DEPARTMENT OF HOMELAND SECURITY

8 CFR Parts 215 and 235

[Docket No. USCBP-2020-0062]

RIN 1651-AB12

Collection of Biometric Data from Aliens Upon Entry to and Departure from the United States


ACTION: Notice of proposed rulemaking.

SUMMARY: The Department of Homeland Security (DHS) is required by statute to develop and implement an integrated, automated entry and exit data system to match records, including biographic data and biometrics, of aliens entering and departing the United States. Although the current regulations provide that DHS may require certain aliens to provide biometrics when entering and departing the United States, they only authorize DHS to require certain aliens to provide biometrics upon departure under pilot programs at land ports and at up to 15 airports and seaports. To advance the legal framework for DHS to begin a comprehensive biometric entry-exit system, DHS is proposing to amend the regulations to remove the references to pilot programs and the port limitation to permit collection of biometrics from aliens departing from airports, land ports, seaports, or any other authorized point of departure. In addition, to enable U.S. Customs and Border Protection (CBP) to make the process for verifying the identity of aliens more efficient, accurate, and secure by using facial recognition technology, DHS is proposing to amend the regulations to provide that all aliens may be required to be photographed upon entry and/or departure. U.S. citizens may voluntarily opt out of participating in CBP’s biometric verification program. This proposed rule also makes other minor conforming and editorial changes to the regulations.
DATES: Written comments must be received on or before [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: Please submit comments, identified by docket number, by the following method:


Due to COVID-19 related restrictions, CBP has temporarily suspended its ability to receive public comments by mail.

Instructions: All submissions received must include the agency name and docket number for this rulemaking. All comments received will be posted without change to http://www.regulations.gov, including any personal information provided. For detailed instructions on submitting comments, see the “Public Participation” heading of the SUPPLEMENTARY INFORMATION section of this document.

Docket: For access to the docket to read background documents or comments received, go to http://www.regulations.gov. Due to COVID-19 related restrictions, CBP has temporarily suspended its on-site public inspection of submitted comments.

FOR FURTHER INFORMATION CONTACT: Michael Hardin, Director, Entry/Exit Policy and Planning, Office of Field Operations, U.S. Customs and Border Protection, by phone at (202) 325-1053 or via e-mail at michael.hardin@cbp.dhs.gov.

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**Table of Abbreviations and Acronyms**

- APC—Automated Passport Control
- ADIS—Arrival and Departure Information System
- APIS—Advance Passenger Information System
- CBP—U.S. Customs and Border Protection
- DHS—Department of Homeland Security
- DHS TRIP—DHS Traveler Redress Inquiry Program
- DOJ—Department of Justice
I. Public Participation

Interested persons are invited to participate in this rulemaking by submitting written data, views, or arguments on all aspects of the rule. Comments that will provide the most assistance will reference a specific portion of the rule, explain the reason for any recommended change, and include data, information, or authority that supports such recommended change. All submissions received must include the agency name and docket number for this rulemaking. All comments received will be posted without change to http://www.regulations.gov, including any personal information provided.

II. Executive Summary
As discussed in Section III (Background), the Department of Homeland Security (DHS) is mandated by statute to develop and implement an integrated, automated entry and exit data system to match records, including biographic data and biometrics,\(^1\) of aliens entering and departing the United States.\(^2\) In addition, Executive Order 13780, Protecting the Nation from Foreign Terrorist Entry into the United States, published in the *Federal Register* at 82 FR 13209, states that DHS is to expedite the completion and implementation of a biometric entry-exit tracking system. Although DHS, through U.S. Customs and Border Protection (CBP), has been collecting biometric data from certain aliens arriving in the United States since 2004,\(^3\) currently there is no comprehensive system in place to collect biometrics from aliens departing the country.

Implementing an integrated biometric entry-exit system that compares biometric data of aliens collected upon arrival with biometric data collected upon departure is essential for addressing the national security concerns arising from the threat of terrorism, the fraudulent use of legitimate travel documentation, aliens who overstay their authorized period of admission (overstays) or are present in the United States without having been admitted or paroled, and incorrect or incomplete biographic data for travelers.

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\(^1\) Biographic data includes information specific to an individual traveler such as name, date of birth, and travel document number, which are data elements stored in that traveler’s passport, visa, or lawful permanent resident card. A biometric refers to a form of identification based on anatomical, physiological, and behavioral characteristics or other physical attributes unique to a person that can be collected, stored, and used to verify the identity of a person, e.g., fingerprints, photographs, iris, DNA, and voice print.


\(^3\) See Section III.B (Current Entry-Exit Process) for further discussion.
As recognized by the National Commission on Terrorist Attacks Upon the United States (also known as the 9/11 Commission), combatting terrorism requires a screening system that examines individuals at multiple points within the travel continuum.\textsuperscript{4} An integrated biometric entry-exit system provides an accurate way to verify an individual’s identity, and, consequently, can improve security and effectively combat attempts by terrorists who use false travel documents to circumvent border checkpoints. It can also be used to biometrically verify that a person who presents a travel document is the true bearer of that document, which will help prevent visa fraud and the fraudulent use of legitimate travel documentation.

Such a system would also allow DHS to confirm more concretely the identity of aliens seeking entry or admission to the United States and to verify their departure from the United States. By having more accurate border crossing records of aliens, DHS can more effectively identify overstays and aliens who are, or were, present in the United States without having been admitted or paroled and prevent their unlawful reentry into the United States. It will also make it more difficult for imposters to utilize other travelers’ credentials. In addition, performing biometric identity verification can help DHS reconcile any errors or incomplete data in a traveler’s biographic data.\textsuperscript{5} Ultimately, this provides DHS with more reliable information to verify identity and to strengthen its ability to identify criminals and known or suspected terrorists.

DHS has faced a number of logistical and operational challenges in developing and deploying a biometric exit capability. This is, in part, because U.S. airports generally do not have designated and secure exit areas for conducting outbound inspections, recording travelers’ departures, or comparing biometric information against arrival data. U.S. land ports of entry present even more infrastructure and operational challenges due to geographic limitations (many border crossings involve crossing a bridge or tunnel),


\textsuperscript{5} See Section III.C. for further explanation.
and a myriad of transportation alternatives for crossing a land port of entry (e.g., car, bus, rail, foot).

CBP has been testing various options to collect biometrics at entry and departure. These tests are described in detail in Section III. E of this document. The results of these tests and the recent advancement of new technologies, including facial recognition technology, have provided CBP with a model to implement a comprehensive biometric entry-exit solution. CBP has determined that facial recognition technology is currently the best available method for biometric verification, as it is accurate, unobtrusive, and efficient. This technology uses existing advance passenger information along with photographs which have already been provided by travelers to the government for the purpose of facilitating international travel, to create “galleries” of facial image templates to correspond with who is expected to be arriving or departing the United States on a particular flight, voyage, etc. These photographs may be derived from passport applications, visa applications, or interactions with CBP at a prior border inspection. Once the gallery is created based on the advance information, the facial recognition technology compares a template of a live photograph of the traveler to the gallery of facial image templates. Live photographs are taken where there is clear expectation that a person will need to provide documentary evidence of their identity. If there is a facial image match, the traveler’s identity has been verified.

In the initial stage of implementation, CBP plans to expand its facial recognition system to commercial air ports of entry. CBP plans to eventually establish a biometric entry-exit system at all air, sea, and land ports of entry.

CBP estimates that a biometric entry-exit system can be fully implemented at all commercial air ports of entry within the next three to five years. For land and sea ports of entry and private aircraft, CBP plans to continue to test and refine biometric exit strategies with the ultimate goal of implementing a comprehensive biometric entry-exit
The proposed regulatory changes are necessary to enable CBP to continue its testing and refinements, and implement permanent programs efficiently once the best solution is identified. As explained below, under the current regulations, CBP can only conduct pilot programs at a limited number of ports of entry at air and sea, and may only collect biometrics from a limited population. If this proposed rule is adopted as a final rule, CBP would continue to expand testing as necessary.

Because CBP is still in the testing phase to determine the best way to implement biometric entry-exit for land and sea ports of entry and private aircraft, CBP has not included, in this proposed rule, an analysis of the costs and benefits of implementing a facial recognition based biometric entry-exit program for land and sea ports of entry and private aircraft. CBP welcomes comments from the public regarding the potential impact of this proposed rule in these environments. Additionally, before CBP moves forward with a large scale implementation at land or sea ports of entry or for private aircraft, the Commissioner of CBP will publish a notice in the Federal Register that notifies the public, specifies the details of these plans, and requests public comments.

If CBP determines that the implementation of the specified facial recognition entry-exit program in these environments results in significant delays at ports of entry or exit, CBP will temporarily discontinue these efforts until the average processing time has improved to be under 125 percent of the baseline (manual processing without biometrics).

Although the current regulations authorize DHS to require certain aliens to provide biometrics on entry and departure, those regulations are too limited in scope to advance the legal framework for establishing a comprehensive biometric entry-exit system. The regulations authorize DHS to require biometrics from certain aliens seeking admission to the United States. *See section 235.1(f) of title 8 of the Code of Federal Regulations (CFR).* They also authorize DHS to require biometrics from certain aliens

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6 Private aircraft are non-commercial flights, sometimes referred to as general aviation. See 19 CFR 122.1(h)
upon departure from the United States under pilot programs at land ports and up to 15 air
and seaports. See 8 CFR 215.8(a). This proposed rule advances a legal framework for
DHS collection and use of biometrics from aliens and for CBP’s comprehensive
biometric entry-exit system by removing the reference to pilot programs and the port
limit.

In addition, this proposed rule provides that all aliens may be required to be
photographed upon entry and/or departure. The use of facial recognition technology
upon entry and departure will make the process for verifying an alien’s identity more
efficient and accurate. It will enable CBP to match the traveler’s photograph with their
vetted biographic information. The ability to biometrically verify the identity and
confirm the departure of aliens will improve security and help DHS detect overstays and
aliens who are or were present in the United States without having been admitted or
paroled, and prevent their illegal reentry. DHS acknowledges that most overstays are of a
rather limited duration and that many overstays are accidental in nature. Regardless of the
length of time, however, overstaying past the authorized period of admission is unlawful
and carries consequences for future visits to the United States. See Section 212 of the
Immigration and Nationality Act of 1952, as amended, 8 USC 1182 (INA 212). Having
accurate entry and exit records is a fundamental piece of the U.S. immigration system and
detecting overstays supports said system.

Furthermore, DHS data supports the conclusion that some status violators and
illegal aliens also have links to terrorism and criminal activity. Ensuring the traveler’s
photograph matches with their vetted biographic and biometric information, helps CBP
prevent visa fraud and the use of fraudulent travel documents, or the use of legitimate
travel documents by imposters, and identify criminals and known or suspected terrorists.

Under this proposed rule, CBP will comply with all legal requirements (e.g., the
Privacy Act of 1974, Section 208 of the E-Government Act of 2002, and Section 222 of
the Homeland Security Act of 2002, as amended) and Departmental and government-
wide policies that govern the collection, use, maintenance, and disposition of personally identifiable information, including biometrics. To ensure data minimization of U.S. citizen photographs, once CBP verifies that a traveler is a U.S. citizen, CBP will not retain in its database the photo of that U.S. citizen which is collected as part of CBP’s biometric verification program. Rather, photos of U.S. citizens collected as a result of their participation in this program will be discarded within 12 hours of verification of the individual’s identity and citizenship.

III. Background

A. Statutory and Executive Authority

Numerous federal statutes require DHS to create an integrated, automated biometric entry and exit system that records the arrival and departure of aliens, compares the biometric data of aliens to verify their identity, and authenticates travel documents presented by such aliens through the comparison of biometrics. The following discussion covers the most relevant statutory and executive authority for the issuance of this rule.

The creation of an automated entry-exit system that integrates electronic alien arrival and departure information was authorized in the Immigration and Naturalization Service Data Management Improvement Act of 2000 (DMIA), Pub. L. No. 106-215, 114 Stat. 337, 339 (8 U.S.C. 1365a). The DMIA provides that the entry-exit system should integrate all authorized or required alien arrival and departure data that is maintained in electronic format. The DMIA also provides for DHS to use the entry-exit system to match the available arrival and departure data on aliens. DMIA section 2 (8 U.S.C. 1365a(e)).

In December 2004, Congress enacted the Intelligence Reform and Terrorism Prevention Act of 2004 (IRTPA), Pub. L. No. 108-458, 118 Stat. 3638, 3817 (8 U.S.C. 1365b). Section 7208 of IRTPA provides for DHS to collect biometric exit data for all categories of aliens who are required to provide biometric entry data. IRTPA requires that the entry and exit data system contain, as an interoperable component, the fully
integrated databases and data systems maintained by DHS, the Department of State (DOS), and the Department of Justice (DOJ) that process or contain information on aliens. Section 7208 of IRTPA also requires that the entry and exit data system have current and immediate access to information in the databases of Federal law enforcement agencies and the intelligence community, which is relevant to the determination of whether a visa should be issued and the admissibility or deportability of an alien. Section 7208 of IRTPA provides a complete list of entry-exit system goals, which include, among other things, screening travelers efficiently. Finally, section 7208 of IRTPA requires the Secretary of Homeland Security to develop a plan to accelerate full implementation of an automated biometric entry and exit data system.

In the 2016 Consolidated Appropriations Act, Congress specified that DHS must submit a plan to implement a biometric entry and exit capability and established a funding mechanism available to the Secretary of Homeland Security, beginning in fiscal year 2017, to develop and implement a biometric entry and exit system. See Consolidated Appropriations Act, 2016, Pub. L. No. 114-113, 129 Stat. 2242, 2493.

The following statutes also require DHS to take action to create an integrated entry-exit system:

- Section 414 of the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001 (USA PATRIOT Act), Pub. L. No. 107-56, 115 Stat. 272, 353;
On March 6, 2017, the President signed Executive Order 13780, Protecting the Nation from Foreign Terrorist Entry into the United States (82 FR 13209). Section 8 of this Order requires the Secretary of Homeland Security to expedite the completion and implementation of a biometric entry-exit tracking system for “in-scope travelers” to the United States, as recommended by the National Commission on Terrorist Attacks Upon the United States, and periodically report to the President on DHS’s progress in this regard.

DHS also has broad authority to control alien travel and to inspect aliens under various provisions of the INA. Under this authority, DHS may require aliens to provide biometrics and other relevant identifying information upon entry to, or departure from, the United States. Specifically, DHS may control alien entry and departure and inspect aliens under sections 215(a) and 235 of the INA (8 U.S.C. 1185, 1225). Aliens may be required to provide fingerprints, photographs, or other biometrics upon arrival in, or departure from, the United States, and select classes of aliens may be required to provide information at any time. See, e.g., INA 214, 215(a), 235(a), 262(a), 263(a), 264(c), (8 U.S.C. 1184, 1185(a), 1225(a), 1302(a), 1303(a), 1304(c)); 8 U.S.C. 1365b. Pursuant to section 215(a) of the INA (8 U.S.C. 1185(a)), and Executive Order No. 13323 of Dec. 30, 2003 (69 FR 241), the Secretary of Homeland Security, with the concurrence of the Secretary of State, has the authority to require aliens to provide biographic, biometric, and other relevant identifying information as they depart the United States. Under section 214 of the INA (8 U.S.C. 1184), DHS may issue regulations, such as those

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7 Although the term “in-scope travelers” is not defined, DHS interprets this to mean those travelers who are required to provide biometric information upon entry to the United States.
concerning requirements to provide biometrics upon entry or departure, the compliance of which may be a condition of admission and maintenance of status of nonimmigrant aliens while in the United States.

Finally, DHS is authorized to take and consider evidence concerning the privilege of any person to enter, reenter, pass through, or reside in the United States, or concerning any matter which is material or relevant to the enforcement of the INA and the administration of DHS. See INA 287(b) (8 U.S.C. 1357(b)).

B. Current Entry-Exit Process

Pursuant to the authorities discussed in the previous section, CBP is responsible for implementing an integrated, automated entry-exit system that matches the biographic data and biometrics of aliens entering and departing the United States. Furthermore, to carry out its mission responsibilities to control the border and to regulate the arrival and departure of both U.S. citizens and aliens, CBP has the authority to confirm the identity of all travelers and verify that they are the authorized bearers of their travel documents.

The entry-exit process as it exists today serves this essential border security mission entrusted to CBP, while also serving the need to facilitate legitimate cross-border travel. The following sections describe the current entry-exit process in more detail and provide background on the relevant laws and obligations that pertain to both individuals who attempt to enter and exit the United States, as well as the commercial air or sea carriers who transport those individuals.

1. APIS Data Collection

electronically to CBP through the Advance Passenger Information System (APIS).\(^8\) This requirement aligns with global standards developed by the World Customs Organization, International Air Transport Association (IATA), and the International Civil Aviation Organization. According to IATA, over 70 countries now require airlines to send advance passenger information before the flight’s arrival.\(^9\) In addition, United Nations Security Council Resolution 2178, adopted by the United States, called upon Member States to require airlines provide advance passenger information regarding flights into, out of and through their territories to detect the travel of UN-listed terrorists.\(^10\)

APIS information includes, but is not limited to, the following information: full name, date of birth, citizenship, passport/alien registration card number, travel document type, passport number, expiration date and country of issuance (if passport required), alien registration number, country of residence, passenger name record locator number, and U.S. destination address (when applicable). The carrier also collects and transmits to CBP the traveler’s U.S. destination address (except for U.S. citizens, lawful permanent residents, crew and persons in transit through the United States) and country of residence.

APIS data allows CBP to effectively and efficiently facilitate the entry and departure of legitimate travelers into and from the United States. Using APIS data, CBP officers can access information on individuals with outstanding wants or warrants and information from other government agencies regarding high risk persons; confirm the accuracy of that information by comparison with information obtained from the traveler and from the carriers; and make immediate determinations as to a traveler’s security risk and admissibility and other determinations bearing on CBP’s inspctional and screening responsibilities.

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\(^8\) See the APIS regulations at 19 CFR 122.49a, 122.49b, 122.49c, 122.75a, and 122.75b.
During the entry processing of the traveler, a CBP officer will verify the traveler’s documents. See Section III.B.2. Through this process, CBP can verify the accuracy of the APIS information the carrier provided to CBP.\(^\text{11}\) CBP does not receive APIS data for individuals traveling to the United States by foot (pedestrian travelers) or by private vehicle, but it does receive APIS data on a voluntary basis from bus and rail carriers crossing the land border.

2. Current Entry Process

Any traveler who requires a nonimmigrant visa to travel to the United States must apply to the DOS under specific visa categories depending on the purpose of their travel, including those as visitors for business, pleasure, study, and employment-based purposes.\(^\text{12}\) DOS also checks every visa applicant’s biographic and biometric data (i.e., fingerprints and facial images) against U.S. Government databases for records indicating potential risk factors, including security, criminal, and immigration violations.

Under DHS regulations, upon arrival into the United States, travelers are required to present themselves to CBP for inspection. See 8 CFR 235.1. Under the current inspection process, CBP obtains information directly from the traveler via travel documents (e.g., passport) presented and/or verbal communications between a CBP officer and the traveler. As a part of this process, a CBP officer typically takes a physical passport from the traveler and electronically “reads” the passport using its Machine-Readable Zone (MRZ) to pull up the traveler’s biographic data for inspection. In addition, for aliens (except for those exempt from biometric collection under 8 CFR

\(^{11}\) While APIS data has been shown to be highly accurate, information gaps remain. At entry, CBP Officers can, using biometrics and CBP system information, adjudicate any records with incorrect information. However, due to resource constraints there is generally no CBP officer stationed at departure locations to confirm that the APIS data submitted matches the traveler. Using biometrics upon exit, CBP can close informational gaps caused by inaccurate APIS data without additional personnel.

\(^{12}\) Under the Visa Waiver Program (VWP), most citizens or nationals of participating countries may travel to the United States for tourism or business for stays of 90 days or less without obtaining a visa. VWP travelers must have a valid Electronic System for Travel Authorization (ESTA) approval prior to travel. Through ESTA, CBP conducts enhanced vetting of VWP applicants in advance of travel to the United States, to assess whether they are eligible to travel under the VWP, or whether they could pose a risk to the United States or the public at large. All ESTA applications are screened against security and law enforcement databases, and CBP automatically refuses authorization to individuals who are found to be ineligible to travel to the United States under the VWP. Similarly, current and valid ESTAs may be revoked if concerns arise through recurrent vetting.
CBP collects fingerprints from the traveler to biometrically verify identity by comparing the traveler’s fingerprints with those previously collected as a part of a visa application, immigration benefits application, or prior inspection by CBP. Once the identity of the traveler is validated in this manner, the CBP officer conducts an interview with the traveler to establish the purpose and intent of travel, and to determine an alien’s admissibility.

