resources. It also has low potential for work in waterways and has greater flexibility for mitigation via site selection for individual projects. Therefore, the Detection, Inspection, Surveillance, and Communications Technology Expansion Alternative is the environmentally preferable action alternative.

To the extent CBP can accomplish its border security and trade and travel facilitation missions without compromising the safety of law enforcement personnel and employing methods and programs that have lesser impacts than alternatives, CBP will continue to work with stakeholder agencies and communities to avoid or reduce adverse impacts to the environment.

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