At some airports or seaports, some of these processes are facilitated for certain travelers through use of Automated Passport Control kiosks, Mobile Passport Control (mobile apps), or Global Entry kiosks. All travelers must still present themselves to a CBP officer to complete the inspection process. In the land environment, biometric collection may be required when an I-94 is issued. CBP does not typically issue an I-94 for Mexican nationals admitted as nonimmigrants for a period of 72 hours to visit within 25 miles of the border or for Canadian citizens traveling to the United States for business or pleasure.13

If the travel document is reported as lost or stolen, upon swiping the document to bring up the biographic information of the traveler, CBP systems will alert the CBP officer. In the case of imposters using legitimate documents that have not been reported lost or stolen by their true owners, biometric identifiers (e.g., fingerprints) enable CBP to determine if the traveler is the true bearer of the travel document.

As the regulations currently exempt certain aliens from the collection of biometrics, including those under 14 and over 79, as well as individuals in certain visa classes, CBP does not use fingerprints to confirm the traveler’s identity in these cases. For these exempt aliens, as well as those without fingerprints on file (i.e., first time VWP travelers14), CBP must rely on the interview during the primary inspection process to

13 See 8 CFR 235.1(h).
14 For travelers traveling under the Visa Waiver Program for the first time, CBP will not have fingerprints on file as these individuals are not required to submit biometrics prior to travel. As such, during the primary inspection process, CBP currently collects fingerprints from these travelers. For future travel, CBP will use the fingerprints collected to biometrically verify his or her identity by comparing the fingerprints with those previously collected during the first visit to the United States.
determine if the traveler is using a lost or stolen travel document. If the CBP officer has a law enforcement concern, then he or she may conduct law enforcement checks (querying but not retaining biometrics) on those exempt individuals, but not for the purpose of biometrically verifying the traveler’s identity.

3. Current Exit Process

APIS requirements also apply to travelers departing the United States. CBP electronically records a traveler’s departure by air or sea using the biographic manifest information provided by the commercial air or vessel carrier. Unlike at entry, however, CBP does not routinely inspect travelers departing the United States to confirm that the APIS departure data is accurate or that the traveler is the true bearer of his or her travel document.

Currently, persons departing the United States via a commercial aircraft must present their boarding pass and identification when being screened by the Transportation Security Administration (TSA). Before boarding, travelers must also present their travel documents and boarding passes to the carrier’s representative at the gate, who visually reviews the travel documents and validates the boarding pass with the carrier’s ticketing system. However, once the traveler has been screened by TSA and is in the secure area of the terminal, travelers generally do not have their photo identification scrutinized again before boarding the aircraft.

CBP uses APIS information along with other law enforcement information and technology to determine whether CBP needs to further inspect outbound travelers. CBP’s outbound operations enable it to enforce U.S. laws applicable upon departure from

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15 See footnote 40 regarding an NPRM published by USCIS proposing to remove the age restrictions on fingerprint collection.
17 Pursuant to 19 CFR 122.49a, 122.49b, 122.49c, 122.75a, and 122.75b, the carrier is responsible for comparing the travel document presented by the traveler with the travel document information it is transmitting to CBP in order to ensure that the information is correct, the document appears to be valid for travel purposes, and the traveler is the person to whom the travel document was issued.
the United States and effectively monitor and control the outbound flow of goods and people.

In the land environment, CBP does not receive APIS data\(^{18}\). Persons departing the United States at the land border are also not consistently subject to CBP inspection, as they are upon arrival. As a result, land departures may not be recorded accurately.\(^{19}\)

C. National Security and Immigration Benefits of a Biometric Entry-Exit Program

Currently, CBP has a comprehensive automated biographic information-based system that vets and checks aliens entering and departing the United States. While this information is extremely valuable to CBP in completing its mission, no biographic information-based system, by itself, can definitively verify the identity of persons presenting travel and identity documents. As stated by the 9/11 Commission:

> Linking biometric passports to good data systems and decision making is a fundamental goal. No one can hide his or her debt by acquiring a credit card with a slightly different name. Yet today, a terrorist can defeat the link to electronic records by tossing away an old passport and slightly altering the name in the new one.\(^{20}\)

Since the 9/11 Commission Report was released, security features in passports have become significantly stronger. Forensic security features in passports have improved, and most countries began to issue electronic passports (e-Passports) around 2005. E-Passports contain an electronic chip embedded in the document that contains the photo of the bearer and the information contained on the passport’s data page, such as the name, date of birth, and country of issuance. The International Civil Aviation

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\(^{18}\) While bus and rail carriers are not required to submit APIS data, CBP encourages these carriers to participate in CBP’s Voluntary APIS Program, See https://www.cbp.gov/travel/travel-industry-personnel/apis2. Accessed October 26, 2020.

\(^{19}\) CBP and the Canada Border Services Agency are exchanging biographic data, travel documents, and other border crossing information collected from individuals traveling between the countries at land border ports of entry. This data exchange allows both governments to expand their situational border awareness so that the record of a traveler’s entry into one country can establish a record of exit from the other country. See https://www.dhs.gov/publication/beyond-border-entryexit-program-phase-ii and https://www.dhs.gov/news/2019/07/11/us-and-canada-continue-commitment-securing-our-borders-begin-phase-iii-entryexit. Accessed October 26, 2020.

Organization maintains standards for the issuance of e-Passports and these standards are adopted by most countries around the world.

The increasingly sophisticated features in modern passports have led to the increased use of legitimate documents by imposters posing as the owners of the documents. Twenty years ago, it was far more common to encounter a passport that had been altered (i.e., changing the name or photo on a document issued legitimately) or manufactured fraudulently. While these cases still occur, the use of e-Passports, combined with sophisticated forensic security features, have made this method of passport fraud prohibitively expensive in most cases. Those seeking to evade detection by DHS or other border or transportation security agencies are turning instead to a relatively cheaper method of fraud - using a non-altered travel document legitimately issued to another person.

This type of fraud is mitigated because carriers are required to ensure that the person presenting the travel document is the person to whom the travel document was issued, pursuant to 19 CFR 122.49a(d), 122.49b(d), 122.75a(d) and 122.75b(d). However, the best tool to combat this fraud is to biometrically verify that a person who presents a travel document is the true bearer of that document. CBP’s biometric tests using facial recognition technology support this conclusion. Within three weeks of implementing new facial recognition technology at Washington Dulles International Airport, CBP identified two imposters attempting to enter the United States by using another person’s passport.21 Since then, CBP has identified five additional imposters, for a total of seven imposters identified in the air environment, including two with genuine U.S. travel documents (passport or passport card), who were using another person’s valid travel documents as a basis for seeking entry to the United States.22 In addition, CBP’s facial recognition technology has identified at least 138 imposters, including 45 travelers...

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with genuine U.S. travel documents (passport or passport card) attempting to enter the United States using another person’s travel documents at the San Luis and Nogales, Arizona land border ports.\(^{23}\) Several of these imposters identified in the land environment had criminal histories including assault, extortion, kidnapping, and drug smuggling. CBP anticipates that the number of imposters it is able to catch will increase as the program expands. While it is difficult to quantify the number of instances in which such fraud has occurred but not been identified by CBP because facial recognition technology is not broadly used at present, DHS expects that the implementation of this rule would greatly enhance DHS’s ability to identify more of these imposters.

In addition to the benefits this technology can provide on entry, an integrated system, including biometric exit, is also essential for maintaining the integrity of the U.S. immigration system. Under current immigration laws, entering or staying in the United States without official permission from the U.S. government can cause a person to be legally barred from reentry to the United States for a number of years following departure or removal. Pursuant to INA 222(g), a nonimmigrant visa will be void if an alien remains in the United States beyond his or her period of authorized stay. For aliens traveling under the Visa Waiver Program, to remain eligible for the program, aliens must comply with the conditions of admission, including remaining in the U.S. only for the authorized period of stay.\(^{24}\) Depending on the duration of a person’s “unlawful presence” in the United States, that alien may be barred from returning to the United States for three or ten years.\(^{25}\) The absence of an effective biometric exit process has enabled aliens who are present in the United States without having been admitted or paroled or who overstayed their authorized period of admission (overstays) to evade immigration laws and avoid the time bars associated with unlawful presence.

\(^{23}\) See id.

\(^{24}\) 8 U.S.C. 1187 (a)(7) and 8 CFR 217.

Through its limited deployment of biometric exit pilots, CBP has been able to process and document hundreds of aliens who were present in the United States without having been admitted or paroled. These cases follow a similar fact pattern. Upon the collection of the traveler’s biometrics, the system is unable to generate a match to any photographs of the traveler on record. Further inspection by CBP officers confirms that the traveler was not previously inspected by CBP or DHS, indicating that they entered the United States illegally. In such cases, CBP creates a biometric exit record for this traveler that will be available to other DHS component agencies, such as U.S. Citizenship and Immigration Services (USCIS) and U.S. Immigration and Customs Enforcement (ICE), as well as the Department of State. If the traveler has no other derogatory information, then CBP allows the traveler to depart, but maintains a record of the encounter which is used to inform future admissibility-related determinations.

As stated in Executive Order 13768, Enhancing Public Safety in the Interior of the United States, “interior enforcement of our Nation’s immigration laws is critically important to the national security and public safety of the United States. Many aliens who illegally enter the United States and those who overstay or otherwise violate the terms of their visas present a significant threat to national security and public safety.” DHS data supports the conclusion that certain status violators and illegal aliens also have links to terrorism and criminal activity.

Using biometrics, CBP has apprehended criminal aliens who were present in the United States without having been admitted or paroled. For instance, during a recent outbound operation, CBP’s facial recognition generated a “no-match” result for a passenger resulting in further inspection by a CBP officer which then confirmed that the traveler was an alien who was present in the United States without admission or parole.

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27 See 82 FR 8799 (January 30, 2017).
and was wanted for aggravated sexual abuse of a minor. Other examples of aliens identified through DHS’s biometric verification system include previously removed aliens who committed felonies such as armed robbery with a firearm, assault with a deadly weapon, and aggravated assault. Since the inception of its biometric exit pilots, CBP has encountered hundreds of cases with similar fact patterns. Because there is no comprehensive system currently in place to collect biometrics at exit, CBP has no way of knowing precisely how frequently these types of cases occur.

Identifying aliens who overstay their period of authorized admission is best addressed with a biometric exit program. Each year, millions of visitors are admitted to the United States for limited times and purposes. According to DHS’s Entry/Exit Overstay Report for fiscal year 2019,29 676,422 of nearly 55 million aliens admitted for business or pleasure through air and sea ports of entry that were expected to depart the United States in fiscal year 2019 overstayed their authorized period of admission. This report likely understates the total number of overstays for fiscal year 2019. This is because, due to data reliability concerns, the Overstay Report only included data for aliens who lawfully entered the United States under nonimmigrant visa categories for temporary visitors for business or pleasure. It did not include aliens who entered the United States under other visa categories.

In addition, biometric exit verification can allow CBP to address errors that sometimes appear in an alien’s biographic data. Although CBP is typically able to successfully vet aliens seeking admission into and departing from the United States based on biographic data, in some cases a biographic check can fail due to errors or incomplete data. Conducting biometric verification at departure can help uncover these issues in an alien’s biographic data and protect the accuracy of recorded border crossings.

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During the course of its biometric exit pilots, CBP encountered a number of cases where collecting biometrics from departing travelers revealed errors or incomplete data in a traveler’s biographic record. For instance, on one occasion, CBP’s biometric query of a departing traveler revealed that he was previously convicted for armed robbery with a firearm and had been deported from the United States. The traveler’s biographic data, however, did not reflect this information because of a misspelling on the traveler’s deportation record. On another occasion, CBP’s biometric query revealed that a traveler had been previously removed from the United States under a false identity. Because the traveler had been traveling under the traveler’s true identity, a review of the traveler’s biographic record did not alert the CBP officer to this important factual information.

In each of these cases, the biometric query revealed the missing data from the traveler’s biographic data. By performing a biometric check at departure, CBP can reconcile any errors or incomplete data in the traveler’s biographic data, increasing the level of accuracy of CBP’s border crossing records. Ultimately, this provides CBP with more reliable information to better identify persons of law enforcement or national security concern.

Finally, a comprehensive and integrated biometric entry-exit system serves an important tool in our fight against global terrorism. Since the 9/11 attacks, the United States remains vulnerable to the threat of global terrorism. The 9/11 Commission recognized that combatting terrorism requires a screening system that examines individuals at multiple points within the travel continuum:

For terrorists, travel documents are as important as weapons. Terrorists must travel clandestinely to meet, train, plan, case targets, and gain access to attack. To them, international targets present great danger, because they must surface to pass through regulated channels, present themselves to border security officials, and attempt to circumvent inspection points…each of these checkpoints is a screening, a chance to establish that these people are who they say they are and are seeking access for their stated purpose, to intercept identifiable subjects, and to take effective action.

The job of protection is shared among these many defined checkpoints. By taking advantage of them all, we need not depend on any one point in the system to do the whole job. The challenge is to see the common problem across
agencies and functions and develop a common framework—an architecture—for an effective screening system.”

The Under Secretary General for the United Nations Office of Counter-Terrorism said, “Terrorists, including foreign terrorist fighters use a wide variety of techniques to travel to destinations all over the world. With the number of international travelers continuing to increase, it is essential that we develop efficient counter-terrorism measures that facilitate rapid, efficient and secure processing at our borders.” Manuals prepared by terrorist groups such as the Islamic State, also known as ISIS, explicitly understand the need to forge identity papers, passports, and visas to circumvent border checkpoints and smuggle people across borders. Recognizing terrorism as one of the most serious threats to international peace and security and the need to take immediate action to address the evolving threat environment, the United Nations Security Council adopted a resolution on December 21, 2017, calling on member nations to increase aviation security and to develop and implement systems to collect biometric data to properly identify terrorists. The resolution was co-sponsored by 66 countries, including the United States, and passed the Security Council with unanimous support.

Although CBP’s security mission has mainly been focused on identifying known or suspected terrorists seeking admission to the United States, identifying and intercepting these individuals at departure is critical to effectively combatting terrorism here and abroad. Individuals who seek to inflict harm on the American homeland are not limited to those attempting to enter the United States. Some of these individuals may seek to depart the United States in order to inflict harm to U.S. interests and allies abroad or engage in the terrorist/jihadist movement abroad for training or coordination. For individuals on a terrorist watch list, law enforcement and intelligence agencies may have

a need to track that individual’s movements and travel. If that individual can depart the
country under an alias without detection, then that impacts the ability of these law
enforcement and intelligence agencies to operate effectively. Preventing these
individuals from leaving the United States, or at minimum, gaining intelligence on their
whereabouts, is critical to diminishing a terrorist network’s ability to mobilize.

The need for identifying and tracking suspected terrorists departing the United
States is further borne out by current research on the movements of such individuals.
According to the George Washington University’s Program on Extremism, out of the 186
individuals who have been charged in the United States on offenses related to the Islamic
State since March 2014, 39% were accused of attempting to travel or successfully
traveled abroad.33

CBP, as the agency entrusted with securing the border, must verify the identity of
those entering and departing with as much accuracy as possible, especially individuals
linked to terrorism or criminal activity. As discussed in the 2018 National Strategy for
Counterterrorism34, one of the priority actions for the U.S. Government is to enhance
detection and disruption of terrorist travel. By collecting and sharing relevant
information on terrorist travel and identities, this information can be used for the benefit
of the public and private section to identify and disrupt the movement of terrorists.

CBP’s biometric exit program will provide another layer of identity verification
and another opportunity to stop these individuals from departing. Despite the agency’s
resource constraints at departure, CBP has identified many recent national security cases
that resulted from examining foreign nationals departing the United States on
international flights. In several of these cases, CBP’s outbound examination of the
individual revealed his or her connections to terrorist and militia groups abroad. Using a

33 See GW Extremism Tracker, The George Washington University,
https://extremism.gwu.edu/sites/g/files/zaxdzs2191/f/Jun19%20Tracker.pdf (last accessed October 26,
2020).
34 See https://www.dni.gov/index.php/nctc-newsroom/item/1911-white-house-releases-national-strategy-
biometric verification system, CBP can update the individual’s border crossing record with this information, linking it to his or her biometrics, which provides greater assurance that the government will be able to identify this individual in the event of future encounters.

Identifying overstays and aliens who are present in the United States without admission or parole is essential to maintaining the integrity of the U.S. immigration system and to national security as a whole. Expanding the biometric entry-exit program to create an integrated system will enable CBP to better identify overstays and aliens who are present in the United States without admission or parole. Furthermore, by providing an accurate way to verify an individual’s identity, a biometric entry-exit system can effectively combat attempts by foreign national terrorists to circumvent border checkpoints using false identity documents. Establishing such a system is crucial to our efforts to respond to the continuing threat of global terrorism.

D. Biometric Entry-Exit Program History

1. Implementation of US-VISIT

In 2003, DHS established the legacy United States Visitor and Immigrant Status Indicator Technology (US-VISIT) program to develop a system to collect biographic data and biometrics from aliens at U.S. ports of entry.

On January 5, 2004, DHS implemented the first phase of the legacy US-VISIT biometric program by publishing an interim final rule in the Federal Register (69 FR 468), which provided that certain aliens seeking admission to the United States through nonimmigrant visas must provide fingerprints, photographs, or other biometrics upon arrival in, or departure from, the United States at air and sea ports of entry. The interim final rule amended 8 CFR 235.1 to authorize DHS to require certain aliens who arrive at designated U.S. air and sea ports of entry to provide biometric data to CBP during the inspection process. DHS designated the air and sea ports of entry where the collection of
biometrics from certain aliens upon entry would occur in a series of notices published in the *Federal Register*.  

The January 5, 2004 interim final rule also added 8 CFR 215.8 to provide that the Secretary, or designee, may establish pilot programs to collect biometric information from certain aliens departing the United States at up to 15 air or sea ports of entry, designated through notice in the *Federal Register*. Pursuant to § 215.8(a)(1), DHS designated the 15 air and sea ports of entry where the collection of biometrics under exit pilot programs would occur in a series of notices published in the *Federal Register*.  

On August 31, 2004, DHS implemented the second phase of the legacy US-VISIT biometric program by publishing an interim final rule in the *Federal Register* (69 FR 53318) expanding the US-VISIT program to include aliens seeking admission under the Visa Waiver Program (VWP) and travelers arriving at designated land border ports of entry. DHS designated the land ports of entry at which biometrics would be collected from certain aliens upon entry in two notices published in the *Federal Register*. The August 31, 2004 interim final rule also amended § 215.8 to authorize DHS to establish pilot programs to collect biometrics from aliens upon departure at designated land border ports of entry.

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35 On January 5, 2004, DHS issued a notice in the *Federal Register* (69 FR 482) designating 15 airports and 14 seaports for the collection of biometrics from aliens upon entry. On August 20, 2004, DHS published a notice in the *Federal Register* (69 FR 51695) identifying six new air and sea ports of entry for inclusion in the legacy US-VISIT program and removing two ports of entry that were inadvertently included in the legacy US-VISIT program in the January 5, 2004 notice.  


37 Pursuant to INA 217 (8 U.S.C. 1187), the Secretary of Homeland Security, in consultation with the Secretary of State, may designate certain countries as VWP program countries if certain requirements are met. Citizens and eligible nationals of VWP countries may apply for admission to the United States at a U.S. port of entry as nonimmigrant aliens for a period of 90 days or less for business or pleasure without first obtaining a nonimmigrant visa, provided that they are otherwise eligible for admission under applicable statutory and regulatory requirements. The list of countries which currently are eligible to participate in VWP is set forth in 8 CFR 217.2(a).  

38 On November 9, 2004, DHS published a notice in the *Federal Register* (69 FR 64964) identifying the 50 most trafficked land border ports of entry where biometric data would be collected from certain aliens upon entry. On September 14, 2005, DHS published a notice in the *Federal Register* (70 FR 54398) identifying additional land ports of entry in which aliens would be enrolled in legacy US-VISIT upon entry into the United States.
ports of entry, in addition to the 15 designated air or sea ports at which DHS was authorized to conduct biometric exit pilot programs. See 8 CFR 215.8(a)(1).

On December 19, 2008, DHS published a final rule in the Federal Register (73 FR 77473) expanding the population of aliens subject to legacy US-VISIT to nearly all aliens, including lawful permanent residents. The rule also finalized the August 31, 2004 interim final rule without change.

As a result of the above rules and notices, DHS now collects biometrics from aliens upon entry, with certain exemptions provided in the regulations, at all air, sea and land ports of entry. The following categories of aliens currently are exempt from the requirements under 8 CFR 215.8 and 235.1 to provide biometrics upon arrival to, and departure from, the United States at a U.S. port of entry:

- Aliens under the age of 14 and over the age of 79;  
- Aliens admitted on an A-1, A-2, C-3 (except for attendants, servants, or personal employees of accredited officials), G-1, G-2, G-3, G-4, NATO-1, NATO-2, NATO-3, NATO-4, NATO-5, or NATO-6 visa;  
- Certain Taiwan officials who hold E-1 visas and members of their immediate families who hold E-1 visas unless the Secretary of State and the Secretary of Homeland Security jointly determine that a class of such aliens should be subject to the requirements; and  
- Canadian citizens under INA 101(a)(15)(B) (8 U.S.C. 1011(a)(15)(B)) who are not otherwise required to present a visa or be issued Form I-94 or Form I-95 for admission or parole into the United States.  

See 8 CFR 235.1(f)(1)(ii), (iv); 8 CFR 215.8(a)(1)-(2). In addition, the Secretary of State and the Secretary of Homeland Security may jointly exempt classes of aliens from this requirement. The Secretaries of State and Homeland Security, in consultation with the

39 See INA 101(a)(3). The term "alien" means any person not a citizen or national of the United States.  
40 On September 11, 2020 USCIS published an NPRM proposing to remove the age exemptions in 8 CFR 215.8 and 8 CFR 235.1 regarding biometrics collection at entry and exit. See, 85 FR 56338.  
41 This category of exemptions covers Canadian citizens traveling on a B1 or B2 visa.
directors of the relevant intelligence agencies, also may exempt any individual from this requirement. See 8 U.S.C. 1365b; 8 CFR 235.1(f)(1)(iv)(C)-(D); 8 CFR 215.8(a)(2)(iii)-(iv).

2. Exit Pilot Programs and the Transfer of Entry and Exit Operations to CBP

While DHS successfully implemented biometric entry capability at all ports of entry, establishing a biometric exit solution posed greater challenges. From January 2004 through May 2007, DHS conducted a series of exit pilot programs at 12 airports and 2 cruise ports across the United States. These pilots were conducted pursuant to 8 CFR 215.8. Under these exit pilot programs, DHS evaluated various technologies and processes to collect biometric data from aliens at the time of departure. DHS found that biometrics provide a significant enhancement to the existing ability to match arrival and departure records as biometrics provides greater assurance of identity verification. In addition, DHS found that each of the various technologies used to collect biometric exit records worked and that compliance with biometric exit procedures improved when the process was convenient for travelers. In a report dated June 28, 2007, the Government Accountability Office stated that “in particular, on average only about 24 percent of those travelers subject to US-VISIT actually complied with the exit processing steps. The evaluation report attributed this, in part, to the fact that compliance during the pilot was voluntary, and that to achieve the desired compliance rate, the exit solution would need an enforcement mechanism.”

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42 The ports of entry included in the pilot were: Baltimore/Washington International Thurgood Marshall Airport; Chicago O’Hare International Airport; Denver International Airport; Dallas Fort Worth International Airport; Miami Cruise Terminal; San Juan Luis Munoz Marin International Airport; Detroit Metropolitan Wayne County Airport (McNamara Terminal); Newark Liberty International Airport; San Francisco International Airport; Los Angeles Cruise Terminal; Hartsfield-Jackson Atlanta International Airport; Philadelphia International Airport; Ft. Lauderdale/Hollywood International Airport; and Seattle-Tacoma International Airport.

43 See footnote 36.

However, DHS also found that the collection process used during those pilots was inadequate and unsuitable for a nationwide deployment because it required significant DHS resources and also depended upon the facility operator, in this case airports, to provide adequate space for the collection of biometric data. The pilots beginning in 2004 used kiosks placed between the security checkpoint and airline gates that would collect a traveler’s fingerprint biometrics. The traveler had the responsibility to find and use the devices, with varying degrees of support from the airports where the pilots were deployed. DHS also hired contract teams to assist travelers in finding and using the kiosks. Although the specific fingerprint technology collection generally worked as intended when it was utilized, the overall compliance rate was low because travelers often departed without providing their biometrics.

DHS concluded from these pilots that it was generally inefficient and impractical to introduce entirely new government processes into an existing and familiar traveler flow, particularly in the air environment. Unlike many airports in Europe and around the world, United States transportation infrastructure was not built with departure control in mind, and does not have existing space within its airports to biometrically process departing travelers. Because DHS was required to secure space within the airports from the private sector, and because space within airports is limited and valuable from a commercial perspective, DHS’s biometric exit pilots tended to operate in relatively inconvenient locations, which contributed to low compliance rates. Overall, DHS concluded that a biometric collection process that fit, to the extent practicable, within the existing traveler flow was necessary for successful implementation. The facial recognition technology required to reliably implement biometric exit processes into existing traveler flows has not been available until recently. Overall, DHS’s conclusion is that the process of collecting biometric exit records should be integrated into the existing departure process.
From May through June 2009, DHS operated two biometric air exit pilots as required by the Consolidated Security, Disaster Assistance, and Continuing Appropriations Act, 2009, Pub. L. No. 110-329, 122 Stat. 3574, 3669-70. DHS announced the implementation of these biometric air exit pilots at Atlanta, Georgia (Hartsfield-Jackson Atlanta International Airport), and Detroit, Michigan (Detroit Metropolitan Wayne County Airport), by notice published in the *Federal Register*.

The pilots tested the collection of biometric exit data in two scenarios: first, the collection of biometric information consisting of one or more electronic fingerprints by CBP at the departure gate using a hand-held mobile device or other portable device; and second, biometric information consisting of one or more electronic fingerprints collected by TSA at the TSA security checkpoint using a mobile device. Although the technology worked as expected and DHS successfully captured the biometric data, DHS concluded that the use of mobile and portable devices to capture electronic fingerprints would be extremely resource-intensive and costly to implement and maintain on a larger scale.

Beginning in December 2009, CBP conducted the Temporary Worker Visa Exit Program Pilot in San Luis, Arizona and Douglas, Arizona, under which aliens admitted on certain temporary worker visas were required to depart from designated land ports of entry and submit certain biographical and biometric information at one of the outdoor kiosks established for this purpose.

In its evaluation of the pilot, CBP identified several issues, including difficulties participants experienced in understanding the requirements and using the kiosks, resource and staffing burdens, unreliable kiosk operability due to

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45 74 FR 26721 (June 3, 2009).
the harsh desert climate, and infrastructure challenges. As a result, CBP discontinued the Temporary Worker Visa Exit Program Pilot in September 2011.47

In 2013, pursuant to the Consolidated and Further Continuing Appropriations Act, 2013, Pub. L. No. 113-6, 127 Stat. 198, Congress transferred US-VISIT’s entry-exit policy and operations, including responsibility for implementing a biometric exit program, to CBP; US-VISIT’s biometric identity management functions to the newly created Office of Biometric Identity Management (OBIM) within DHS’s National Protection and Programs Directorate (now Cybersecurity and Infrastructure Security Agency48); and US-VISIT’s overstay analysis mission to ICE within DHS.

E. Recent Developments in the Biometric Entry-Exit System

In 2015 and 2016, CBP conducted the following four biometric tests, three at airports and one at a land port: (1) Biometric Exit Mobile Air Test (BE-Mobile); (2) 1 to 1 Facial Comparison Project; (3) Southwest Border Pedestrian Exit Field Test; and (4) Departure Information Systems Test. In October 2017, CBP began testing a streamlined entry process using facial recognition technology known as “Simplified Arrival.” Since 2017, CBP has partnered with a number of airlines and airport authorities to test a facial-recognition exit process for international flights at certain locations. In 2018, CBP began conducting biometric pilot programs at the land border in Anzalduas, Texas and Nogales and San Luis, Arizona. Summaries of the tests, lessons learned, and conclusions are set forth below.

1. Biometric Exit Mobile Experiment (BE-Mobile)

In the summer of 2015, CBP began deploying the BE-Mobile pilot at the 10 highest volume international airports in the United States.49 Under this pilot, CBP officers stationed at the passenger loading bridges of selected flights used a handheld mobile device to scan fingerprints and passports of certain aliens at the time of their

47 See 76 FR 60518 (Sept. 21, 2011).
48 As a result of the Cybersecurity and Infrastructure Agency Act of 2018, OBIM was transferred to the DHS Management Directorate.
49 See 80 FR 44983 (July 28, 2015).
departure from the United States at designated airports. The biometric and biographic data collected by the BE-Mobile device was matched against data such as departures and arrivals in the United States, criminal histories, and lawful immigration status. The goal of the BE-Mobile pilot was to evaluate the viability of using handheld mobile technology to collect exit data from a sample population on randomly selected flights within a specified airport, as well as to evaluate the viability of implementing biometric exit in conjunction with CBP’s outbound enforcement operations.\(^{50}\)

In its evaluation of the pilot, CBP concluded that while the handheld mobile technology can effectively capture biometric data and match that data against DHS databases, the handheld devices required too much time and manpower to be a biometric exit solution on all flights departing the United States. However, CBP concluded that BE-Mobile does provide some benefits when used to assist with outbound enforcement operations. For instance, BE-Mobile allows officers to identify travelers who have suspicious travel histories or other derogatory information for further investigation by searching databases that detail individuals’ travel patterns, visa status, and criminal records. Similarly, BE-Mobile can identify travelers exiting the country who do not have corresponding entry information, indicating that they potentially entered the country without having been admitted or paroled. Finally, BE-Mobile may identify individuals who have overstayed their period of admission, allowing CBP to collect more accurate overstay information.

CBP is currently utilizing the same technology tested in the BE-Mobile pilot at the original 10 airports as an enforcement tool for use by CBP officers. Since 2017, CBP has expanded the use of the BE-Mobile technology as an enforcement tool to additional airports and, more recently, land ports.\(^{51}\) BE-Mobile technology also serves as an

\(^{50}\) CBP conducts traveler targeting operations to vet inbound and outbound travelers from commercial airlines to identify potential high-risk individuals, such as terrorists.

additional identity verification tool for CBP’s biometric pilots using facial recognition technology in the air and land environments, and CBP is considering it for use in the sea environment, as well.

2. 1 to 1 Facial Comparison Project

From March to May 2015, CBP tested the 1 to 1 Facial Comparison Project at Dulles International Airport. This pilot was intended to assist CBP officers in matching travelers to their passport photo. After the conclusion of the pilot program, the technology was deployed for use at both Dulles International Airport and John F. Kennedy International Airport for U.S. citizens and first-time VWP travelers. The technology compares a photograph taken of the traveler by a CBP officer upon entry to the photograph stored on the traveler’s electronic passport to assess whether the individual applying for entry into the United States is the same person to whom the passport was legally issued.

Although the capability was tested at the time of entry to the United States, the information gathered through the pilot was intended to also inform the acquisition of a biometric exit capability. The results of the pilot showed that biometric facial matching can increase the confidence with which CBP officers verify individuals’ identities without a negative impact to port of entry operations and traveler wait times. Further, the results of this pilot aided CBP in determining the appropriate technical specifications needed for the air travel environment, which CBP could then test at exit by air.

3. Southwest Border Pedestrian Exit Field Test

From February to May 2016, CBP conducted a pilot program to test facial and iris scanning technology at the Otay Mesa port of entry south of San Diego, California.

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53 The 1 to 1 Facial Comparison Project focused on U.S. citizens and first-time Visa Waiver Program travelers because fingerprint biometrics are already available to verify other travelers upon admission to the United States.
The purpose of the test was to determine if biometric technology could be effectively used in an outdoor land environment without significant impact to operations and wait times, and to determine if collecting biometrics in conjunction with biographic data upon exit would assist CBP in identifying individuals who have overstayed their period of admission.

Under this pilot program, CBP collected biographic data from all travelers departing the United States at the Otay Mesa port of entry, and biometrics (facial images and/or iris scans) from all aliens, except for those exempt pursuant to 8 CFR 215.8(a)(2) and 235.1(f)(1)(iv), entering and departing the Otay Mesa port of entry on foot. Before departing, travelers scanned their passports at a radio frequency identification-enabled kiosk. One collection lane was equipped with facial and iris scanning equipment that required the traveler to pause for biometric data collection. Another lane was equipped with technology that collected facial and iris images while the traveler continued through the lane without pausing.

The pedestrian exit field test allowed CBP to test the capability of biometrics other than fingerprints in an outdoor environment. The pilot also provided information about the physical challenges to implementing face and iris scanning technology at land ports of entry. The successful implementation of a biometric capture system requires infrastructure tailored to mitigate both environmental factors that degrade image quality and human factors that inhibit travelers from properly interacting with the biometric capture system. Environmental factors included issues such as light, temperature, and items within the biometric camera field of view. Certain human factors, such as traveler attire and attentiveness, did impact technology effectiveness. The test highlighted the need for biometric scanning equipment to be located inside for protection from the elements, while recognizing that some land ports of entry do not have sufficient space for such infrastructure.

4. Departure Information Systems Test
In June 2016, in partnership with an airline, CBP deployed the Departure Information Systems Test pilot at Atlanta’s Hartsfield-Jackson International Airport.\textsuperscript{55} The goal of the pilot was to evaluate the effectiveness of biometric facial recognition matching of a real-time photograph of an individual to a gallery of photographs stored in a database. The field trial was designed to use existing CBP systems and to leverage data already provided to CBP by the traveler and airlines for matching purposes. Additionally, the field trial was designed to support existing business practices of airlines and fit within existing infrastructure at U.S. airports.

During the pilot, photographs of travelers taken during boarding were compared to photographs taken previously (as part of a U.S. passport application, a U.S. visa application, or through DHS encounters such as admission processing) that had been stored in the gallery. The names on the outbound flight manifest were used to populate the gallery with potential matches to the travelers boarding the flight. The device used to capture the photographs upon departure consisted of a camera, document reader, and display tablet. The display tablet instructed travelers to present their boarding pass to the reader as they approached the unit. Once the boarding pass was scanned, a camera captured a photograph of the traveler’s face. After the system matched the photograph to the photographs in the gallery, an indicator light appeared and the traveler was instructed to proceed to board the plane. In the event the system did not produce a match, a CBP officer could attempt to verify the traveler’s identity through in person manual review and use of other available information.

For the pilot, CBP deployed the capability at one gate and for one daily nonstop flight from Atlanta to Tokyo. Today, this technology, now operating as the Traveler Verification Service (TVS), is recording biometric exit records for a limited number of daily international flights at a number of international airports.\textsuperscript{56}


\textsuperscript{56} See https://www.biometrics.cbp.gov/air for an up to date listing of these airports.
5. Land Border Biometric Tests

In 2018, CBP began testing a number of different processes to develop a biometric entry-exit system to track aliens entering and departing the United States at the land border. For example, in September 2018, CBP began a technical demonstration at the San Luis port of entry in Arizona, testing the collection of photographs from pedestrian travelers entering the United States. Under this technical demonstration, CBP uses a facial recognition system to collect photographs of in-scope travelers entering the United States. CBP expanded this pilot to Nogales, Arizona in October 2018 and to Brownsville, Texas; Progresso, Texas; and Blaine, Washington in 2020.

CBP has also explored using facial recognition technology in the vehicle environment. From August 2018 to February 2019, CBP conducted the Vehicle Face demonstration at Anzalduas, Texas, which captured facial images of vehicle occupants “at speed” under 20 mph and biometrically matched the new images against a TVS gallery of recent travelers. For this demonstration, CBP installed several cameras in inbound lanes just prior to the existing vehicle lane infrastructure and in outbound lanes just beyond the license plate reader vehicle footprint. Vehicles proceeded through the respective inbound and outbound lanes as normal, with CBP officers processing vehicle occupants at the primary inbound booths using existing CBP software applications and technology. This process captured the biographic data of the vehicle occupants, associated the travelers with the vehicle, and created an exit crossing record for the occupants. The identification numbers assigned to the exit crossing records were associated with scene and facial images captured during this demonstration so that analysts could compare the biographic crossing data with the facial images and biometric matching. This demonstration did not impact the current experience of the travelers or

58 See 83 FR 56862 (Nov. 14, 2018).
officers, except during normal outbound operations in which CBP officers stopped vehicles and processed the occupants using a TECS System application.

After an evaluation of these and any other pilot programs, CBP plans to implement a long-term biometric exit solution at the land border that would address the unique operational and infrastructure challenges that exist in that environment.

6. Simplified Arrival

In October 2017, CBP began testing Simplified Arrival, a streamlined entry process using facial recognition technology at Atlanta’s Hartsfield-Jackson International Airport. Under Simplified Arrival, CBP uses facial recognition technology to biometrically verify a traveler’s identity. Under this process, CBP uses APIS manifest data to retrieve existing traveler photographs from government databases, including CBP’s own data systems, passport and visa databases of the Department of State, and other DHS holdings such as DHS’s Automated Biometric Identification System (IDENT), to build a photo gallery of travelers who are expected to arrive in the United States. At the inspection booth, CBP captures a “live image” of the traveler and matches it to a photograph in the pre-assembled gallery. Both the live image and the gallery photograph are displayed to the CBP officer along with the traveler’s biographic data. The CBP officer then conducts an interview with the traveler to validate the results and complete the inspection process.\(^{59}\)

In addition to Atlanta, CBP is now testing Simplified Arrival for arriving travelers on international flights at locations including, Miami International Airport, Orlando International Airport, George Bush Intercontinental Airport, Houston Hobby, San Antonio International Airport, San Francisco International Airport, Dallas – Fort Worth International Airport, Norman Y. Mineta San Jose International Airport, Fort Lauderdale-Hollywood International Airport, Washington Dulles International Airport, McCarran

\(^{59}\) Currently, U.S. citizens and aliens exempt under 8 CFR 235.1(f) may voluntarily participate in Simplified Arrival or instead undergo the normal inspection process.
International Airport, Detroit Metropolitan Airport, San Diego International Airport, John F. Kennedy International Airport, Newark International Airport, and Los Angeles International Airport. CBP is also testing Simplified Arrival for arriving travelers processed through the preclearance facilities at locations including Queen Beatrix International Airport, Aruba; Shannon Airport and Dublin Airports, Ireland; and Abu Dhabi International Airport, United Arab Emirates.\(^6\)

7. Public-Private Partnerships

Since June 2017, certain airlines, such as JetBlue Airways, Delta Air Lines, and British Airways, have volunteered to use their own technology in partnership with CBP to test a facial recognition-based boarding process for international flights that would facilitate identity verification, and also assist CBP in meeting its congressional mandate to implement biometric exit. In compliance with CBP’s business requirements, these stakeholders deployed their own camera operators and camera technology meeting CBP’s technical specifications to capture photographs of travelers boarding certain international flights via a facial biometric capture device. The photographs are sent to CBP’s TVS via a secure, encrypted connection, which will indicate to the airline if each traveler’s identity can be verified.

The technology has the potential to speed up the departure for airlines and travelers, as it enables identity verification without manual verification of the boarding pass and scanning of the passport. This new process can assist carriers to more efficiently and accurately comply with their obligation to ensure that the person presenting the travel document is the person to whom the travel document was issued, pursuant to 19 CFR 122.49a(d), 122.49b(d), 122.75a(d) and 122.75b(d). In some of these tests, the biometric verification process has replaced the use of boarding passes. Eventually, participating

\(^6\) See https://www.biometrics.cbp.gov/air for an up to date list of locations where CBP is testing Simplified Arrival.
airlines may choose to eliminate boarding passes entirely or use the technology to speed up other processes.

Participating airlines, in partnership with CBP, are testing this facial recognition-based boarding process on select international flights at locations including: Atlanta Hartsfield- Jackson International Airport, Boston Logan International Airport, Chicago O’Hare International Airport, Dallas/Fort Worth International Airport, Detroit Metropolitan Wayne County Airport, Fort Lauderdale – Hollywood International Airport, William P. Hobby Airport, George Bush Intercontinental Airport, McCarran International Airport, Miami International Airport, Minneapolis-St. Paul International Airport, Newark Liberty International Airport, John F. Kennedy International Airport (New York), Orlando International Airport, Portland International Airport, Salt Lake City International Airport, San Antonio International Airport, San Francisco International Airport, Washington Dulles International Airport, and Ronald Reagan Washington National Airport.  

F. Proposed Facial Recognition Based Entry-Exit Process

Based on CBP’s extensive biometric tests discussed above, DHS has determined that facial recognition technology can provide a successful foundation for a biometric exit solution, as well as an improved and more streamlined biometric entry process. The following sections will discuss CBP’s proposed facial recognition based entry-exit process. This process will be implemented first at commercial air ports of entry. Full implementation at for land and sea ports of entry will follow after CBP has tested and refined its biometric exit strategies in those environments.

Some of the facial recognition based entry and exit processes described below may already be implemented in limited form at entry or under biometric exit pilot programs. For such existing processes, CBP adheres to all applicable laws or regulations.

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61 See https://www.biometrics.cbp.gov/air for an up to date list of locations where CBP is testing facial recognition on international flights departing from the United States.
that govern its collection of biometrics. If this proposed rule is implemented, CBP will be able to collect facial images under the processes described here from all aliens arriving and departing the United States.

1. Benefits of a Facial Recognition Based Process

Using facial recognition technology, CBP has developed a model for moving forward with implementing a biometric exit solution, starting at airports. As fingerprint scans have proven to be an effective law enforcement tool, CBP will continue to capture fingerprints as the initial identification biometric. CBP may elect not to collect fingerprints for subsequent identity verification where CBP has implemented facial recognition. Fingerprint scans can be used for most aliens should facial recognition fail to properly identify the traveler.

CBP has determined that facial recognition technology is currently the best available method for biometric verification as it is efficient, accurate, and unobtrusive. The key benefit of a biometric entry-exit system based on facial recognition is its efficiency; it can leverage information that all travelers provide to the U.S. government as a condition for international travel. Photographs of all travelers are readily available to DHS through sources such as previous encounter photos and visa databases, eliminating the need to collect new information and add another layer to travel process. In addition, a system that matches a traveler’s facial biometrics against a limited number of stored photographs, rather than an entire government database of photographs, significantly reduces the amount of time necessary to verify a traveler’s identity. As a result, CBP is able to verify the identity of arriving or departing travelers with a high degree of efficiency while facilitating travel for the public.

Biometric verification using facial recognition is highly accurate. As of September 2018, CBP’s facial recognition technology was able to match travelers at a rate of greater than 97 percent. If the system fails to match a traveler, then a manual review of the traveler’s document is performed, just as the process is conducted today.
Additionally, CBP has a rigorous process in place to review data and metrics associated with biometric facial recognition matching performance. CBP is working with DHS Science and Technology (S&T) Directorate to continue to develop and refine methods to analyze any differences that are discovered in matching performance (e.g., age, gender, and citizenship) based on the available data collected through biometric entry-exit operations. CBP is also seeking the expertise of the National Institute of Standards and Technology (NIST) in evaluating the performance and core algorithm capability of face recognition algorithms. CBP’s presently available data demonstrates marginal differences in match rate between age, gender, or citizenship.\(^{63}\) CBP will continue to work with its partners to develop methods to address any performance variations within the system.

As an added benefit, a biometric entry-exit system based on facial recognition is relatively unobtrusive. It relies on current traveler behaviors and expectations; most travelers are familiar with cameras and do not need to learn how to have a photograph taken. Finally, the biometric capture device can be installed at an airline departure gate without any necessary changes to existing airport infrastructure.

To fully implement an effective biometric entry-exit system in a secure and comprehensive manner, and to avoid another layer in the travel process, DHS has concluded that it may be necessary to collect photographs from all aliens upon entry and/or departure from the United States.\(^{64}\) In this proposed rule, DHS proposes to amend the regulations to provide that all aliens may be required to be photographed upon entry and/or departure. Failure to comply with a requirement to be photographed upon entry

\(^{62}\) Currently, the regulations provide that aliens younger than 14 or older than 79 are exempt from the collection of biometrics upon entry and departure from the United States. See 8 CFR 215.8(a) and 235.1(f)(1); see also Section III.D.1 for more discussion. CBP will collect additional data on these populations and evaluate match rates once the regulations are amended to include these age groups.

\(^{63}\) Based on June 2017 – May 2018 CBP Air Exit data from ATL, HOU, IAD, IAH, JFK, LAS, LAX, MIA, ORD, SEA, SFO. Please see Evaluating Bias in the docket for this rulemaking. See also NIST Interagency Report 8271, available at https://doi.org/10.6028/NIST.IR.8271.

\(^{64}\) Currently, the regulations provide that certain aliens are exempt from the collection of biometrics upon entry and departure from the United States. See 8 CFR 215.8(a) and 235.1(f)(1); see also Section III.D.1 for more discussion.
and/or departure may be found to constitute a violation of the terms of the alien’s admission, parole, or other immigration status and, where the failure to comply is upon entry, may result in a determination that the alien is inadmissible under section 212(a) of the Immigration and Nationality Act or any other law.\textsuperscript{65}

By collecting photographs from all aliens departing the United States, DHS can more effectively verify their identity and confirm their departure. This collection also helps identify visa overstays and aliens who are present in the United States without having been admitted or paroled, and prevent their illegal reentry into the United States, as well as prevent visa fraud and the use of fraudulent travel documents. It also helps DHS identify known or suspected terrorists or criminals traveling using someone else’s documents, before they depart the country. By confirming that the traveler is not the true bearer of a presented travel document, the traveler would then be subject to further inspection, first by the airline and also in some circumstances by CBP officers, which may include fingerprinting and/or an interview. Through this additional inspection, CBP would be better able to identify known criminals and other threats to border security.

The collection of photographs from all aliens avoids the need to have different processes at the point of departure for alien travelers who are currently subject to the collection of biometrics and those who are not. Collecting photographs from all alien travelers aligns with international passport standards, which require a photograph of the traveler on the document regardless of age or classification. Having multiple processes for different alien travelers at the departure gate would add another layer to the travel process and place significant burdens on carriers, airports and other port facilities, and the traveling public. Also, at certain locations, such as at an international departure gate at an airport, there may not be sufficient space for multiple lines of alien travelers.

\textsuperscript{65} See proposed 8 CFR 215.8(b) and 235.1(f)(1)(iv). In the event of technical failures preventing the capture and matching of photographs of travelers at exit, air carriers will be directed to use manual boarding processes until the systems are functional. In this scenario, a biographic exit record will be created for the traveler but a biometric confirmation will not exist. A missing biometric confirmation record based on technology or operational failures is not considered non-compliance with departure requirements.
DHS has also determined that the collection of photographs from all aliens at entry is necessary, without regard to age or visa classification. Based on NIST’s research, CBP has found that effectiveness of a biometric entry-exit system based on facial recognition improves when more sources of biometrics are available to match against. A photograph collected from a traveler upon entry to the United States would provide DHS with another data point to match against a photograph collected upon departure, in addition to the photographs already available to DHS through sources such as previous encounter photos and visa databases. In addition to improving the system’s matching performance, establishing a requirement that all aliens may be photographed without exemption enables DHS to biometrically verify the identity of all alien travelers traveling to and from the United States, thereby helping prevent visa fraud and the fraudulent use of legitimate travel documentation.

Collecting photographs from all aliens at entry also enables CBP to implement a streamlined entry process using facial recognition for all such aliens. For example, under the Simplified Arrival process described above, CBP primarily uses photographs rather than fingerprints to verify the traveler’s identity and retrieve the traveler’s biographic information for inspection. Facial recognition technology can perform the function of biometrically verifying an alien traveler’s identity much more efficiently than collecting and comparing his or her fingerprints. During CBP’s current inspection process, most aliens are subject to being photographed upon arrival into the United States at primary inspection. The Simplified Arrival process, which is based on this requirement, utilizes integrated biometric identity verification with the retrieval of a traveler’s biographic data from a single capture of a photograph. In doing so, the Simplified Arrival process eliminates the need for CBP to scan a passport or travel document to pull up the traveler’s biographic data for inspection because a facial recognition scan performs this same

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function more quickly. Ultimately, using facial recognition at entry can eliminate several administrative processes that will increase the speed at which CBP can inspect travelers arriving in the United States. By eliminating the administrative tasks involved in scanning a travel document or collecting fingerprints, CBP can devote more resources to interviewing an alien traveler to determine his or her admissibility.

As noted above, DHS proposes in this rule to collect photographs from all aliens regardless of their age. This will enable DHS to associate the immigration records created for children to their adult records later, which will help combat trafficking of children, and confirm the absence of criminal history or associations with terrorist or other organizations seeking to violate applicable law. The current regulations that exempt biometric collection based on the age of the individual (i.e., under 14 and over 79) were based on technological limitations on collecting fingerprints from children and elderly persons, as well as traditional law enforcement policies and other policies, such as not running criminal history background checks on children. These policies are no longer applicable to CBP’s facial recognition based biometric entry-exit program, as the use of biometrics has expanded beyond criminal history background checks and now plays a vital role in identity verification and management. The use of facial recognition also obviates the technological problems previously associated with fingerprints.

Certain privacy advocates have expressed concern over the accuracy of facial matching technology especially as it relates to demographics such as age, race and gender. By expanding the scope of individuals subject to facial image collection, the accuracy of the facial matching system will improve for all segments of the population, including children and the elderly, as it would be matching against more recent photos of the traveler rather than older, outdated visa photos.\(^67\) Additionally, as discussed above, the proposed change to remove biometric exemptions for aliens would also alleviate the need to have multiple processing procedures for aliens, which would be a resource

intensive process. For land and sea ports of entry and private aircraft, CBP plans to continue to test and refine biometric exit strategies with the ultimate goal of implementing a comprehensive biometric entry-exit system nationwide. The proposed regulatory changes would support CBP’s efforts to regularly conduct a variety of statistical tests to bolster performance thresholds and minimize any possible bias impact on travelers of certain race, gender or nationality.

In this proposed rule, CBP has not analyzed the costs and benefits for implementing a facial recognition based biometric entry-exit program for land and sea ports of entry and private aircraft because CBP is still in the testing phase to determine the best way to implement biometric entry-exit within each of these unique environments. CBP would welcome comments from the public on the rule’s impact on land and sea ports of entry and private aircraft.

CBP is continually evaluating how to best implement a biometric entry-exit system that is efficient, accurate, and secure and incorporates the latest technology. These evaluations will allow CBP to determine if new technology or new methods of employing existing technology might improve the entry-exit system.

2. Facial Recognition Technology Gallery Building

CBP has developed a matching service for all biometric entry and exit operations that use facial recognition, regardless of the method of entry or exit (i.e., air, land, and sea). For all biometric matching deployments, TVS relies on biometric templates generated from pre-existing photographs that CBP already maintains, known as a “gallery.” These images may include photographs captured by CBP during previous entry inspection, photographs from U.S. passports and U.S. visas, and photographs from other DHS encounters. CBP builds “galleries” of photographs based on where and when a traveler will enter or exit. If CBP has access to APIS manifest information, CBP will build galleries of photographs based on upcoming flight or vessel arrivals or departures. If CBP does not have access to APIS manifest information, such as for pedestrians or
privately owned vehicles at land ports of entry, CBP will build galleries using photographs of “frequent” crossers for that specific POE, taken at that specific POE, that become part of a localized photographic gallery. CBP’s TVS facial matching service then generates a biometric template for each gallery photograph that is stored in the TVS virtual private cloud for matching when the traveler arrives or departs.

3. General Collection Process

Due to the complexities in logistics across the entry and exit environments, CBP will collect photographs of the arriving or departing traveler via several different methods depending on the local port of entry. Generally, when travelers present themselves for entry or exit, they will encounter a camera connected to CBP’s cloud-based TVS facial matching service via a secure, encrypted connection. This camera matches live images with existing photo templates from passenger travel documents. The camera may be owned by CBP, the air or vessel carrier, another government agency such as TSA, or an international partner governmental agency. Once the camera captures a quality image and the system successfully finds a match among the historical photo templates of all travelers from the gallery associated with that particular manifest, the traveler proceeds to inspection for an admissibility determination by a CBP Officer, or is permitted to depart the United States. When a “no match” occurs, CBP may use an alternative means to verify the traveler’s identity, such as a manual review of the travel document. See Section III.F.6 for more discussion.

4. Facial Recognition Based Entry Process

Historically, prior to admission to the United States, CBP has used a manual process to inspect travel documents, such as passports or visas, to initiate system checks and verify a traveler’s identity, travel history, and any law or border enforcement concerns that may require attention. The new primary entry solution uses biometrics to initiate the transaction and system checks, using facial recognition as the primary biometric verification modality. This shift from a biographic, document-based system to
a biometric-initiated transaction requires travelers to provide facial photos for identity verification purposes. This enables CBP to more accurately verify identity and citizenship by matching the traveler’s photograph with vetted and validated biographic information. Studies show that humans can benefit in face recognition tasks when assisted by a machine, and vice versa.  

Under Simplified Arrival, CBP uses CBP-owned cameras, CBP’s primary arrival subsystem of TECS, and the facial matching service to capture facial biometric data from travelers seeking to enter the United States. All travelers proceed to the entry lanes within CBP’s Federal Inspection Services (FIS) area, where a camera captures an image of the traveler’s face. The TECS primary arrival subsystem transmits the image to TVS. In order to biometrically identify the traveler, TVS automatically creates a template from the image and uses the template to query against a gallery of known identities, based on the manifests for all incoming flights for that day.

Once the traveler is matched, TVS transmits the match results, along with a TECS system-generated unique traveler identifier and a unique photo identifier generated by CBP’s Automated Targeting System (ATS)-Unified Passenger (UPAX) module to TECS. In turn, the TECS primary arrival subsystem uses the unique traveler identifier to retrieve the traveler’s biographic information from the APIS manifest. Additionally, the TECS subsystem uses the ATS-UPAX-generated identifier to retrieve the historical image (which had matched with the new image) stored in UPAX. The CBP officer has the ability to view and evaluate the traveler’s biographic data, along with any derogatory information, in the TECS primary arrival application, along with associated biometric match results from TVS. The CBP officer then conducts the standard inspection interview and establishes the purpose and intent of travel. Upon admission or entry, CBP updates the traveler crossing history in TECS to reflect a confirmed arrival into the

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United States. Inbound processing for travelers on commercial sea vessels (e.g., cruise ships) will resemble the air entry process, as this travel method is also based on an APIS traveler manifest.

Even with the use of facial recognition technology upon entry, CBP still leverages APIS information and screens it against TECS records and other law enforcement databases in order for CBP to ascertain if any security or law enforcement risks exist.

At this time, CBP is not actively using galleries of known travelers in the land environment. This is because private rail and bus lines are not required to submit APIS manifests (although, in some cases, private rail and bus lines submit APIS to CBP voluntarily) and CBP does not receive any manifest for pedestrians crossing the land border on foot or for persons traveling in private vehicles. However, CBP is developing processes that would enable the use of TVS at the land border. For example, CBP may briefly retain local galleries of travelers who have recently crossed at a given POE and are expected to cross again within a given period of time. CBP is conducting tests to determine feasibility. Currently, in San Luis and Nogales, Arizona, CBP is using facial recognition technology to compare the traveler against the photo in the travel document presented (1:1 comparison). Expanding the scope of travelers that may be required to present biometrics will allow CBP to continue to examine the possibility of using galleries in the land environment.

5. Facial Recognition Based Exit Process

CBP is using biometric technologies in voluntary partnerships with other federal agencies and commercial stakeholders. These partnerships enable CBP to more effectively verify the identities of individuals entering and exiting the United States, identify aliens who are violating the terms of their admission, and expedite immediate action when such violations are identified.

In some partnership arrangements, an airline or airport authority partner staffs TVS biometric collection and the boarding process, rather than CBP. These stakeholders
are assisting CBP in meeting the congressional biometric entry-exit system mandate. Some of these partners are already using traveler photographs in their own business processes. A number of airlines and airport authorities may choose to leverage their own technology in partnership with CBP to facilitate identity verification. Based on agreements with CBP, these stakeholders deploy their own camera operators and camera technology to operate TVS for identity verification. These stakeholders must adhere to strict business requirements and the cameras must meet CBP’s technical specifications to capture facial images of travelers prior to use. Each camera is connected to the TVS via a secure, encrypted connection. While the photo capture process may vary slightly according to the unique requirements of each participating airline and airport authority, the IT infrastructure supporting the backend process is the same.

During the boarding process, CBP’s facial recognition matching service allows CBP to biometrically verify the identity of travelers departing the United States with the assistance of airline or airport partnerships. At the departure gate, each traveler stands for a photo in front of a partner-provided camera. Aided by the authorized airline or airport personnel, the partner-owned camera attempts to capture a usable image and submits the image, sometimes through an authorized integration platform or vendor, to CBP’s cloud-based TVS facial matching service. TVS then generates a template from the departure photo and uses that template to search the assembly of historical photo templates in the cloud-based gallery. Some airlines continue to accept boarding passes at the gate, while other carriers accept CBP’s biometric identity verification in lieu of boarding passes as part of a new paperless, self-boarding process. In the latter process, the carrier may employ technologies (such as automated gates) to further automate the boarding process. For example, a traveler whose photo has generated a positive match with a photo in the gallery, will be directed to board the plane. As CBP verifies the identity of the traveler, either through the automated TVS facial recognition process or manual officer processing, the backend matching service returns the “match” or “no-match” result, along
with the associated unique identifier. Carriers, pursuant to the APIS regulations, are responsible for comparing the travel document to validate the information provided and ensure that the person presenting the document “is the person to whom the travel document was issued.” 19 CFR 122.49a, 122.49b, 122.49c, 122.75a, and 122.75b. The use of TVS provides a more efficient and accurate way to meet this requirement.

Typically, on air exit, CBP is not permanently stationed at the gate. Therefore, CBP currently must rely on the review of biographic data (provided via APIS) to determine whether further inspection on departure is warranted and whether an outbound enforcement teams should be sent to the gate. With the use of facial recognition technology, outbound enforcement teams are informed immediately when a no match occurs (via notification on mobile device) and can then determine if additional inspection is warranted.

Outbound processing for travelers on commercial sea vessels (e.g., cruise ships) would resemble the air exit process. It is expected that this process will also be based on an APIS traveler manifest, although further testing is needed to refine and implement this process. At the land border, as part of CBP’s outbound enforcement efforts, CBP has begun recording departures of Third Country Nationals (TCN) encountered during outbound operations at land crossings, both biographically and with facial images and fingerprint biometrics. A TCN is defined as a foreign national who is attempting to enter either Canada or Mexico but is not a citizen of either country. TCNs departing the United States by land are those individuals who are currently subject to biometric collection under existing CBP regulations.

6. Alternative Procedures and Public Notices

Currently for air exit, all travelers, including U.S. citizens, may notify the airline-boarding agent if they would like to opt out of the facial-recognition based process at the time of boarding and request that an alternative mean of validation be employed. Airline personnel would then conduct manual identity verification using the travel document, and
may notify CBP to collect biometrics, if applicable. Under the proposed rule, alien
travelers would no longer be able to opt out. Alternative procedures would only be
available to U.S. citizen travelers.

All U.S. citizens are subject to inspection upon arrival into and departure from the
United States to confirm their identity and citizenship. Where CBP has implemented a
biometric verification program, participation by U.S. citizens in CBP’s biometric
verification program is voluntary. Such participation provides a more efficient boarding
process or admission process and a more accurate and efficient method for verifying the
identity and citizenship of U.S. citizens. A U.S. citizen traveler who does not wish to
have his or her photograph taken may request an alternative inspection process. For
example, in the event a U.S. citizen elects not to be photographed at airports where CBP
is conducting biometric exit verification, an airline gate agent will perform a manual
review of the U.S. citizen’s passport. If there is some question as to the authenticity of
the passport or whether the person presenting the passport is the person to whom the
passport was lawfully issued, the airline will contact CBP for additional inspection, and a
CBP officer may perform a manual review of the passport. A CBP officer may ask
questions to validate identity and citizenship. At other departure locations, such as at a
land port where CBP is conducting biometric verification, CBP provides appropriate
alternative procedures. As biometric collection progresses, CBP believes that it will save
customers time. If this is the case, the alternative inspection process may be a slower
process than the automated process, but every effort will be made to not delay or hinder
customers.

As discussed in Section III.E.6, Simplified Arrival enables CBP to use facial
recognition to streamline the entry process for all arriving travelers. This process has
been implemented at certain locations and will be expanded. For U.S. citizens,
participation is voluntary. CBP provides appropriate alternative procedures for U.S.
citizens who choose not to participate in the biometric verification process at entry. The
alternative procedures proposed in this rule are intended to be similar to the existing process at entry today, in which a CBP officer would physically examine the traveler’s documentation to ensure the bearer is the true owner, and scan the document to pull up the traveler’s data for inspection. See Section III.E.6.

CBP strives to be transparent and provide notice to individuals regarding its collection, use, dissemination, and maintenance of personally identifiable information (PII). When airlines or airports are partnering with CBP on biometric air exit, the public is informed that the partner is collecting the biometric data in coordination with CBP. CBP provides notice to travelers at the designated ports of entry through both physical and either LED message boards or electronic signs, as well as verbal announcements in some cases, to inform the public that CBP will be taking photos for identity verification purposes. CBP also provides notice to the public that a traveler may opt out of having their photo taken and request an alternative procedure. CBP works with carriers, airports, and other port facilities to incorporate appropriate notices and processes into their current business models.

Upon request, CBP officers provide individuals with a tear sheet with Frequently Asked Questions (FAQ), opt-out procedures, and additional information on the particular demonstration, including the legal authority and purpose for inspection, the routine uses, and the consequences for failing to provide information. Additionally, in the FIS, CBP posts signs informing individuals of possible searches, and the purpose for those searches, upon arrival or departure from the United States. Privacy information on the program, such as System of Records Notices and Privacy Impact Assessments (PIAs), are published on www.dhs.gov/privacy. CBP will also continue to make program information, such as Frequently Asked Questions, available for the public on CBP’s biometrics website at www.cbp.gov/biometrics.

7. “No Match” Procedures
CBP has designed the entry and exit inspection process such that, in the event of a mismatch, false match, or “no match,” CBP may use alternative means to verify the traveler’s identity and ensure that the traveler is not unduly delayed. If the system fails to match a traveler, then a manual review of the traveler’s document is performed. On entry, the CBP officer may continue to conduct additional screening or request fingerprints (if appropriate) to verify identity. Each inspection booth at entry is equipped with a fingerprint reader.

At departure, after the manual review of the travel document (i.e., scanning a boarding pass and checking a traveler’s passport), the airline or cruise line may notify CBP’s outbound enforcement teams should additional inspection be required. In such case, CBP officers may inspect the traveler’s passport or other valid travel document. If the traveler is subject to biometric collection (under the current regulations or under the amended regulations once this rule is finalized), the officer may swipe the traveler’s document in the MRZ of the BE-Mobile device and collect the traveler’s fingerprints. BE-Mobile uses fingerprints, facial images, and the existing connections between ATS-UPAX and DHS IDENT for all biometric queries and storage. CBP encrypts data on the wireless handheld device as it is collected and encrypts the biometric and biographic data during transmission to and from internal and external systems. No information is retained on the BE-Mobile device.

The BE-Mobile device transfers prints and passport information to the appropriate DHS and CBP information technology system to identify any law enforcement lookouts related to the traveler. In addition, the device matches the traveler to the APIS manifest and creates a confirmed exit record in such CBP systems as APIS and the Arrival and

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69 Communication between CBP’s outbound enforcement team and airlines/cruise lines is not unique to locations where facial recognition is implemented. During the outbound inspection, CBP may interview the traveler as well as use BE-Mobile devices. CBP conducts outbound enforcement operations using BE-Mobile devices in all modes of transportation and also at locations where facial recognition technology (i.e., biometric exit boarding) is unavailable. Neither the operations nor the technology is exclusive to locations where facial recognition based biometric exit is implemented.
Departure Information System (ADIS). If the system checks yield no derogatory information, the CBP officer allows the traveler to board/continue travel.

Based on the inspection results and the queries using the newly collected biometric and biographic data, if CBP finds actionable derogatory information on the traveler, the CBP officer may escort the traveler to the FIS area to conduct further questioning and take the appropriate actions under CBP’s law enforcement authorities.

In the event that an individual does experience a delay or issue as an outcome of these processes, travelers may contact the CBP Info Center and/or DHS Traveler Redress Inquiry Program (TRIP). Signage and tear sheets at select ports of entry where the TVS is employed provides information on how to contact the CBP Info Center and/or DHS TRIP. In addition, travelers may request information from the on-site CBP officer or gate agent.

8. U.S. Nationals, Dual Nationals and Lawful Permanent Residents

Under the INA, a U.S. national is either a citizen of the United States, or a person who, though not a U.S. citizen, owes permanent allegiance to the United States. See INA section 101(a)(22). Non-citizen U.S. national status applies only to individuals who were born either in American Samoa or on Swains Island to parents who are not citizens of the United States.\(^70\)

Dual nationals are individuals who owe allegiance to both the United States and the foreign country. They are required to obey the laws of both countries, and either country has the right to enforce its laws. For purposes of international travel, U.S. nationals, including dual nationals, must use a U.S. passport (or alternative documentation as required by 22 CFR part 53) to enter and leave the United States. See INA 215(b) (8 U.S.C. 1185(b)); see also 22 CFR 53.1.

For purposes of this proposed rule, a U.S. national or dual national who presents as a citizen of another country will be processed as a foreign national and their photo will be retained accordingly, unless they are able to present evidence of U.S. citizenship or nationality.\footnote{A person claiming U.S. citizenship must establish that fact to the examining officer’s satisfaction and must present a U.S. passport or alternative documentation as required by 22 CFR part 53. If such person fails to satisfy the examining immigration officer that they are a U.S. citizen, the person shall thereafter be inspected as an alien applicant for admission. 8 CFR 235.1(b).}

Under immigration law, lawful permanent residents (LPRs) are aliens authorized to live permanently within the United States.\footnote{Under the INA, the term alien means any person who is not a citizen or national of the United States. 8 CFR 215.1(a). Therefore, a lawful permanent resident is an alien under the INA.} As such, for purposes of this proposed rule, LPRs will be processed as aliens.

9. Business Requirements for Public-Private Partnerships

The business requirements implemented by CBP with its partners govern the retention and use of the facial images collected using CBP’s facial recognition technology. CBP prohibits its approved partners such as airlines, airport authorities, or cruise lines and participating organizations (e.g. vendors, systems integrators, or other third parties) from retaining the photos they collect under this process for their own business purposes. The partners must immediately purge the images following transmittal to CBP, and the partner must allow CBP to audit compliance with this requirement. As discussed in the November 2018 PIA, CBP has developed Business Requirements to document this commitment. In order to use TVS, private sector partners must agree to these Business Requirements. After this rule is implemented, the Business Requirements document will be updated and available for viewing on cbp.gov.

IV. Proposed Regulatory Changes

A. General Biometric Exit Requirement for Aliens

To advance the legal framework for the full implementation of a biometric exit capability as described above, DHS is proposing to amend the regulations in 8 CFR that set forth the requirements for providing biometrics upon entry and departure. Currently,
8 CFR 215.8(a)(1) authorizes DHS to collect biometric exit information from certain aliens on departure from the United States pursuant to pilot programs at air, land, or sea ports of entry and places a limit of 15 air or sea ports of entry at which such biometric exit pilots may be established. The reference to pilot programs and the 15 air or sea port limitation hinders DHS’s ability to expand and fully implement a comprehensive biometric exit solution. Therefore, DHS is proposing to amend § 215.8 by removing the reference to pilot programs and the 15 air or sea port limit.

B. *Collection of Photographs from Aliens Upon Entry and Departure*

As discussed in Section III.D.1, DHS regulations implementing the legacy US-VISIT program provide that certain categories of aliens are exempt from the collection of biometrics upon arrival to, and departure from, the United States. See 8 CFR 235.1(f); 8 CFR 215.8(a)(1)-(2). These exemptions are not statutorily based. As discussed in Section III.A, DHS has broad statutory authority to control alien travel, inspect aliens and require biometrics from aliens upon arrival in, or departure from, the United States.

To implement a biometric entry-exit system based on facial recognition, DHS is proposing to amend the regulations to provide that all aliens may be required to be photographed upon departure from the United States. The exemptions of certain aliens from the collection of biometrics in § 215.8(a)(1)-(2) will no longer pertain to the collection of photographs from aliens upon departure. Specifically, DHS is proposing to amend § 215.8 to add new paragraph (a)(1), which provides that an alien may be required to be photographed when departing the United States to determine identity. The collection of photographs from an alien upon departure will assist DHS in determining the alien’s identity and whether immigration status in the United States has been properly maintained.

In addition, DHS is proposing to amend § 235.1(f) to add new paragraph (1)(ii), which provides that an alien seeking admission may be required to be photographed to determine the alien’s identity, admissibility, and whether immigration status in the United States
States has been properly maintained. As for the collection of photographs upon departure, the exemptions in § 235.1(f)(1)(ii) will no longer pertain to the collection of photographs from aliens seeking admission.

DHS is not proposing to change the existing exemptions in §§ 215.8 and 235.1(f) for the collection of biometrics other than photographs (e.g., fingerprints and other biometrics) from aliens upon entry to and departure from the United States. This is set forth in 8 CFR 215.8(a)(2)-(3) and 235.1(f)(1)(iii) and (vi) as amended in this document; see also Section IV.C.1 of this document. Notwithstanding these exemptions, DHS is authorized to collect biometrics from aliens, regardless of age, citizenship, or visa status, for law enforcement purposes or in other contexts not addressed by these regulations, such as from aliens attempting to enter the United States illegally between U.S. ports of entry. See Section III.A. As such, CBP may, on a case-by-case basis, collect biometrics other than photographs from aliens outside of the age limits or visa category exceptions.

C. Collection of Biometrics When Departing the United States and Other Minor Conforming and Editorial Changes

DHS is proposing to amend § 215.8(a) to specify that biometrics may be required “when departing the United States.” The current provision refers to “upon departure from a U.S. port of entry.” This amendment is necessary to allow for the collection of biometrics from individuals upon departure at locations other than at a U.S. port of

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The following categories of aliens currently are exempt from the requirements under 8 CFR 215.8 and 235.1 to provide biometrics upon arrival to, and departure from, the United States at a U.S. port of entry: Canadian citizens under Section 101(a)(15)(B) of the Act who are not otherwise required to present a visa or be issued a form I-94 or Form I-95; aliens younger than 14 or older than 79 on the date of admission; aliens admitted A-1, A-2, C-3 (except for attendants, servants, or personal employees of accredited officials), G-1, G-2, G-3, G-4, NATO-1, NATO-2, NATO-3, NATO-4, NATO-5, or NATO-6 visas, and certain Taiwan officials who hold E-1 visas and members of their immediate families who hold E-1 visas unless the Secretary of State and the Secretary of Homeland Security jointly determine that a class of such aliens should be subject to the requirements of paragraph (d)(1)(ii); classes of aliens to whom the Secretary of Homeland Security and the Secretary of State jointly determine it shall not apply; or an individual alien to whom the Secretary of Homeland Security, the Secretary of State, or the Director of Central Intelligence determines it shall not apply.
entry. Although the majority of travelers depart the country from a designated U.S. port of entry, a few travelers depart the country from locations that are not designated as ports of entry, such as Ronald Reagan Washington National Airport or John Wayne Airport, California. To ensure the implementation of a biometric entry-exit system that tracks all individuals departing the country, DHS may require aliens to provide biometrics upon departure at U.S. ports of entry or when departing the United States at any other location.

In addition, DHS is proposing to make certain minor conforming and editorial changes in §§ 215.8 and 235.1(f). In § 215.8, DHS is proposing to redesignate paragraph (a)(2) as paragraph (a)(3), revise cross-references and add paragraph headings as necessary. In § 235.1(f), DHS is proposing to redesignate paragraph (f)(1)(ii) as paragraph (f)(1)(iii), paragraphs (f)(1)(iii) and (iv) as paragraphs (f)(1)(v) and (vi), add new paragraphs (f)(1)(ii) and (iv), and revise cross-references and add paragraph headings as necessary. In §§ 215.8 and 235.1(f), DHS is proposing to remove the phrase “[t]he Secretary of Homeland Security or his or her designee” and add in its place “DHS” and remove the phrase “biometric identifiers” and add in its place “biometrics.”

Finally, DHS is proposing to amend §§ 215.8(a) and 235.1(f) to remove the specific references to fingerprints and photographs. Currently, these sections provide that any alien may be required “to provide fingerprints, photograph(s) or other specified biometric identifiers” upon arrival into or departure from the United States. Because this rule adds a separate sub-paragraph relating to the provision of photographs, the word “photograph(s)” in this provision is no longer appropriate. Furthermore, to allow the flexibility for DHS to employ different methods of biometric collection in the future, DHS is proposing to amend §§ 215.8(a) and 235.1(f) to provide instead that any alien,
other than those exempt by regulation, may be required “to provide other biometrics” upon arrival into and departure from the United States. CBP has tested iris technology, for example, but biometric technology continues to advance and there may be other biometric options that may have potential for implementation in the future.

V. Withdrawal of 2008 Air Exit Notice of Proposed Rulemaking

On April 24, 2008, DHS published a notice of proposed rulemaking (NPRM) in the Federal Register (73 FR 22065) proposing a biometric exit program at air and sea ports that would require commercial air and vessel carriers to collect biometric data from aliens and submit this information to DHS within a certain timeframe. The proposed rule set out certain technical requirements and a substantive performance standard for the transmission of biometric data, but provided the carriers with some discretion in the manner of collection and submission of biometric data, including latitude in determining the location of the biometric data collection within the port of entry. DHS received 118 comments from the public in response to the NPRM. Most of the comments opposed the adoption of the proposed rule due to issues of cost and feasibility.

In consideration of the regulatory changes being made in this rule, the comments received, the results of the biometric exit pilots conducted in 2009, and DHS’s new approach to implementing a biometric entry-exit system, DHS has decided that the 2008 NPRM should be withdrawn. The withdrawal notice is being published concurrently with the publication of this proposed rule.

VI. Statutory and Regulatory Requirements

A. Executive Orders 12866 and 13563

Executive Orders 13563 (“Improving Regulation and Regulatory Review”) and 12866 (“Regulatory Planning and Review”) direct agencies to assess the costs and benefits of available regulatory alternatives and, if regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic,
environmental, public health and safety effects, distributive impacts, and equity).

Executive Order 13563 emphasizes the importance of quantifying both costs and benefits, of reducing costs, of harmonizing rules, and of promoting flexibility.

This rule is an “economically significant regulatory action,” under section 3(f) of Executive Order 12866. Accordingly, the Office of Management and Budget (OMB) has reviewed this regulation.

1. Need and Purpose of the Rule

DHS is statutorily mandated to develop and implement an integrated, automated entry and exit data system to match records, including biographic data and biometrics, of aliens entering and departing the United States. DHS is also required by Executive Order to expedite the completion and implementation of a biometric entry-exit tracking system. Since 2004, DHS, through CBP, has been collecting biometric data from aliens arriving in the United States, but currently there is no comprehensive biometric system in place to track when the aliens depart the country.

Since taking over entry and exit operations in 2013, CBP has been testing various options to collect biometrics at arrival and departure. The results of these tests and the recent advancement of facial recognition technology have provided CBP with a model for moving forward with implementing a comprehensive biometric exit solution. In the initial stage of implementation, CBP has expanded its biometric exit capability to a limited number of airports. These deployments are allowing CBP to fine-tune the process before implementing it on a nationwide basis. However, CBP is limited by regulation to collecting biometrics from aliens upon departure from air and seaports under pilot programs to 15 locations (no limits apply in the land border context). This rule will remove the reference to pilot programs and the port limit and establish that all aliens may be required to be photographed upon entry and/or exit.

Upon exit, U.S. citizens are currently typically processed similarly to aliens (i.e., without the collection of photographs) and may generally continue to be inspected in the
same way under this rule, even in situations where CBP has instituted a biometric exit program. Where CBP has instituted photograph collection at exit, U.S. citizens may be photographed voluntarily or request the existing alternative process. This rule will not change the option U.S. citizens have not to have their pictures taken and instead, to request alternative processing.

Currently, certain aliens are not subject to photograph collection. For example, aliens who are under the age of 14 or over the age of 79 are not required to be photographed at entry or exit. By providing that all aliens may be required to be photographed at entry and/or exit, CBP will be able to further expand the photograph collection program to allow for a more complete evaluation as it moves toward nationwide expansion.

Collecting photographs will allow CBP to know with better accuracy whether aliens are departing the country when they are required to depart, reduce visa or travel document fraud, and improve CBP’s ability to identify criminals and known or suspected terrorists before they depart the United States. It will also allow for a substantial time savings for travelers.

2. Background, Baseline, and Affected Population

Under DHS regulations, upon arrival into the United States, travelers are required to present themselves to CBP for inspection under the immigration laws. See 8 CFR 235.1. Under the current air inspection process, CBP obtains information directly from the traveler via his or her travel documents (e.g., passport) and/or verbal communications between a CBP officer and the traveler. As a part of this process, a CBP officer typically takes a physical passport from the traveler and electronically “reads” the passport using its MRZ to pull up the traveler’s biographic data for inspection. In addition, for aliens (except for those exempt from biometric collection under 8 CFR 235.1), CBP collects fingerprints from the traveler to biometrically verify his or her identity by comparing the fingerprints with those previously collected as a part of a visa application, immigration
benefits application, or earlier inspection process with CBP. Once the identity of the traveler is validated in this manner, the CBP officer conducts an interview with the traveler to establish the purpose and intent of travel, and to determine admissibility.

The Aviation and Transportation Security Act of 2001 and the Enhanced Border Security and Visa Entry Reform Act of 2002 together mandated the collection of certain biographical manifest information on all passengers and crew members who arrive in or depart from (and, in the case of crew members, overfly) the United States on a commercial air or sea carrier. This collection is done through APIS. As APIS requirements apply equally to travelers departing the United States, CBP electronically records a traveler’s departure by commercial air or sea using the biographic manifest information provided by the carrier. Unlike at entry, however, CBP does not routinely inspect travelers departing the United States to confirm that the APIS departure data is accurate or that the traveler is the true bearer of his or her travel document.

Currently, those departing the United States via the air environment must present their boarding pass and identification when being screened by TSA. Before boarding, travelers must also present their boarding passes to the carrier at the gate, who visually reviews the travel documents and validates the boarding pass with the carrier’s ticketing system. However, once in the sterile area of the terminal, although travelers may be subject to random identification checks, travelers generally do not have their photo identification scrutinized again before boarding the aircraft.

CBP uses APIS information along with other law enforcement information and technology to determine whether CBP needs to further inspect outbound travelers. CBP’s outbound operations enable it to enforce U.S. laws applicable upon departure from the United States and effectively monitor and control the outbound flow of goods and people.

77 See section III.B.2 for more information on the current process.
In the land environment, CBP does not receive advance APIS data. Persons departing the United States at the land border are also not consistently subject to CBP inspection, as they are upon arrival. As a result, land departures may not be recorded accurately. For the purposes of this analysis, the process described above is the baseline. This analysis assesses the incremental change from the baseline. CBP has operated various pilot programs over the years that deviate from the baseline and have guided CBP in its development of the air exit process under this rule. Tests continue at land and sea and at air entry. The costs and benefits of these pilots are sunk for the purposes of deciding whether to proceed with the regulatory program, but they are important for understanding the full costs and benefits of CBP’s facial recognition program as a whole. As such, we analyze the effects of the facial recognition program over two time periods. First, we study the pilot period from 2017 to 2019. Then we study the regulatory period from 2020 to 2024.

CBP collects biometric data from most aliens entering the United States by air and sea at entry but does not generally collect biometric data at departure from aliens in any outbound environment, nor does it generally collect biometric data from U.S. citizens on a systematic basis upon entry or departure from the United States. DHS, through CBP, has been developing and testing additional biometric entry and exit capabilities since 2004.

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78 For a more detailed explanation of the baseline, see section III.B, titled “Current Entry Exit Process,” earlier in the preamble of this document.

79 CBP does collect biometric data from U.S. citizens in certain circumstances on a voluntary basis, such as under entry-exit pilot programs described herein, under CBP’s trusted traveler programs, and may be compelled on a case-by-case basis for law enforcement purposes. For the Automated Passport Control (APC) kiosks, which are free, voluntary, and do not require a membership, the APC kiosks collect facial images from all travelers and fingerprints from VWP, U.S. visa, and non-Canadian LPR travelers. The kiosk captures a photo and then prints out a receipt with the traveler’s face and biographic information. This process allows CBP Officers to make manual one-to-one comparisons of the newly-captured facial images with the travelers themselves. APC kiosk systems may not retain PII, including biographic and biometric data. APC Services retains PII via log records for no longer than 30 days. For Mobile Passport Control, although the traveler profile includes a facial photo, there is no option for the user to submit the profile itself, including the photo, to CBP. The traveler only submits the MPC “trip” which includes the traveler’s biographic information, inspection question responses, and class of admission, if applicable.
What follows is a brief summary of the pilot programs and the current biometric entry-exit requirements for those affected by this rule. For a full history, see Section III.D above, titled “Biometric Entry-Exit Program History.”

Since 2004, DHS and CBP have run a variety of pilot programs to test various biometric entry and exit capabilities. Tests have been conducted using a variety of technologies in different environments ranging from handheld devices for capturing fingerprints at airports upon entry to kiosks for pedestrians at land ports. CBP has most recently been testing facial recognition technology and has concluded that this is the preferred method of widespread biometric collection. It allows CBP to collect biometric data quickly and unobtrusively and the data can be easily compared with previously collected data to match the traveler with previous entries and with her/his passport or visa photograph. CBP already takes photographs of most aliens at entry during the routine inspection process and maintains them in a database. For aliens who have traveled to the United States previously, CBP’s database includes a photograph from each entry. For aliens with visas, CBP’s database also includes the photographs taken during the visa application process. Facial recognition technology compares a new photograph of an individual with previously captured photographs to ensure that the individual is who he or she claims to be.

In June 2016, CBP deployed a facial recognition pilot at the Hartsfield-Jackson Atlanta International Airport. This pilot was the first time a process similar to the one used under this rule was tested at exit. Based on the early success of the pilot in Atlanta, CBP expanded the use of facial recognition technology to additional airports. For the purposes of this analysis, the process at the eight airports shall be referred to as the initial pilot. The facial recognition technology is now operating as TVS. Using the initial pilot, CBP is capturing photographs from all participating travelers on selected daily trips.

The eight airports include: Washington Dulles International Airport, Atlanta Hartsfield-Jackson International Airport, Houston George Bush Intercontinental Airport, Chicago O’Hare International Airport, Las Vegas McCarran International Airport, Houston William P. Hobby Airport, John F. Kennedy International Airport, and Miami International Airport.
outbound flights at a number of international airports. Before boarding, travelers typically line up so an airline employee can scan their boarding passes. CBP has added a station along this line where CBP officers scan travelers’ boarding passes and take their photographs. The photograph is compared with the photograph(s) in CBP’s database to ensure there is a match. Under the initial pilot, an airline employee still scans the boarding pass after the facial recognition process is complete. According to a time in motion study of the biometric identity verification process, this process took 9 seconds of each traveler’s time. Overall boarding time is unaffected because the facial scans are done while the traveler is already in line waiting to board. Note that this is an estimate for the added time for the initial pilot and it does not apply to the end state solution under this rule because in the end state there will not be a boarding pass scan in addition to the facial recognition.

While this initial pilot model has been useful for testing the facial recognition software and process, it is not feasible for nationwide deployment because CBP does not have the staffing for such an expansion. Airlines have recognized the potential for facial recognition to speed up the process for airlines and travelers and have partnered with CBP to test the software in different locations and with alterations to the model. For example, British Airways began testing a new model at Los Angeles International Airport in November 2017, and is currently testing or planning to expand this at additional airports, including the Orlando International Airport. Under this model, airline employees operate the facial recognition gates rather than CBP. Once the match is made, there is no additional step of scanning the boarding pass or checking the traveler’s identification. If there is not a match, the document is examined by an airline representative, and a CBP officer may also be notified to examine the document. British Airways

81 The time in motion study captured the “stop and look” scenario for currently “in-scope” travelers, which encompasses the reading a boarding pass, face capture and matching. If a traveler does not match, or matches erroneously, then a manual review, as occurs today, would be conducted; therefore, manual reviews are not included in the 9 seconds. Source: Communication with the Office of Field Operations on May 2, 2017.
Airways has found that this process allows for boarding of its largest aircraft in 22 minutes, less than half the time under the usual process.\textsuperscript{82}

Orlando International Airport has announced that it will soon begin building infrastructure to collect photographs of all arriving and exiting aliens.\textsuperscript{83} The exit model will be similar to the British Airways pilot in that the exit process will be conducted by the airlines. Participating airlines may eventually choose to eliminate boarding passes entirely and may also use facial recognition to speed up other processes. TVS will also be tested at entry and is already being tested in certain other locations. CBP and airlines expect the implementation at entry to save considerable time. The existing version of 19 CFR 235.1 already specifically authorizes CBP to require photographs of most aliens at entry. This rule will expand the requirement to all aliens. This would simplify the testing at entry because no aliens would be eligible to opt out of the facial recognition process. Currently, this process is optional for all exempt travelers.

The rule will advance the legal framework to implement a biometric exit requirement using facial recognition technology on a nationwide basis. CBP lacks the resources to implement this program nationwide and will continue to work with airlines and airports to establish partnerships before doing so. Due to airline and airport interest, CBP expects to implement the program nationwide within five years.

While this analysis is primarily focused on the impacts of this rule once it is in effect, CBP has been using similar facial recognition in its pilot programs for several years, which have both costs and benefits to CBP and the public. To give the reader a full view of the effects of CBP’s facial recognition program through the entire time it has been used, CBP analyzes the impact of the biometrics process over two time periods. First, we analyze the impacts in the initial facial recognition pilot period (2017-2019). This includes the systems and hardware development by CBP, the initial testing, and the

\textsuperscript{83} See https://www.cbp.gov/newsroom/national-media-release/cbp-advances-biometric-exit-mission-orlando-international-airport
photographic collection process operated by CBP at the initial pilot locations. Because
the pilots have started at different times and new pilot locations are still being set up, we
present the unit costs for the pilot time period in addition to the total cost of the initial
pilot. The unit costs illustrate the effects of new pilots as they are added. Second, we
analyze the impacts of facial recognition in the regulatory period beginning in 2019 when
CBP moves to nationwide deployment. CBP expects deployment at all airports within
five years, so we use the period of analysis of 2020-2024. For the regulatory time period,
CBP estimates, to the extent data is available, the total projected costs, and cost savings,
and benefits that result from the gradual nationwide expansion of the collection of
photographs at exit and entry.

To estimate the number of U.S. citizens and aliens that could be affected by this
rule, we use historical arrival and departure data from internal CBP databases and the
international travel forecast produced by the Department of Commerce’s Office of Travel
and Tourism Industries (OTTI). Table 1 shows the OTTI growth forecast from 2017-2024. We note that this is a forecast of inbound travel, not outbound. Quality forecasts
of outbound air travel are not available, so we use inbound air travel as a proxy. Because
most international travel is done on a round-trip basis, we believe that inbound air travel
growth is a good proxy for outbound air travel growth. To the extent that inbound and
outbound travel grow at different rates, the effects of this analysis could be overstated or
understated.

Table 1: OTTI International Travel Forecast Growth Rates

<table>
<thead>
<tr>
<th>Year</th>
<th>Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>0.7%</td>
</tr>
<tr>
<td>2018</td>
<td>55.7%</td>
</tr>
<tr>
<td>2019</td>
<td>3.2%</td>
</tr>
<tr>
<td>2020</td>
<td>22.7%</td>
</tr>
<tr>
<td>2021</td>
<td>3.3%</td>
</tr>
<tr>
<td>2022</td>
<td>3.6%</td>
</tr>
</tbody>
</table>

84 Source: U.S. Department of Commerce, International Trade Administration, Industry & Analysis,
National Travel and Tourism Office; Statistics Canada; INEGI, Forecast of International Travelers to the
United States by Top Origin Countries, October 2018. Available as a supporting document in the docket of
this rulemaking.

The OTTI October 2018 forecast is only through 2023. For the purposes of this analysis, we use the 2023
growth rate for 2024.
Tables 2 shows the actual 2017 and projected 2018-2024 outbound air traveler volumes from the United States. Table 3 shows the projected inbound air traveler volumes for the same years.

Table 2: 2017-2024 Projected Outbound Air Travel

<table>
<thead>
<tr>
<th>Year</th>
<th>U.S. Citizens</th>
<th>Aliens</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>50,375,295</td>
<td>64,784,389</td>
<td>115,159,684</td>
</tr>
<tr>
<td>2018</td>
<td>53,246,687</td>
<td>68,477,099</td>
<td>121,723,786</td>
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<tr>
<td>2019</td>
<td>54,950,581</td>
<td>70,668,366</td>
<td>125,618,947</td>
</tr>
<tr>
<td>2020</td>
<td>56,434,247</td>
<td>72,576,412</td>
<td>129,010,659</td>
</tr>
<tr>
<td>2021</td>
<td>58,296,577</td>
<td>74,971,434</td>
<td>133,268,011</td>
</tr>
<tr>
<td>2022</td>
<td>60,395,254</td>
<td>77,670,406</td>
<td>138,065,660</td>
</tr>
<tr>
<td>2023</td>
<td>62,629,878</td>
<td>80,544,211</td>
<td>143,174,089</td>
</tr>
<tr>
<td>2024</td>
<td>64,947,183</td>
<td>83,524,347</td>
<td>148,471,530</td>
</tr>
</tbody>
</table>

Table 3: 2017-2024 Projected Inbound Air Travel

<table>
<thead>
<tr>
<th>Year</th>
<th>U.S. Citizens</th>
<th>Aliens</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>47,493,852</td>
<td>58,312,091</td>
<td>105,805,943</td>
</tr>
<tr>
<td>2018</td>
<td>50,201,002</td>
<td>61,635,880</td>
<td>111,836,882</td>
</tr>
<tr>
<td>2019</td>
<td>51,807,434</td>
<td>63,608,228</td>
<td>115,415,662</td>
</tr>
<tr>
<td>2020</td>
<td>53,206,235</td>
<td>65,325,650</td>
<td>118,531,885</td>
</tr>
<tr>
<td>2021</td>
<td>54,962,041</td>
<td>67,481,396</td>
<td>122,443,437</td>
</tr>
<tr>
<td>2022</td>
<td>56,940,674</td>
<td>69,910,726</td>
<td>126,851,400</td>
</tr>
<tr>
<td>2023</td>
<td>59,047,479</td>
<td>72,497,423</td>
<td>131,544,902</td>
</tr>
<tr>
<td>2024</td>
<td>61,232,236</td>
<td>75,179,828</td>
<td>136,412,064</td>
</tr>
</tbody>
</table>

This rule removes the existing limitation on biometric exit pilot programs at airports and seaports and establishes that all aliens may be required to be photographed upon departure. The practical effect of this change at air exit is that CBP will be able to continue expanding its biometric exit capability to additional locations, aliens will be subject to the collection of photographs at these locations, and U.S. citizens who voluntarily participate in CBP’s biometric verification program will also have their photographs taken. The pace of the expansion will depend on how quickly CBP is able to enter into partnerships with airlines and airports. Given the level of interest in such partnerships so far, CBP expects that the program will expand steadily over the next five years until it has been implemented for most outbound commercial passenger air traffic. We therefore assume that 20 percent of travelers will be affected in 2020, 40 percent in
2021, 60 percent in 2022, 80 percent in 2023, and 97 percent in 2024 and beyond.\footnote{97 percent corresponds to the portion of the international traveler volume that takes place at the 20 busiest airports.}

Table 4 shows the estimated number of aliens and U.S. travelers on outbound flights with the biometric process in each year.

Table 4: 2020-2024 Projected Outbound Air Travelers on Flights with Biometrics

<table>
<thead>
<tr>
<th>Year</th>
<th>U.S. Citizens</th>
<th>Aliens</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>11,286,849</td>
<td>14,515,282</td>
<td>25,802,132</td>
</tr>
<tr>
<td>2021</td>
<td>23,318,631</td>
<td>29,988,574</td>
<td>53,307,204</td>
</tr>
<tr>
<td>2022</td>
<td>36,237,152</td>
<td>46,602,244</td>
<td>82,839,396</td>
</tr>
<tr>
<td>2023</td>
<td>50,103,902</td>
<td>64,435,369</td>
<td>114,539,271</td>
</tr>
<tr>
<td>2024</td>
<td>62,998,768</td>
<td>81,018,617</td>
<td>144,017,384</td>
</tr>
</tbody>
</table>

After implementation of this rule, as is currently the case under CBP’s biometric exit pilot programs, participation by U.S. citizens will be voluntary. As is the case in the air pilots, U.S. citizens may request an alternative inspection process rather than being photographed. The alternative process is no different than what happens absent this rule – an airline employee verifies the traveler’s passport information and will contact CBP if they are concerned with the validity of the passport or the identity of the passport holder. Based on recent experiences under various pilots, and because the biometric process is expected to save time, CBP does not expect many to request the alternative process. Biometrics are captured with minimal inconvenience for the traveler and under the biometric exit pilot programs it has been extremely rare for travelers to decline to be photographed. We estimate the opt-out rate through reference to the Transportation Security Agency (TSA)’s biometrics pilot. TSA has recently begun testing facial recognition at some locations, comparing the photographs of travelers to CBP’s gallery. During the test, TSA has made clear through signage that it was optional and the TSA agent asked travelers whether they wanted to opt out. TSA tracked the number of opt outs over two days in the summer of 2019 and found an opt-out rate of 0.18 percent across more than 13,000 travelers. We adopt this rate as our estimate for U.S. citizens who will opt out of biometric collection under this rule. We request comment on this.
assumption. CBP will continue to gather available data, to the extent possible on the opt-out rates as it continues its pilots until this rule is finalized and will update this assumption for the final rule. Table 5 shows the projected number of U.S. citizens who will be subject to photographs, excluding the 0.18 percent who we assume would request an alternative process.

Table 5: 2020-2024 Projected Outbound U.S. Citizens Subject to Biometrics

<table>
<thead>
<tr>
<th>Year</th>
<th>U.S. Citizen Travelers</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>11,266,533</td>
</tr>
<tr>
<td>2021</td>
<td>23,276,657</td>
</tr>
<tr>
<td>2022</td>
<td>36,171,926</td>
</tr>
<tr>
<td>2023</td>
<td>50,013,715</td>
</tr>
<tr>
<td>2024</td>
<td>62,885,370</td>
</tr>
</tbody>
</table>

3. Costs

We next analyze the costs of the biometrics process both for the pilot period and the nationwide deployment period. Because the various pilots have started at different times and new pilot locations are still being set up we focus on the unit costs for the pilot time period. For the regulatory time period, CBP estimates, to the extent data is available, the total projected costs and cost savings that result from the gradual nationwide expansion of the collection of photographs at exit and entry.

*Pilot Period*

As discussed above, CBP conducted a time in motion study during the initial biometric exit pilot. This study estimated that the biometric identity verification process added 9 seconds to a traveler’s departure time. We monetize the travelers’ time burden using the Department of Transportation’s recommended hourly wage rates for all-purpose air travel, $47.10. The opportunity cost per traveler is approximately $0.12.

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86 During the initial pilots, the biometric verification process was done separately from the airline scan of the travelers’ boarding passes. In some pilots, and in the regulatory period, biometric identification will be fully integrated into the boarding process, which will save the travelers time. See the benefits section for a discussion of the time savings in the regulatory period.

87 Source: U.S. Department of Transportation, Office of Transportation Policy. The Value of Travel Time Savings: Departmental Guidance for Conducting Economic Evaluations Revision 2 (2016 Update), “Table 4 (Revision 2 - 2016 Update): Recommended Hourly Values of Travel Time Savings for Intercity, All-
Approximately 1,134,000 travelers traveled on flights that were part of the pilot programs in 2017. Therefore, the approximate opportunity cost for these travelers in 2017 was $136,080. Similar numbers are expected for 2018 and 2019.

Participation in the biometric exit pilot programs is voluntary for U.S. citizens, who may request an alternative inspection process. As discussed earlier, we estimate 0.18 percent of U.S. citizens request an alternative process. In the event a U.S. citizen elects not to be photographed at airports where CBP is conducting biometric exit verification, an airline gate agent will perform a manual review of the passport. If there is some question as to the authenticity of the passport or whether the person presenting the passport is the owner of the passport, the airline will contact CBP for additional inspection, which would take longer than the biometric process. However, as this is the current procedure without the rule, there is no new opportunity cost associated with this requirement.

CBP has borne the bulk of the costs of the biometric verification pilot programs. CBP’s costs include the cost to develop the facial recognition capabilities, the cost of the hardware for the expansion of the biometric exit pilot programs and the annual operation and maintenance costs of that hardware, the cost of the required network upgrades, and the opportunity cost of the CBP officers who collect the biometrics. Table 6 shows the estimated hardware and software costs for the expansion of the biometric exit pilot programs. The expansion hardware is the cost of the hardware that has been placed during the initial pilot. The Biometric Pathway Development Costs are the software development costs required to create a service to operate facial recognition at airport international departure gates used for the biometric exit pilot programs and will serve as

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88 Source: CBP’s Borderstat Database.
89 The first pilot began at a single airport in 2016. Because we do not have quality data for 2016 and because a relatively small number of flights and travelers were affected by this pilot, we begin our quantification of the pilot period in 2017, acknowledging that there were some small costs and benefits in 2016 as well.
the foundation for use as the program becomes operational on a nationwide basis. This
development includes creating open interfaces to accommodate multiple biometric
collection devices, adapting current systems to survey and collect traveler images from
existing data, transferring data between the point of collection and the CBP back-end,
processing biometric data, and creating reports for awareness and analysis. Facial
Recognition Technology Expansion Hardware O&M are the annual operations and
maintenance costs for the hardware at the airports participating in CBP’s biometric exit
pilot programs. Matching Licenses are costs to procure back-end enterprise matching
licenses for the airports participating in CBP’s biometric exit pilot programs from the
developer. It is anticipated that these costs are spread over the first two years of use.
After the first two years, we estimate no further costs for CBP as airlines will be buying
their own hardware, which is expected to have a useful life longer than the period of
analysis.

During the pilot period, CBP installed the facial recognition technology hardware
into existing airport gates at CBP’s expense. Though the hardware does not use a
significant amount of electricity, airports were concerned that their networks did not have
sufficient bandwidth to accommodate the matching software. CBP has added additional
capacity to allow for the needed bandwidth. This is included in the Cloud Hosting costs
listed in Table 6.

CBP also bears the opportunity costs of assigning CBP Officers at each of the
biometric exit pilot program flights. Two CBP Officers are assigned to each flight, and it
takes an hour for each of them to process the travelers on a flight. There were 18 daily
flights that were part of the initial biometric exit pilot programs (the initial pilot period),
and staffing that number of flights takes approximately 13,140 hours of officer time (18
flights per day x 365 days per year x 2 officers). According to CBP’s position model, the
average loaded wage rate for a CBP Officer is $63.80 per hour.\textsuperscript{90} We therefore estimate that it costs approximately $838,000 per year in officer time costs.

Table 6 shows CBP’s estimated pilot costs for 2017-2019. These costs are based on the initial pilot period. The Air Technology Development, Air Technology Operations and Maintenance, and Biometric Pathway Development and Matching Licenses are fixed costs that will not change if the pilot is expanded to other flights. The remaining costs are variable and will increase when the pilot is expanded. The total variable cost over the three-year period is $44,074,000 or an average of $1,358,000 per year. The initial pilot period covered 18 scheduled flights per day. Dividing by 18 flights, the annual variable pilot cost to CBP is $80,657 per flight.

Table 6: CBP Costs (undiscounted thousands of 2017 dollars) - Pilot

<table>
<thead>
<tr>
<th>Cost Category</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biometric Entry-exit – Air Technology Development</td>
<td>44,447</td>
<td>58,642</td>
<td>44,286</td>
</tr>
<tr>
<td>Biometric Entry-exit – Air Technology Operation &amp; Maintenance</td>
<td>10,661</td>
<td>19,693</td>
<td>24,066</td>
</tr>
<tr>
<td>Facial Recognition Technology Expansion Hardware</td>
<td>804</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Biometric Pathway Development - Facial Recognition Technology Expansion</td>
<td>8,104</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Facial Recognition Technology Expansion Hardware O&amp;M</td>
<td>-</td>
<td>243</td>
<td>-</td>
</tr>
<tr>
<td>Cloud Hosting - Facial Recognition Technology</td>
<td>90</td>
<td>90</td>
<td>90</td>
</tr>
<tr>
<td>Matching Licenses</td>
<td>567</td>
<td>567</td>
<td>567</td>
</tr>
<tr>
<td>CBPO Time Cost</td>
<td>838</td>
<td>838</td>
<td>838</td>
</tr>
<tr>
<td>Total</td>
<td>65,512</td>
<td>80,073</td>
<td>70,090</td>
</tr>
</tbody>
</table>

In summary, the biometric exit pilot programs have resulted in costs to travelers and CBP. Table 7 shows the total costs during the pilot period. The unit cost per additional traveler would be 12 cents per departure. Annual costs to CBP per daily-scheduled flight added would be approximately $81,000 per flight.

Table 7: Summary of Pilot Costs (undiscounted thousands of $2017)

<table>
<thead>
<tr>
<th>Year</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
</table>

\textsuperscript{90} Source: CBP’s Office of Finance Position Model.
Traveler Costs

<table>
<thead>
<tr>
<th></th>
<th>$136</th>
<th>$136</th>
<th>$136</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBP Costs</td>
<td>$65,512</td>
<td>$80,073</td>
<td>$70,090</td>
</tr>
<tr>
<td>Total Costs</td>
<td>$65,648</td>
<td>$80,209</td>
<td>$70,226</td>
</tr>
</tbody>
</table>

**Regulatory Period**

The estimated costs during the regulatory time period (2020-2024) are substantially different than those in the pilot period. During the regulatory period, CBP will enter into partnerships with carriers and airports to streamline the process and eliminate redundancies. Facial recognition will be integrated into the boarding process and will result in time savings for all parties (see the benefits section below for more information), rather than a cost. As occurs today, CBP will continue to be available to adjudicate any issues.

The hardware cost in the regulatory period will be borne by the carriers and airports who partner with CBP. CBP will give carriers and airports access to its facial recognition system and the carriers and airports will choose (and pay for) the hardware that best fits their needs. While this partnership is voluntary, CBP expects that all commercial carriers and major airports will elect to participate within five years. As discussed above, we assume that the biometric exit process will be expanded by 20 percent each year. In total, there are approximately 2,500 departure gates that will need facial recognition hardware installed, so we assume that carriers and airports will install the hardware at 500 departure gates each year. The cost of the hardware will vary by carrier and airport and may depend on how they intend to use the hardware. For example, if they intend to use it only at the exit gate, costs will be lower than if they also choose to use it for their own purposes, such as simplifying the baggage drop and claim process or for access into elite traveler lounge areas. CBP believes costs will range from

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91 Costs to carriers and airports are limited to hardware costs. During the pilot period, carriers and airports have not needed additional staff, nor has there been a need for additional training as the system is intended to be integrated with the airline or airport departure control system.

$5,000 to $20,000 per departure gate, based on its experience procuring equipment during the pilot period. We use $20,000 as the primary estimate for the analysis as carriers and airports have expressed interest in using facial recognition for other purposes and are likely to purchase higher end cameras that will give them flexibility. It is also possible that costs will go down substantially over time as carriers and airports develop better and cheaper hardware. For example, the Washington Metropolitan Airports Authority has begun using modified iPads for its new facial recognition pilot.\(^{93}\) If this hardware is successful and is adopted more broadly, the cost to carriers and airports would drop substantially. We request comment on these estimates. Carrier and airport hardware estimated costs for the regulatory period are reported in Table 8.

Table 8: 2020-2024 Carrier and Airport Hardware Costs (undiscounted thousands of $2017)

<table>
<thead>
<tr>
<th>Year</th>
<th>Gates</th>
<th>Cost - Low</th>
<th>Cost - High</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>500</td>
<td>2,500</td>
<td>10,000</td>
</tr>
<tr>
<td>2021</td>
<td>500</td>
<td>2,500</td>
<td>10,000</td>
</tr>
<tr>
<td>2022</td>
<td>500</td>
<td>2,500</td>
<td>10,000</td>
</tr>
<tr>
<td>2023</td>
<td>500</td>
<td>2,500</td>
<td>10,000</td>
</tr>
<tr>
<td>2024</td>
<td>500</td>
<td>2,500</td>
<td>10,000</td>
</tr>
</tbody>
</table>

Much of the costs to develop the facial recognition technology was incurred by CBP during the pilot period, but CBP will continue to incur some additional technology costs as facial recognition is expanded nationwide. In the first two years of the regulatory period, CBP expects to incur costs for final development and deployment of the technology. Throughout the period of analysis, CBP will also incur operations and maintenance costs. CBP’s costs in the regulatory period are summarized in Table 9 below.\(^{94}\)

Table 9: 2020-2024 CBP Technology Costs (undiscounted thousands of $2017)

<table>
<thead>
<tr>
<th>Year</th>
<th>Development</th>
<th>O&amp;M</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>43,449</td>
<td>21,802</td>
<td>65,251</td>
</tr>
<tr>
<td>2021</td>
<td>0</td>
<td>39,585</td>
<td>39,585</td>
</tr>
</tbody>
</table>


Most aliens are already subject to a biometric requirement at entry, so there will be no change for those already photographed at entry. U.S. citizens are not currently required to be photographed at entry, and this rule does not change that. CBP continues to explore ways to streamline traveler processing upon entry and is developing pilot programs, often in coordination with industry partners, to help inform its decisions. CBP has been testing facial recognition to improve the arrival process. For example, CBP has implemented Simplified Arrival for travelers entering the United States at various airports. Under this new process, CBP uses facial recognition instead of scanning travelers’ travel documents. The photograph is taken as the traveler approaches the CBP Officer for primary inspection. If there is a match, the officer does not need to scan the traveler’s documents. If there is no match, the officer proceeds with the current process of scanning the documents. Simplified Arrival is still in its infancy, but early analysis indicates that this could save approximately 15 seconds of processing time per traveler on average, an estimate that could change once it has been tested further. As travelers’ wait times are affected by not only their own processing time but also the processing time of everyone else ahead of them in line, this could have a very significant time savings for travelers. In fact, airlines have indicated that they are hopeful that Simplified Arrival will lead to even more time savings than the new exit procedure. At this time, there is not enough information to adequately evaluate the possible savings that results from Simplified Arrival.

Although CBP plans to eventually revamp the admission process to speed the inspection of arriving travelers and will likely use photographs in this process, this process would only be implemented if it results in a net time savings for travelers. In addition, U.S. citizens would generally have the option not to be photographed (though they would then not get the benefits of the shorter inspection process). Therefore, this
rule imposes no cost on most aliens or U.S. citizens at entry. To the extent that CBP is able to extend its facial recognition capabilities to improve the entry process, it would result in time savings for all travelers and CBP. CBP will conduct a study of the effect of Simplified Arrival on wait times and will include the results in the analysis for the final rule.

This rule provides that all aliens may be required to be photographed at entry and/or exit. Under the current regulations only certain aliens are subject to such requirements. This expansion of the biometric entry-exit verification program will enable CBP to require all aliens to be photographed at entry and exit. There are no additional hardware costs for carriers or airports who photograph travelers. As discussed later in the Cost Savings section, the regulatory facial recognition exit process will result in opportunity cost savings for travelers. The savings to currently exempted aliens is included in the total cost savings for travelers in that section.\(^{95}\) CBP will initially focus primarily on the air environment. In the near term, CBP also plans to gradually scale up efforts in the land and sea environments to determine the best way to fully implement biometric entry-exit in those environments pursuant to this rule. Most aliens are already photographed when entering by air. CBP is testing various biometric collection options, such as the Simplified Arrival process described earlier, that would apply to aliens who are not currently subject to photographs. CBP anticipates that such a process, once implemented on a nationwide basis, will result in a net time savings for travelers. Therefore, that change will impose no new costs on these currently exempted aliens.

This rule would also allow for the implementation of a biometric exit capability at land border ports. CBP already has authority to test biometric collection at land borders through pilot programs that are not subject to the limits that air and sea pilots have. CBP will continue testing biometric collection at land border ports, but a nationwide biometric

\(^{95}\) Our data on the travelers that are affected by the pilot do not separate out the portion of travelers who are out of the scope of the pilot. We do not have separate data, for example, on the number of travelers who are under the age of 14. Because of this, the estimates in our analysis capture the impacts on all travelers, including the currently out of scope travelers.
exit solution at the land border in all modes of transportation is not feasible at this time and there is no near-term plan for such an expansion. As CBP already has the ability to test biometric collection at land border ports without a limit on the number of locations, this rule has no practical effect in that environment except that it would include currently exempt aliens in those tests. For any potential future process to be workable in the land environment it needs to be done in a way that minimizes the burden on the public and the ability to expand the pilots will help inform CBP on how to accomplish that. Because there is no near-term plan to expand the general requirement for biometrics to land and sea beyond pilots, we focus the analysis on the effects of the pilots. This analysis does not account for the costs, cost savings, or benefits of some future expansion to land and sea beyond pilot programs because it is impossible to predict what that expansion would entail.

The ability to collect photographs from currently exempt aliens will enhance CBP’s ability to test various exit concepts at the land border. For example, CBP is considering testing biometrics of pedestrians exiting the United States on a limited basis under various scenarios. CBP has not yet determined this process, but it would likely involve providing notice that U.S. citizens may opt out of the test by approaching a CBP officer and requesting an alternative process. As this pilot is still being developed, we do not have a firm estimate of the time it will take to capture photographs or how many travelers would be affected. We note, however, that their time delay and opportunity cost will be no greater than the 9 seconds and 12 cents estimated above for the biometric exit pilot programs process.96 When CBP begins requiring biometrics from all aliens exiting at the land border (i.e., not through a limited pilot program), to the extent that requirement lengthens entry or exit processing, there will be additional opportunity costs for the travelers and CBP. CBP is endeavoring to use biometrics as a way to streamline

96 The process currently being used for pedestrians is similar to what is being used at airports. For vehicles, CBP is working on various concepts and is committed to a system that would not significantly increase wait times at the land border.
the entry and exit process, and it believes any additional net time it will add to travelers will be minimal or non-existent. Depending on the particulars of the biometric collection, there may also be significant hardware and infrastructure costs to CBP.

This rule would add a provision that aliens may be photographed upon exit and entry. While this provision applies at all types of ports of entry, more testing will be conducted before full implementation for land and sea ports of entry and private aircraft. For the near future the photographic requirement will apply primarily at airports. Most aliens arriving by air are already photographed at entry and have their fingerprints captured, and such aliens already have their passport photographs examined visually when entering or exiting the United States. In addition, most aliens are photographed if they are required to apply for a U.S. visa. A facial recognition system would compare the traveler’s face to the previously taken photographs to ensure there is a match. CBP acknowledges that the traveler may perceive this process to be a loss of privacy, which is a cost of the rule. Facial comparison has presented CBP with the best biometric approach because it can be performed relatively quickly, with a high degree of accuracy, and in a manner perceived as less invasive to the traveler (e.g., no actual physical contact is required to collect the biometric). This approach, as with all biometric collections, poses privacy risks which, as discussed in the PIA for the TVS,\(^7\) are mostly mitigated. Nevertheless, CBP’s phased deployment has shown the use of facial recognition technology is successful in a variety of scenarios that meet CBP’s business requirements while requiring minimal infrastructure investments and space redesign and having minimal impacts on travelers. Moreover, the phased deployment has allowed CBP to ensure that biometrics are collected, maintained, and used consistent with applicable privacy laws and best practices.

Table 10 summarizes the monetized costs of the regulatory period. These estimated costs are only for air exit. Any costs from an unknown future deployment at land or sea are not included in these estimates.

<table>
<thead>
<tr>
<th>Year</th>
<th>CBP</th>
<th>Carriers/Airports – Low</th>
<th>Carriers/Airports – High</th>
<th>Total – Low</th>
<th>Total - High</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>65,251</td>
<td>2,500</td>
<td>10,000</td>
<td>67,751</td>
<td>75,251</td>
</tr>
<tr>
<td>2021</td>
<td>39,585</td>
<td>2,500</td>
<td>10,000</td>
<td>42,085</td>
<td>49,585</td>
</tr>
<tr>
<td>2022</td>
<td>31,605</td>
<td>2,500</td>
<td>10,000</td>
<td>34,105</td>
<td>41,605</td>
</tr>
<tr>
<td>2023</td>
<td>32,383</td>
<td>2,500</td>
<td>10,000</td>
<td>34,883</td>
<td>42,383</td>
</tr>
<tr>
<td>2024</td>
<td>33,178</td>
<td>2,500</td>
<td>10,000</td>
<td>35,678</td>
<td>43,178</td>
</tr>
</tbody>
</table>

4. Cost Savings

In the regulatory period, CBP and airlines expect that the use of facial recognition will speed the entry and exit processes considerably, resulting in time savings for travelers and shorter plane turnaround times for carriers. Various airlines have been testing facial recognition models similar to what is planned under this rule. In one test, an airline partner has been able to board an Airbus A-380 with 350 travelers in only 20 minutes.\(^98\) Another airline partner has reported to CBP that their baseline loading time for an A-380 is 45 minutes. In the test of the integrated facial recognition system used at the Orlando Airport, travelers have experienced a 15 minute time savings. According to one news article, this is down from 30 minutes for a 240-passenger plane.\(^99\) In both tests, boarding times are reduced by approximately 50 percent. These estimates are for some of the largest planes carrying travelers and much of the time savings is due to a process that allows boarding through several doors. Smaller planes do not have as many doors so the time savings for their travelers is likely to be lower. Additionally, these initial implementation flights and locations were selected in part based on ease of implementation. Using a 50 percent or 15-minute time savings for all flights based on the

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savings in these pilots would overstate the time savings due to this rule. Because of the uncertainty surrounding the time savings, we present a range of time savings estimates. For the low end of the range, which serves as our primary estimate, we assume that average time savings due to this rule will be 5 minutes per traveler, or one third of the savings airline partners observed during the pilot. For the high end of the range, we assume that the time savings would be 10 minutes, or two thirds of the savings from the pilot. We request comment on these assumptions. CBP will be conducting time studies to refine our estimates and will use updated estimates, and will consider any public input on the estimates at the final rule stage.

To estimate the value of time savings of air travelers at exit due to this rule, we apply the assumed range of time savings (5 to 10 minutes) to the traveler projections from Table 4.\(^{100}\) We then apply the $47.10 hourly value of time for these travelers to determine the total opportunity cost savings as a result of this rule. Table 11 shows the hours saved at air exit due to this rule during the 5-year regulatory period of analysis. Table 12 shows the value of this time savings. As shown, in the primary estimate the savings range from $101 million in the first year to $565 million in 2024, when full nationwide deployment is expected to occur at air exit. These estimated savings are for air exit only.

Table 11: 2020-2024 Projected Time Savings for Air Travelers at Exit (hours)

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S Citizens - Primary</td>
<td>938,878</td>
<td>1,939,721</td>
<td>3,014,327</td>
<td>4,167,810</td>
<td>5,240,447</td>
</tr>
<tr>
<td>U.S. Citizens – High</td>
<td>1,877,756</td>
<td>3,879,443</td>
<td>6,028,654</td>
<td>8,335,619</td>
<td>10,480,895</td>
</tr>
<tr>
<td>Aliens – Primary</td>
<td>1,209,607</td>
<td>2,499,048</td>
<td>3,883,520</td>
<td>5,369,614</td>
<td>6,751,551</td>
</tr>
<tr>
<td>Aliens – High</td>
<td>2,419,214</td>
<td>4,998,096</td>
<td>7,767,041</td>
<td>10,739,228</td>
<td>13,503,103</td>
</tr>
</tbody>
</table>

Table 12: 2020-2024 Value of Time Savings for Air Travelers at Exit ($2017)

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S Citizens - Primary</td>
<td>44,221,142</td>
<td>91,360,880</td>
<td>141,974,809</td>
<td>196,303,832</td>
<td>246,825,076</td>
</tr>
<tr>
<td>U.S. Citizens – High</td>
<td>88,442,284</td>
<td>182,721,759</td>
<td>283,949,618</td>
<td>392,607,664</td>
<td>493,650,152</td>
</tr>
<tr>
<td>Aliens – Primary</td>
<td>56,972,483</td>
<td>117,705,151</td>
<td>182,913,806</td>
<td>252,908,823</td>
<td>317,998,070</td>
</tr>
<tr>
<td>Aliens – High</td>
<td>113,944,967</td>
<td>235,410,303</td>
<td>365,827,612</td>
<td>505,817,645</td>
<td>635,996,140</td>
</tr>
</tbody>
</table>

\(^{100}\) As a reminder, we assume that a small portion of U.S. citizens will request an alternative inspection. These costs include only the U.S. citizens who undergo the facial recognition process.
In addition to the savings to travelers, boarding an aircraft more quickly has a substantial benefit to airlines as they will be able to turn around aircraft more quickly. According to one study, reducing turn time by 10 minutes could lead to an improved aircraft utilization rate of 8.1 percent.\(^1\) If there is a sustained decrease in turn times as a result of this rule, carriers could eventually reduce the number of aircraft in their fleets. In addition, to the extent the shorter turn time saves airline staff time, airlines could experience additional savings.

5. Benefits

The primary benefit of this rule is the security benefit of having biometric confirmation of the identification of those leaving the country by air. CBP has very good records of those legally entering the United States by air, land and sea. These records are enhanced for aliens through the collection of biometrics at entry. At departure, CBP has a record of the names of everyone leaving the United States by air or sea. However, these records are not verified with the same accuracy as at entry. Comparing biometrics at departure will enable CBP to know with greater certainty the identity of those leaving the United States, which will help detect and deter visa overstays and visa fraud; help identify persons attempting to fraudulently use travel documents; and alert authorities to criminals or known or suspected terrorists prior to boarding. Studies show that humans are best at identifying imposters when paired with technology.\(^2\) CBP believes that facial recognition is the best available method for biometric identification as it is highly


accurate, unobtrusive, and cost effective. This rule would expand CBP’s ability to implement this biometric exit capability at additional locations before eventually implementing it nationwide.

An alien admitted to the United States on a visa or through the Visa Waiver Program (VWP) is permitted to remain in the country for the lawful period of admission (in the case of a VWP traveler, 90 days). An overstay occurs when a person enters the United States legally on a visa or through the VWP, but does not leave within the prescribed time period. Some aliens who overstay their lawful period of admission remain in the United States illegally for years. For Fiscal Year 2018, DHS estimates that about 666,500 aliens who entered by air or sea and were expected to depart that year overstayed their lawful period of admission, or 1.22 percent of aliens arriving by air and sea. These figures are estimates because without biometrics, CBP cannot verify with certainty the identity of those leaving the United States. For example, many aliens sharing a common name may enter the United States in a given year. Biometrics allow CBP to better differentiate those who have identical names and basic biographic information, provide checks against the use of fraudulent identity documents, and better understand whether any particular alien left the United States on time or if the departing alien was a different person with the same name. Without biometrics it is difficult to know whether the alien leaving did so on time or if the departing alien was a different person with the same name.

Similarly, there are ways to exploit the current exit system to avoid the detection of passport and visa fraud. Currently, those departing the United States must present their boarding pass and identification when being screened by TSA. Before boarding, travelers also need to present their travel documents and boarding passes to the carrier at the gate, who visually reviews the travel documents and validates the boarding pass with

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the carrier’s ticketing system. However, once in the sterile area of the terminal, although travelers may be subject to random identification checks, travelers generally do not have their photo identification scrutinized again before boarding the aircraft. This has allowed for passport and visa fraud.\textsuperscript{104} During the boarding process, in addition to addressing customer service issues, such as baggage and seat assignments, gate agents are also required to check travel documents during what can often be a hectic boarding process. Using facial recognition technology reduces the number of documents that the gate agent needs to review thereby increasing the effectiveness of the limited fraudulent document detection and impostor identification training gate agents receive. Furthermore, people are most effective at identifying fraud when paired with technology. The facial recognition pilots have helped identify 77,000 visa overstays and 240 individuals who previously entered the United States without inspection.\textsuperscript{105} CBP has also used facial recognition to identify several imposters attempting to fraudulently enter the United States and expects to have similar success on exit.\textsuperscript{106}

Having an accurate accounting of visa overstays is important both for reasons of equity and government resources. The United States has set up a system whereby aliens may visit by legal means and the vast majority follow this system conscientiously, though it can sometimes take a significant amount of time to proceed through the immigration process. It is not equitable for these legitimate travelers and immigrants when others circumvent the legitimate process through illegal visa overstays. The success of those who are able to overstay their visas without consequences only encourages others to attempt to do the same. Further, overstays place a strain on government resources as the

\textsuperscript{104} Note: TSA subjects all travelers entering the sterile area of an airport, and their carry-on belongings, to security screening at the checkpoint.


government must investigate and remove those who are not here legally. Compounding this problem is a lack of true identity verification, as DHS must spend time determining whether an individual actually overstayed his/her lawful period of admission before beginning the actual investigation. Biometric identity verification will give DHS the information it needs about those who have overstayed their visas and will allow it to focus on these individuals.

The public also has an interest in accurate identification at departure for law enforcement and national security reasons. Security agencies maintain an extensive database of known and suspected terrorists, but sometimes they have incomplete information about them. In some cases, they may have photographs on a person of interest, but no name. In other cases, someone could be traveling under a false name with false documents. Having biometric identification would assist CBP in identifying these individuals during the travel process and taking appropriate action. Similarly, biometric identification would help CBP identify those wanted for a crime or who are the subject of a court order (such as in a child custody dispute) and intercept them before they are able to leave the country.

As discussed in the Costs section above, CBP is exploring various ways to use biometrics to streamline the entry process. This rule allows for the expansion of these tests as it provides the framework for CBP to require all aliens to be photographed at entry. Under the current regulations, certain aliens are not subject to this requirement, making a full evaluation of the concept impossible. Early analysis of the Simplified Arrival pilot suggests that it could save 15 seconds of processing time for all participating travelers, including U.S. citizens who voluntarily participate. CBP is expected to experience time savings as well, but it is unknown how much time it will save. CBP is expanding Simplified Arrival and will be doing time-in-motion studies to determine the effect on processing and wait times. We will include a discussion of the results in the final rule.
The development of a reliable facial recognition system could also have benefits for other government agencies. CBP is coordinating with TSA to test facial recognition to streamline its processes. Among other things, TSA is considering using facial recognition to improve the TSA Pre✓™ process. TSA also plans to explore other ways facial recognition can improve security and traveler processing. TSA’s use of CBP’s facial recognition system is still in its planning stage, so it is impossible to estimate any savings that could result. To the extent that TSA is able to improve security or reduce processing times for travelers, that would be an additional cost savings or benefit of this rule.

6. Net Benefits

As discussed in the cost section, the biometric exit pilot programs have resulted in costs to travelers and CBP. From 2017-2019, travelers experienced approximately $136,000 in opportunity costs per year. CBP spent $228 million to develop, maintain, and operate the initial pilots from 2017 to 2019. The unit costs to expand these pilots would be 12 cents per departure for travelers and $81,000 annually per daily-scheduled flight for CBP. These costs are summarized in Table 13.

Table 13. Total Pilot Costs 2017-2019 (thousands of 2017 U.S. Dollars)

<table>
<thead>
<tr>
<th></th>
<th>3% Discount Rate</th>
<th>7% Discount Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Present Value Cost</td>
<td>$215,222</td>
<td>$199,887</td>
</tr>
<tr>
<td>Annualized Cost</td>
<td>$76,088</td>
<td>$76,159</td>
</tr>
</tbody>
</table>

During the regulatory time period, the costs will be split by carriers and airports who will install the facial recognition hardware at gates and CBP, which incurs development and operations and maintenance costs. Table 14 shows the discounted costs of the regulatory time period. As shown, costs over the 5-year period of analysis range

from $211 to $233 million, depending on the discount rate used. Annualized costs range are $51 million. Unquantified costs include the costs of expanding photographic collection of currently exempt aliens at entry. These costs are difficult to quantify as the Simplified Arrival concept has not yet been widely tested and this expansion will only occur if it is determined that the aliens experience net savings as a result.

Table 14. Total Regulatory Costs 2020-2024 (thousands of 2017 U.S. Dollars)

<table>
<thead>
<tr>
<th></th>
<th>3% Discount Rate</th>
<th>7% Discount Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Present Value Cost</td>
<td>232,776</td>
<td>210,719</td>
</tr>
<tr>
<td>Annualized Cost</td>
<td>50,827</td>
<td>51,393</td>
</tr>
</tbody>
</table>

This rule’s establishment of a biometric identification system at departure will have benefits, including cost savings, to CBP and the public. Travelers will experience a time savings through a shorter boarding process. Table 15 shows the discounted savings as a result of this rule. As shown, CBP estimates that this rule will save travelers opportunity costs of between $1.289 and $1.480 billion over the 5-year period of analysis. On an annualized basis, this rule will save between $314 and $323 million. In addition, carriers may experience turn around cost savings and travelers may experience additional savings from a new Simplified Arrival process. Further, this rule will allow CBP to identify travelers with greater certainty, which will reduce travel document fraud. It will also give CBP a more accurate record of those who overstayed their visas.

Table 15. Total Regulatory Cost Savings 2020-2024 for both Aliens and U.S. Citizens (thousands of 2017 U.S. Dollars)

<table>
<thead>
<tr>
<th></th>
<th>3% Discount Rate</th>
<th>7% Discount Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Present Value Cost Savings</td>
<td>$1,480,137</td>
<td>$1,288,814</td>
</tr>
<tr>
<td>Annualized Cost Savings</td>
<td>$323,195</td>
<td>$314,330</td>
</tr>
</tbody>
</table>
Table 16 shows the net monetized cost savings for the rule’s primary estimate. As shown, the rule will result in total net savings ranging from $1.078 million to $1.247 million, depending on the discount rate used. On an annualized basis, savings will range from $262 to $272 million. Accounting statements 1 and 2 show the costs, cost savings, and benefits of the rule for the pilot period and the regulatory period, respectively. The net cost savings listed in this table is for air exit only. Any costs, cost savings, and benefits from an unknown future deployment at land or sea are not included in these estimates.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3% Discount Rate</td>
<td>7% Discount Rate</td>
</tr>
<tr>
<td>Total Present Value Cost Savings</td>
<td>$1,247,361</td>
<td>$1,078,094</td>
</tr>
<tr>
<td>Annualized Cost Savings</td>
<td>$272,367</td>
<td>$262,937</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Costs</th>
<th>3% Discount Rate</th>
<th>7% Discount Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annualized monetized costs</td>
<td>76,088</td>
<td>76,160</td>
</tr>
<tr>
<td>Annualized quantified, but non-monetized costs</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Qualitative (non-quantified) costs</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cost Savings</th>
<th>3% Discount Rate</th>
<th>7% Discount Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annualized monetized benefits</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Annualized quantified, but non-monetized benefits</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Qualitative (non-quantified) costs</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Benefits</th>
<th>3% Discount Rate</th>
<th>7% Discount Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annualized monetized benefits</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Annualized quantified, but non-monetized benefits</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Qualitative (non-quantified) benefits</td>
<td>Enhanced security and identification of visa overstays</td>
<td>Enhanced security and identification of visa overstays</td>
</tr>
</tbody>
</table>

**Accounting Statement 2: Regulatory Period (2020-2024) (thousands of $2017)**

<table>
<thead>
<tr>
<th>Costs</th>
<th>3% Discount Rate</th>
<th>7% Discount Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annualized monetized costs</td>
<td>50,828</td>
<td>51,393</td>
</tr>
<tr>
<td>Annualized quantified, but non-monetized costs</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Qualitative (non-quantified) costs</td>
<td>Perceived privacy loss</td>
<td>Perceived privacy loss</td>
</tr>
</tbody>
</table>

Cost Savings
7. Alternatives Analysis

CBP considered many types of biometrics and has concluded that partnering with carriers and airports to capture facial images is the most viable large scale solution as it is highly effective, cost effective, and less disruptive than other possible methods. Two other methods that were considered were fingerprint and/or iris scans and using CBP personnel and equipment to collect the facial scans.

CBP has tested fingerprint and iris scans on a limited basis to determine its effectiveness and scalability. CBP found that while these scans are highly effective in finding matches when data is available, they have numerous problems. First, CBP often lacks data to match against. Although CBP often has fingerprints from entry that it can use to match a departing alien, it does not typically capture iris scans. Nor are these biometrics typically included in passports. To use iris scans, CBP would need to establish a new way to capture a baseline iris scan to compare against at exit, which is not feasible. Fingerprint and iris scans are also more time consuming and the equipment needed is more expensive than facial recognition. Finally, these methods are more intrusive than taking a picture, so they present additional privacy concerns.

CBP also considered purchasing the facial recognition hardware and using CBP personnel to capture the facial images rather than having the carrier or airport purchase and operate it. This alternative would essentially expand the initial pilot nationwide. As discussed above, this would add an opportunity cost of 12 cents per traveler departure and $81,000 annually in costs for CBP per daily-scheduled flight. More importantly,
since this would add a step to the boarding process rather than simplify the process, travelers would forgo the time savings estimated above and valued at $310 million per year. Further, this alternative approach would eliminate the advantage of giving carriers and airports access to the facial recognition capabilities, which allows them to use it for other purposes.

B. Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 et. seq.), as amended by the Small Business Regulatory Enforcement Fairness Act of 1996, requires an agency to prepare and make available to the public a regulatory flexibility analysis that describes the effect of a proposed rule on small entities (i.e., small businesses, small organizations, and small governmental jurisdictions) when the agency is required to publish a general notice of proposed rulemaking for a rule.

The Regulatory Flexibility Act requires agencies to consider the impacts of their rules on small entities. This proposed rule would only directly regulate travelers. Travelers are individuals and are not considered to be small entities by the RFA. Carriers are indirectly affected by the rule as the rule does not place any requirements on the carriers, nor does it grant them any new rights. Any participation by carriers is strictly voluntary and CBP expects that carriers will only participate if they believe the benefits of participation outweigh the costs. CBP therefore certifies that this rule will not result in a significant economic impact on a substantial number of small entities.

C. Paperwork Reduction Act

In accordance with the Paperwork Reduction Act of 1995 (44 U.S.C. 3507), an agency may not conduct, and a person is not required to respond to, a collection of information unless the collection of information displays a valid control number assigned by OMB. The collections of information related to this NPRM, including biometric exit, are approved by OMB under collection 1651-0138.

D. Privacy
CBP will ensure that all legal requirements (e.g., the Privacy Act of 1974, Section 208 of the E-Government Act of 2002, and Section 222 of the Homeland Security Act of 2002, as amended) and applicable policies are adhered to during the implementation of the biometric entry-exit system.

CBP retains biographic records for 15 years for U.S. citizens and lawful permanent residents and 75 years for non-immigrant aliens, consistent with the DHS/CBP-007 Border Crossing Information (BCI) System of Records Notice (SORN). Records associated with a law enforcement action are retained for 75 years in accordance with the DHS/CBP-011 TECS SORN. CBP retains biographic entry and exit records in the ADIS for lawful permanent residents and non-immigrant aliens, consistent with the SORN.

Since 2004, CBP has collected biometric information in the form of fingerprints and a facial photograph on entry for in-scope travelers (pursuant to 8 CFR 235.1); CBP transmits this information to the DHS OBIM’s IDENT, where it is stored.

Under CBP’s facial recognition based entry-exit program, CBP’s biographic data retention policies remain the same. CBP temporarily retains facial images of non-immigrant aliens and lawful permanent residents for no more than 14 days within ATS-UPAX for confirmation of travelers’ identities, evaluation of the technology, assurance of accuracy of the algorithms, and system audits. However, if the TVS matching service determines that a particular traveler is a U.S. citizen, CBP holds the photo in secure CBP systems for no more than 12 hours after identity verification, in case of an extended system outage, and then deletes it.

Photos of all travelers are purged from the TVS cloud matching service within a number of hours, depending on the mode of travel. Photos of in-scope travelers are

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109 Id.
retained in IDENT for up to 75 years, consistent with existing CBP records that are housed in IDENT in accordance with the BCI SORN.

As discussed in Section III, CBP will begin implementation of the biometric entry-exit system through the TVS. CBP has issued a number of PIAs for the TVS, and earlier traveler verification tests, which outline how CBP will ensure compliance with the DHS Fair Information Practice Principles (FIPPs) as part of the biometric entry-exit system. In November 2018, CBP published a revised comprehensive TVS PIA, which, along with the previous versions, examines the privacy impact and mitigation strategies of TVS as it relates to the Privacy Act and the FIPPs. The FIPPs address how information being collected is maintained, used and protected, particularly to issues such as security, integrity, sharing of data, use limitation and transparency. The comprehensive TVS PIA provides background information on early test deployments. Additionally, it explains how CBP’s use of facial recognition technology complies with privacy requirements at both entry and exit operations in all modes of travel where the technology is currently deployed.

As discussed in Section III.E, CBP is conducting a number of biometric exit pilot programs at the land border. CBP will issue PIAs for these pilot programs, which will be made publicly available at: www.dhs.gov/privacy.

E. National Environmental Policy Act

DHS Directive (Dir.) 023–01 Rev. 01[1] establishes the procedures that DHS and its components use to comply with the National Environmental Policy Act (NEPA) and the Council on Environmental Quality (CEQ) regulations for implementing NEPA, 40 CFR parts 1500–1508. The CEQ regulations allow Federal agencies to establish, with

CEQ review and concurrence, categories of actions ("categorical exclusions") which experience has shown do not individually or cumulatively have a significant effect on the human environment and, therefore, do not require an Environmental Assessment (EA) or Environmental Impact Statement (EIS). 40 CFR 1507.3(b)(1)(iii), 1508.4. DHS Instruction 023–01-001 Rev. 01 establishes such Categorical Exclusions that DHS has found to have no such effect. Inst. 023–01-001 Rev. 01 Appendix A Table 1. For an action to be categorically excluded, DHS Inst. 023–01-001 Rev. 01 requires the action to satisfy each of the following three conditions: (1) the entire action clearly fits within one or more of the Categorical Exclusions; (2) the action is not a piece of a larger action; and (3) no extraordinary circumstances exist that create the potential for a significant environmental effect. Inst. 023–01-001 Rev. 01 section V.B (1)–(3).

DHS analyzed this action and has concluded that the proposed changes to 8 CFR parts 215 and 235 concerning the collection of biometric data from aliens upon entry and departure falls within DHS’s categorical exclusion A.3, which is set forth in DHS Inst. 023-01-001 Rev. 01, Appendix A, Table 1. Categorical exclusion A.3 covers, among other things, the promulgation of rules that interpret or amend an existing regulation without changing its environmental impacts. Although the changes to 8 CFR parts 215 and 235 will mean that DHS/CBP will be collecting more biometric data, it will not fundamentally alter the manner in which DHS/CBP processes travelers within existing facilities.

F. Signature

The Acting Secretary of Homeland Security, Chad F. Wolf, having reviewed and approved this document, has delegated the authority to electronically sign this document to Chad R. Mizelle, who is the Senior Official Performing the Duties of the General Counsel for DHS, for purposes of publication in the Federal Register.

List of Subjects
8 CFR Part 215
Administrative practice and procedure, Aliens, Travel restrictions.

8 CFR Part 235
Administrative practice and procedure, Aliens, Immigration, Reporting and recordkeeping requirements.

Proposed Amendments to the Regulations
For the reasons discussed in the preamble, DHS proposes to amend 8 CFR chapter I as set forth below:

PART 215—CONTROLS OF ALIENS DEPARTING FROM THE UNITED STATES; ELECTRONIC VISA UPDATE SYSTEM

1. The authority section for part 215 is revised to read as follows:


2. Amend § 215.8 as follows:
   a. Revise the section heading;
   b. Add a heading for paragraph (a);
   c. Redesignate paragraphs (a)(1) and (2) as paragraphs (a)(2) and (3);
   d. Add new paragraph (a)(1);
   e. Revise newly redesignated paragraph (a)(2) and paragraph (a)(3) introductory text;
   f. In newly redesignated paragraph (a)(3)(ii), remove “(a)(1)” and add in its place “(a)(2) of this section”;
   g. In paragraph (b), add a heading and revise the first sentence; and
   h. In paragraph (c), add a heading.

The revisions and additions read as follows:
§ 215.8 Requirements for biometrics from aliens on departure from the United States.

(a) Photographs and other biometrics—(1) Photographs. DHS may require an alien to be photographed when departing the United States to determine his or her identity or for other lawful purposes.

(2) Other biometrics. DHS may require any alien, other than aliens exempted under paragraph (a)(3) of this section or Canadian citizens under section 101(a)(15)(B) of the Act who were not otherwise required to present a visa or have been issued Form I-94 (see §1.4 of this chapter) or Form I-95 upon arrival at the United States, to provide other biometrics, documentation of immigration status in the United States, as well as such other evidence as may be requested to determine the alien’s identity and whether the alien has properly maintained immigration status while in the United States, when departing the United States.

(3) Exemptions. The requirements of paragraphs (a)(2) of this section shall not apply to:

* * * * *

(b) Failure of a non-exempt alien to comply with departure requirements. An alien who is required to provide biometrics when departing the United States pursuant to paragraph (a)(1) or (2) of this section and who fails to comply with the departure requirements may be found in violation of the terms of his or her admission, parole, or other immigration status. * * *

(c) Determination of overstay status. * * *

PART 235—INSPECTIONS OF PERSONS APPLYING FOR ADMISSION

3. The authority citation for part 235 is revised to read as follows:


4. Amend § 235.1 as follows:
   a. In paragraph (f)(1) introductory text, add a heading;
   b. In paragraph (f)(1)(i), add a heading;
   c. Redesignate paragraphs (f)(1)(ii), (iii), and (iv) as paragraphs (f)(1)(iii), (v), and (vi), respectively;
   d. Add new paragraph (f)(1)(ii);
   e. Revise newly redesignated paragraph (f)(1)(iii);
   f. Add new paragraph (f)(1)(iv);
   g. Revise newly redesignated paragraph (f)(1)(v) and paragraph (f)(1)(vi) introductory text; and
   h. In newly redesignated paragraph (f)(1)(vi)(B), remove “(d)(1)(ii)” and add in its place "(f)(1)(iii) of this section”.

The revisions and additions read as follows:

§ 235.1 Scope of examination.
   * * * * *
(f) * * *
(1) Requirements for admission. * * *
   (i) Permanent residents. * * *
   (ii) Photographs. DHS may require an alien seeking admission to be photographed to determine his or her identity or for other lawful purposes.
   (iii) Other biometrics. DHS may require any alien, other than aliens exempted under paragraph (f)(1)(vi) of this section or Canadian citizens under section 101(a)(15)(B) of the Act who are not otherwise required to present a visa or be issued Form I-94 (see §1.4 of this chapter) or Form I-95 for admission or parole into the United States, to provide other biometrics, documentation of immigration status in the United States, as well as such other evidence as may be requested to determine the alien’s
identity and admissibility and/or whether the alien has properly maintained immigration status while in the United States.

(iv) *Failure to comply with biometric requirements.* The failure of an alien at the time of inspection to comply with paragraph (f)(1)(ii) or (iii) of this section may result in a determination that the alien is inadmissible under section 212(a) of the Immigration and Nationality Act or any other law.

(v) *Biometric requirements upon departure.* Aliens who are required under paragraph (f)(1)(ii) or (iii) of this section to provide biometrics at inspection may also be subject to the departure requirements for biometrics contained in § 215.8 of this chapter, unless otherwise exempted.

(vi) *Exemptions.* The requirements of paragraph (f)(1)(iii) of this section shall not apply to:

* * * * *

Chad R. Mizelle,
Senior Official Performing the Duties of the General Counsel.

[FR Doc. 2020-24707 Filed: 11/18/2020 8:45 am; Publication Date: 11/19/2020]